

# The digital transformation of insurance with Nick Leimer

Podcast transcript

David: Welcome to the Microsoft Industry Experience Team Podcast. I'm your host David Starr. And in this series you will hear from leaders across various industries discussing the impact of digital disruption and innovation, sharing how they've used Azure to transform their business. You can find our team online at [aka.ms/indxp](https://aka.ms/indxp) or on Twitter at [industryxp](https://twitter.com/industryxp).

For a very special set of episodes, we've partnered with Vince Menzione to highlight the thought leadership of our team's principle program managers who are doing great things within their specific industries. And how your host for this episode, Vince Menzione.

Vince: In this special series of the podcast, I sit down with leaders from Microsoft that are helping important sectors of industry to transform and thrive through the use of this innovative cloud technology. In this episode my guest is Nick Leimer, Microsoft's insurance industry lead for the newly created Industry Experiences Team. In this episode Nick and I discuss his extensive background in insurance, the transformation going on in this segment, Microsoft and Azure's commitment to the insurtech market, and why if you're a customer or partner you should invest with Microsoft and Azure.

This episode of the podcast is sponsored by Microsoft and the industry experiences team. Thank you for listening and I hope you enjoy this episode.

Nick, welcome to the podcast.

Nick: It's great to be here.

Vince: You're the principal industry lead Azure for insurance and you focused on the industry segment as part of this newly formed Microsoft [inaudible 00:01:55] industry team under Paul Mare. I'm excited to hear from you about the organization's role and focus, Microsoft and Azure's compelling value proposition around insurance, and how this amazing transformation is impacting this industry and why this all matters to our customers and partners. So welcome.

Nick: It's great to be here. Obviously I'm coming from the insurance side. We're talking about how we can leverage cloud-based tools from Microsoft benefit insurance industry. So that's brokers, agents, insurance companies themselves, reinsurers, et cetera. The whole value chain where historically you've been using technology from the beginning and just how they leverage these new sets of technologies to export existing products and then develop new ones.

Vince: So you're in a new role, this principle industry lead for insurance. Can you explain for our listeners in simple terms that role in the Microsoft organization and your mission and that of the team?

Nick: So part of a new organization within Microsoft and we are really to function as an outreach and connection piece between insurance companies, software providers that have support the insurance industries and startups and insurtechs, really to make sure that we can communicate outward what are the new tools that are available within Azure and then also communicate back from our interactions directly with the insurers, our partners, and the insurtech industry on where we might be missing certain tool sets, et cetera. So the information needs to flow in both directions so we can both make our products better and really make sure the customer's aware of all the good technology that's available within Microsoft.

Vince: So that's a somewhat of a new term for me, insurtech. Can you just peel back a little bit for our listeners who may not know much about the insurance industry?

Nick: Insurance is a three-hundred-year-old industry. It's really all about determining risk to commercial entities to person, et cetera, and then how to either help mitigate that risk or assign a dollar value. If a bad event happens then we'll compensate you will a certain amount so that the overall effect to an organization or a person is somehow mitigated.

So historically it's been a lot of hand calculation and as soon as other technologies come online, have always been a big consumer of both data and calculation capabilities. So insurance companies always use computer processing if it was available and that just continues to grow as the number of policies and complexities within those insurer products evolve over time to the point now where they use big data to really analyze risks for weather patterns, et cetera, for property [inaudible 00:04:40] side, on the life side a lot of the new products are [inaudible 00:04:44]. So there are random selections of random selections, so you could really ... probability-based risk modeling to calculate the risk both of changes in interest rates and life expectations, et cetera, on top of each other. And that combination is a huge demand on calculation capabilities. And you need to layer on top of that additional regulatory changes that are forcing even increased amount of calculations as well. So throughout insurance industry, the need to do more and more complicated calculations on existing blocks of business is there.

And insurtech is sort of taking that to the next step. So we're using other sources of data to combine with the existing sources of data to get a better picture in real time of the risk exposure from both weather events, et cetera, to back down to the individual person to their heart rate, et cetera, all this information is coming in. How do we process it? How do we manage that? How can we better support our customers from the insurance company side and really analyze the whole financial risk in real time? So it's just a lot of things that are evolving over time. And insurtech is really how we're incorporating some of the newer technology on top of existing. So insurtech in certain ways has been around for 50 years, but it's just sort of been rebranded the last five years to really include some of the more innovative technology stacks that are coming on with AI, artificial intelligence, machine learning, IoT internet of things, which is really how you incorporate sensor data in real time to help analyze risk across the industry.

Vince: I get it now. Thank you for clarifying that for our listeners. So why is Microsoft investing in this team at this time? Why is the insurance segment in particular so important to Microsoft?

Nick: As I mentioned earlier the calculation requirements of the insurance industry is already massive. All insurance companies have to do quarterly and monthly reporting to meet their regulatory requirements. So there's already this huge demand for calculation power just to do those reserving and projectory requirements. You start adding on top of that, [inaudible 00:07:00] testing and other pieces of the business needs to do. So you have a layer of more and more calculations on top of that. And as we just talked about we add the new technologies from using big data to artificial intelligence machine learning. It just keeps escalating. So there's a huge demand within the insurance industry. And that will just continue to grow.

In certain ways we have underserved that segment of the market historically. So now it's like we really want to make sure we catch up and we can really deliver these new sets of technologies to this existing block of calculation, et cetera, that are needed by the insurance industry. So that's the key point why we're investing in the insurance industry because it does vary considerably between other verticals. So it's even investment banking and capital markets is different than insurance. It's different regulations. They're different demands and how we utilize those different tools is different as well.

Vince: I was curious if Microsoft's commitment to localization of data played a role there with some of these regulations in various regions.

Nick: Actually it helps with ... I'm sure most people are aware just within the last week or so GDPR went live for Europe which effects where data is stored, how it's managed. That's a new set of regulations, but there are also regulations that have been on the books globally. I know China and Indonesia just rolled out some new regulations in the last year that their data had to stay locally, at least all the personal data, none of the calculations could be moved to the cloud. The real advantage to Azure is we have data centers in almost every single one of those countries that have these new sets of regulation. So we could have their data in the cloud in the country of origin and then only do global redundancy across certain areas just for the calculation power but the actual data would still stay in the home country. So that's a huge advantage to having a diverse cloud environment globally. So our partners and customers across Asia and the Pacific as well across Europe. In North and South America we have data centers that we can store that information without violating their data sovereignty issues.

Vince: So Nick I read a little bit about your background. And it's not what you normally see traditionally in a technology person, someone in the technology space. Can you tell our listeners why you joined this team and a little bit about your journey to this particular spot in your career?

Nick: I'll start with the why I joined the team. It's a huge challenge. And Microsoft's a very large company. And I think I could have the biggest impact on the insurance industry as a whole from this position. How did I get here? So I started out, my career, professional career, as a statistician for the federal government. And while I was working in that role,

started taking [inaudible 00:09:55] exams, because I saw that as an opportunity to advance my career, recruiter called me for actuary consulting software company in the same town I was living in. So I sort of switched careers and worked there for 10 years developing software on the evaluation side for insurance companies and also in projection modeling, developing software that was deployed globally.

So then went from that consulting firm to a different consulting firm on the define benefits side working with the reinsurer for the define benefits base. Very interesting how it was very similar technology stack. The scale was a little bit different. The models ran across \$2 trillion in assets and liabilities. So it's a little different scope. So then went from consulting firms to a major insuretech, at the time the world's largest insurer, and was in direct support of actuaries and the IT that was on the IT side, so directly reported to the chief actuary. And then moved from that large insurance to a Canadian-based insurer and helped work with their cloud-based deployments across Asia. And that was all on Azure. So that combination of experience sort of led me to where I am now at Microsoft in working with Azure and how different insurance companies are integrating those calculation tools into the cloud.

Vince: You and I have talked offline a little bit about coming to a big technology giant like Microsoft. What was the best piece of advice that someone gave you when you took this role?

Nick: Be prepared to be overwhelmed. They were right. It's a very different atmosphere compared to the very regulated, controlled, structured paced work that both from a consulting side and from a major insurer where you have these quarterly results that have to be done. Very strict structure, what can change and when and freeze dates and how it all fits together. And innovation has to work within those structures. Microsoft is much more free flowing of information in working with different teams, which I think is a great thing. But it's very different from the very structured, scheduled, controlled process that insurers have to follow for the regulatory pieces. So that was sort of the driving force in insurance companies they have this kind of natural cycle, quarterly, monthly, and this is how things could happen and you had maybe two weeks every month you had a window that you could actually change something before it had to be tested and rolled out to the next cycle.

So it's different. I really like it. I like that there's this really collaborative approach to solving problems. You work with lots of different teams within Microsoft itself. It's not this sort of structured, controlled piece which is probably the biggest change but it's very exciting as well.

Vince: So I'm going to shift gears here a little bit because I want to talk about this time of innovation that's been happening. And I've been astonished in my talks and interviews about the pace of change and transformation particularly in the last 18 months or so. And it's happening across all industries and it's accelerating quite candidly. And in the insurance industry I'm sure it's no exception. Can you tell our listeners what you're seeing happening now as the business is evolving and transforming?

Nick: It's interesting. We talked a little bit about insurtech a year and a half ago or so with all the insurtech startups are coming up. And they will destroy the insurance industry and they'll just replace them completely, get rid of the agents and brokers and they'll be this all bot-driven everything. Obviously that didn't happen. And what has happened really is the insurance companies have absorbed a lot of the new startup technology companies and work with them directly and started using some of these new sets of technologies from the sort of bot-driven AI consumer CRM.

So if your interaction with your, the equivalent of your agent, either that agent has been replaced by a bot-driven tool that you interact with through text or for voice and that helps you direct which products are better, et cetera, or if you have a question then you are slid over to interacting directly with a person or behind the scenes in that sort of broker-dealer area there might be a series of bots behind the scenes that are feeding questions as the brokers interacting with a customer and so filling out the forms and, okay, I missed this information. I'm selling this product so I need this other piece. And that's all being fed back through to the broker who then communicates it out directly to a live person. So they can either put that technology in directly with the customer or one level back for that sort of customer interaction. That's sort of the easy piece. But that same technology can be then filtered the entire value chain within insurance industry. It's not just the sales piece. That's sort of where people see where AI's making huge difference with bots they interact with every time they talk to an insurance agent or have an app on their phone, et cetera, how it all ties together.

But that's just what you see. There's all this other layers of AI machine learning that's done in that sort of middle layer and downstream as you process claims, as you improve the calculations with assigning risk to make sure that in real time you can adjust what the cost of the insurance products are to the customer based on all this new information that comes in. So that's where things are changing radically. And in companies that aren't changing I think are [inaudible 00:15:39] we might still be able in business but they're going to start losing market share and their profitability will go down because the other companies will have a better handle on risk and be able to really price their products more correctly and then get out of products that are more risky than they really initially thought.

The historical model's always been capture information about a building or a person, assign a risk, charge a premium based on that risk at sale. And then maybe it's renewed every year, every other year for a commercial product, when a life product, you sold it. This is the price. And if those risk factors change throughout time, you have no way to modify that. But that's changing out too. Products are being developed that those things can be updated in real time. It's really better, give you a better deal on price because your risk factors are lower. Or it'd be a red flag and say, "Okay, you way under priced this product because the risk factors are now changed."

Vince: Yeah, so I think of some examples, right? The Gecko example of the risk driver, right? So my teenage children driving the car versus me driving the car type of scenarios or maybe my health and my wearing maybe a Fitbit. And if I'm in really good health, I get one level of insurance premium. But if I'm really kind of getting out of shape and not keeping up, my insurance premium changes.

Nick: Correct. I mean those are kind of things that are ... There are companies that are doing that right now. And they're also building up models to set that. So I had work for [inaudible 00:17:12] and their American subsidiary, John Hancock, used Abilify for all their employees. So it's a product that comes with a Fitbit and it gives you a discount on your life insurance and health insurance based on your activity. And there's other incentives as well as it gives you information about your eating habits and et cetera and how it all fits together. It's an overall employee wellness package. So they're capturing all that information and right now it's a motivation to reduce premiums and more activity.

And [inaudible 00:17:46] model if not the exact same tools are being used by major corporations across the United State. If you wear this Fitbit, we'll give you a monetary incentive to be staying in shape, because a healthier employee is a better employee, more productive. So there's a sort of synergy there that they're trying to build on and they're capturing that information to build better models. It'll be interesting how that evolves over time. You think about it from a life insurance perspective, someone who's very active and out running and riding a bike, is their mortality risk greater than someone that's sitting on a couch eating potatoes and watching sitcoms? For a certain window it's probably riskier to be out on the road jogging or riding your bike than sitting on a couch. You're in a likelihood of getting run over by a car is almost zero if you're sitting on a couch.

Vince: That's a good point.

Nick: Yeah, there's going to be a balance and trade off there. And I don't think there's enough data at this point to really fine tune that. They're working on it. They're already giving those discounts. Most insurance companies are doing that from a Fitbit side. You talked about sensors in your car. That's where things are exploding how that works for the [inaudible 00:18:57] it's the autonomous driving vehicles and then there's all the steps in between where you have the sensors that keep you in the lane and monitor the weather conditions, do automatic stopping the car before you hit somebody, keeps track of pedestrians.

You start layering all those things, you can really make that car driving experience much, much safer and the risk of an event occurring is lessened because of all these additional things that are on the car to prevent you from doing bad things. And then it's also keeping track of who's driving a car and varying the insurance based on that information. And those products are already enforced globally for different insurance companies and different packages. So they're working on figuring exactly how to best fit that. In certain places I think it's going to be mandatory that you have a car that has these sensors in the next five years, just because the benefit to the insurer is so much greater.

And then there's things like if I have my old car that I drive just on the weekends, why should I insure it all the time if I'm only driving it some of the time? So there're ways that you can use those same sensors they built into the car to turn on the insurance only when it's driven, and you have some base level insurance for the vehicle when it's parked in the garage. You know where it is at all times and who's driving it. So you can

customize those insurance policies with all that new information and there's lots of other net benefits on top of that we can go into as well. But that's sort of from a risk perspective. There's so much more data out there that companies can use.

Vince: So we talked a little bit about IoT. We talked a little bit about bots and the use for customer interaction. But I think there's also another area around claims as well with bots. What about AI? How is AI playing it here with the insurance industry?

Nick: So AI is the piece that takes the information from all your bots and sensors. The entire value chain. So it's both interacting with customers. We've talked about that whole CRM piece where you take in information. You have the bots that drive that making sure the customer has the right products to meet their needs and it's priced correctly. And then there is the AI that is monitoring all that information from all the IoT devices. And we haven't talked about this yet. But the next big explosion of IoT devices is smart home, smart companies, smart factory. On the commercial factory side, it's been around for decades. Those sensors for all the flow rates and temperatures and lights, et cetera. That information is always flowing in for any big plant. But now that's sort of filtering down to the home levels. So you've got your video capture of who's at your door, which lights are on. What's the temperature? Is there a water problem? Is it your water sensor, humidity, rate on gas, et cetera. All those pieces can now be connected in real time so you can see what's going on in your house. An AI can then sort of have a model. It's what's an anomaly. What isn't? Is there a fire? Is there water damage?

So our insurance companies with all this additional information are moving from after an event what happens so the claim side to claim mitigation. So, oh, there's a water leak that's happening in your water heater for example the water sensor kick that there's a leak happening.

Vince: I'm sorry. So I'm always thinking predictive or preventative maintenance.

Nick: Exactly. That's what's happening on the commercial side. But that's moving to the home side as well. So one of the biggest claims non-fire for home insurers is water damage, a leaky pipe, broken water heater. And if it starts out as a little drip, a little leak, that can be easily fixed with very little cost, especially in like a vacation home. You go away for several months come back and your whole basement's flooded because a leak occurred or you have a problem where you have a hot water heater that broke or leaked out and then flooded the basement, flooded the furnace so it couldn't light. So now everything in the house froze, the pipes freeze, everything broke. So it's again you have all the water damage throughout the building and then you maybe have a freeze event, then so all these things sort of pile on top of each other. It could easily prevent it if you had those sensors to say, "Okay. We've got a water damage. We'll send a text to you. Here's a problem. You have a problem with this sensor going off. Do you want us to send someone else to fix it or?" You make your choice.

So again it's been used widely on the commercial side. Now it's moving to the home side as well. And it can be live monitoring so you can see who knocked at your door. Do you have any packages? Et cetera. So those sort of things with cameras both inside and outside.

You talked a little bit earlier about claims, on the workers comp, traffic kind of claim things. On both of those there's commercially sort of most commercial trucking systems have cameras front and [inaudible 00:23:53] of the truck, cameras pointing at the driver. They have sensors on the driver and on every part of the vehicle so they know what's happening before an accident happens. So say an example, an event happened. A car's pulled out in front of the truck. The truck hits that car. It can automatically copy all the telemetric information where the car is, how fast it was moving, when the brakes were applied, when its gas was applied, what gear the truck was in. You have video of the event, before the event, during the event, and after the event. So all that information can be captured and then makes the whole claim processing much easier.

Again from the worker's comp there's the same lot of working environments have videos scanning 24/7. Casinos for example there's hundreds of cameras at every possible angle. And that information is stored in real time. So if there's ever a workplace event for an employee or if someone has a slip and fall, they have video capture of everything that happened before, and during, and after that event. So it does make the whole claim process easier.

And then to tie those two things together a lot of companies because there's so much information on accidents and accident photos, you can just take a picture of the damage on your car and they can compare it to that similar damage for the exact same model of car. Is the frame bent? Is it just this one piece of plastic? And then we've got all this information about what that would cost to repair it. Who does the best repair in that area? And they can get a check to you very, very quickly. Or realize there's a bigger problem and also a good fraud detection. Is that really your car? Take a picture of the VIN number showing the damage at the same time, and then you've got the telemetrics on the camera from your phone for example that says, "This is where I was, when I took the picture, what time it was." And then you have the information in the picture as well.

Vince: So you don't need a claims adjuster go out to location? You can do all of that online.

Nick: All of it online. Yeah. That's the real advantage on homeowner's side too where they can use drones to fly over to examine both on that sort of preventative side. So for example a lot of in fire prone areas there's part of the policy is you have to cut back brush around a building because it's huge fire risk during fire season. So they can send a drone out there to inspect that that actually happened and capture all that information with both telemetric so you know exactly where the drone was and when the drone was there, plus the video. So if a fire happened, you had captured that information a few weeks before and the customer didn't do X, Y, or Z, you can use that for the insurer to make sure that, okay, you didn't do this. This happened, so your claim is now reduced because of that. There's a penalty. Or you can do it proactively and let the customer know, "We just did a quick scan of your property and realized you're of increased fire risk. You can either increase your premium or trim back this brush around your building."

Vince: So let's shift gears here a little bit and talk about Azure in particular. If I'm a customer or a partner looking to engage in insuretech, why should I consider Azure first and foremost?

Nick: I mean we talked about this earlier. One of the key things with Azure is this global presence. And the net piece is really we're constantly innovating. There are so many new tools that are coming online. I was just in London a week ago talking to a group about blockchain. And we had just rolled out the blockchain work match, a way that people can use multiple blockchains and easily integrate that through API connection pieces and really build from scratch something that used to take a long time, but now they can do it in a day and do some test work right away. So there are things that we're developing continuously that are making it easier to apply technology. On the IoT side we have IoT Edge, IoT Hub. It takes information from multiple IoT sensors, preprocesses it, and you can integrate that with your machine learning AI algorithms and train them and deploy them on the edge device. There's all these things that are just coming online, and we've developed the past three years that are all sort of coalescing into a really great platform that insurers can use, startups, et cetera, in a tool set that people are familiar with.

So that's the real great thing about Microsoft. Everyone has a Microsoft computer or software running on it from Excel to Word. And then that can all Office 365, Office Dynamics, so there's these pieces that all sort of fit together that all major companies globally are already using and this can all sort of fit together within the cloud and that whole synergy is a real win for the companies too. And they're not working with somebody they never worked with before. So coming from an insurance background, the whole procurement process on how to interact with different providers can be a long and lengthy process. But you're already working with Microsoft, so that whole sort of interaction and getting things started is much easier.

Vince: So it seems like Microsoft's making a huge commitment to the insurance industry and to various components to support it.

Nick: Exactly. I mean that's part of the reasons why I'm here is really to support the industry and communicate. And a lot of the tool sets like the IoT, blockchain, et cetera can be used across different verticals as well. So it's really we're trying to develop documentation in examples and use cases that fit the insurance industry and leverage those dynamically changing horizontal pieces on the IoT side, machine learning, AI, so if we can gain the experience from other industries and then also combine that with [inaudible 00:29:39] from the insurance side as well, fitting it all together to really make it easier for insurance companies to leverage these new technologies.

Vince: Nick, why are partners important to the insurance industry?

Nick: I think the really big thing coming as a former Microsoft partner as a consulting and software company it's really the first interaction a lot of insurers have with the cloud environment is really working with those partners and solutions. So they have a problem they want to fix either evaluation, the projection modeling. They have a long history working with a partner. What technology stack should we be running on? Should we build it on our own internal system or should go to the cloud? So it's really critical that us as Microsoft are interacting with those partners as well to make sure that they see the benefit or using our technology stack and then working with the other side with the insurers. Say, "Okay, while you're running in Azure [inaudible 00:30:38] this other

partner, all that information now fits the other because it's in the same cloud, under the same subscription." From the insurance companies I worked in the past that synergy is really critical as the data flows from the partner's applications, their BI tools, et cetera, back to the company and then into the cloud and that whole sort of connecting the pieces with other Microsoft tools and other technology stacks is really critical.

Vince: Based on what we talked about today there's a huge opportunity from what I'm seeing here for our partners to get better engaged with you and the team.

Nick: Correct, yeah. Having been in that space, it's easy to be heads down, working directly on your technology stack making sure what you're working on and not always be aware of some of the new things that are being out there. And that's part of the reasons why we're at a lot of insurtech events and interacting with both partners and customers in insurtech startups as well to really make sure they're aware of the new technologies that are out there. Again the best way to get information, especially from a partner, I think talk to us directly. We have partner support teams as well. We can share those links. And then there's all the information about Azure, documentation, et cetera. So we can again share those links about where that information is on Microsoft products. And then you can contact me directly or our partner management team as well.

Vince: So if I want to learn more about what Microsoft is doing here in the insurance industry, how can I do so? Where can you point me?

Nick: There's a couple different ways. You can direct it to me specifically or we've got a series of blogs and websites that have information from both our Microsoft Docs which has documentation about the tool sets we've talked about. We have a specific area for insurance. There's a whole series of different areas within Microsoft's media presence that communicates out on Twitter and on LinkedIn, et cetera. Again or you can contact me directly and I can fine tune, get you to the right place for insurance.

Vince: Great. And Nick, we're going to provide some links, you're going to provide some links for me that we'll put into the show notes here for our listeners so they can follow along and get all that useful information. And for our listeners who want to reach out directly to you, what's the best way to reach you?

Nick: Both Twitter and LinkedIn I check throughout the day. So I'm nickleimer in LinkedIn. And then for my Twitter handle, it's leimernick. You just put Leimer, you get Brad Leimer who's a Fintech thought leader. Not a bad person but that's not me. So it's leimernick on Twitter. And then again I'm on LinkedIn. I try to have information both places with useful links and then updates on information that's coming out on Microsoft as well.

Vince: Great. And we'll have all that in the show notes. Nick I want to thank you for taking the time today from your compressed schedule. I know you've been traveling around quite a bit actually with your new role. So I want to thank you for making time for us.

Nick: It was great to be here. This is a great communicate out to your listeners. It really helps spread the message of what Microsoft can do for the insurance industry as a whole.

Vince: Exciting times for the industry and also for our partners that want to participate as well. So thank you so much.

Nick: Thank you.

David: Thank you for joining us for this episode of the Microsoft Industry Experiences Team Podcast, the show that explores how industry experts are transforming businesses with Azure. Visit our team at [aka.ms/indxp](https://aka.ms/indxp). And don't forget to join us for our next episode.