

09252017 Ignite Technology Keynote James Phillips

**Microsoft Ignite
Technology Keynote
James Phillips
September 25, 2017**

(Video: Business Forward Dynamics)

ANNOUNCER: Please welcome to the state Corporate Vice President, Business Applications Group, James Phillips. (Applause.)

JAMES PHILLIPS: Thank you very much. Great to be here. It was fun watching Satya this morning and hearing about digital transformation. We're going to talk a lot about that continuing in this session, kind of drill into how we're making it possible in a bit deeper way.

You know, it's kind of funny, on the flight out here, I was walking back and forth down the aisles and about half the laptops that were open had "digital transformation" slides on them. So I think it's clearly the watch word here at the conference.

And it's stunning to me how much change is occurring across every single industry. One of the best things about working at Microsoft is the opportunity to meet with all of you. We've got people coming to campus continuously. We probably have 10 companies a day that come to our Executive Briefing Center. And so get the opportunity to listen, what's top of mind, what the challenges are, what the struggles are. Literally, there is no industry that is untouched at this point by this transformation. I think the automobile industry is the one that's sort of the most visceral probably and easiest to see and understand for all of us.

Auto manufacturers, historically, have been in the business of supply chain optimization, manufacturing prowess, bending metal, distributing these products through dealer networks, you know, this intermediated relationship with customers. Customers come to lots, they buy cars, they use them for their useful life.

And I got to the hotel from the airport here by taking my phone out, asking for a car to show up, took me, dropped me off at the hotel, and very soon that car won't have a driver. You'll have this autonomous vehicle that shows up, picks you up, drops you off, hovers nearby waiting for the next ride. So, you know, that entire industry is in the process of being reimaged.

When I talk to auto manufacturers, when I talk to retail dealers of automobiles, they're all struggling with how do we do this? What does it mean to our business?

And the same thing is happening across every industry. I was talking to the largest hospital operator in the United Kingdom a few weeks ago. And so their business,

historically, they're basically a real estate management company. They build hospitals, build operating rooms, and effectively lease facilities to doctors who come run practices out of these facilities. They, this real estate company, wants to have a more direct relationship with the people that walk through the front door of their facilities. They've got mobile phones, you can download applications, you can use beacons, you know when people are coming and going. So everyone's trying to disintermediate.

And that disintermediation of supply chains and direct relationships with customers is happening across every single industry.

You know, it's interesting that we use the words "digital transformation" instead of "business transformation" or "industry transformation." Largely, I think it's because digital technology is what's making this possible. You know, it is software and data that is driving all of these transformations. But industries don't transform themselves. It's the companies within the industries that need to transform, and really it's the business processes that have to change in order to change the company, in order to transform the industry.

And the example that I just sort of shared with you in the auto space, I mean, think about the business processes that are in flight, that are changing, the product. It's no longer just bent metal that I distribute, it is a service that I'm operating at the limit as that industry transforms. The relationship with the customer is no longer an automobile that I sell through an intermediary, where I don't really have direct touch with a customer. Now it's a service that I'm providing directly, and so I've got that direct relationship.

The operational systems. I still need supply chain management. I still need the ability to manufacture and to control those operations, but I need new operational systems that allow me to predict where these cars need to be positioned, that allow me to direct the cars to pick up the next rider, and I need to be able to tie all of this together.

And so digital transformation, absolutely real, happening across every single industry. And it really starts at the business process level. And Dynamics 365 is what we provide to our customers to transform business processes. They're services that we offer to allow you, our customers, to go on your digital transformation journey across all of your business.

Now, I never talk about Dynamics 365 in a vacuum. I think the most interesting thing about Dynamics is that it is part of a much larger Microsoft cloud offering. And if you think about the -- sort of the holistic nature of the Microsoft Cloud and the unity across all of these pieces, and that's what we're going to talk a lot about today, we think we've got something that's absolutely unique.

I mean, think about all of these pieces. Dynamics 365, which we'll go into a lot more detail on in a couple of minutes, but business process, software as a service across marketing, sales, service, operations, finance, and talent, paired with Office 365. And we call these things 365 for a reason, we want to signal that they are sister services, and they

are in every way. And so you've got, with Office, you know, communication, collaboration, creativity; with Dynamics, structured business process automation, but they work together. You can run your business where you're collaborating. You can create and communicate where you're running your business. And so just a beautiful interlocked set of holistic business SaaS applications.

Now, all of that is built on top of this platform. And with the Power Platform -- Power BI, PowerApps, Microsoft Flow, the Common Data Service -- you've got the ability to tune these applications, extend them, integrate with other systems, and do it in a low code/no code way, and we'll talk a lot about that today and show off where we are and where we're going with the Power Platform.

But today, you open up SharePoint Online, PowerApps is the way you can then go customize lists or build atop a file library.

You open up Dynamics 365, Microsoft Flow, Power BI, PowerApps, the way to add more capability is to integrate and extend. Consistency, unity across those two tiers. But, of course, that's often not enough. Sometimes you've got to go write code, a low code/no code platform may not be sufficient for all use cases, and we'll demonstrate where that might be the case.

So all of this is built on Azure. And with the Azure PaaS capabilities, Azure Functions, Logic Apps, App Service, you've got the ability to drop into code when you need to to create logic that you can then expose through APIs, for example, that you can manage with Azure API Management. Those building blocks show up in the Power Platform that allows you to then go build atop that work that was done and leverage the work that was done by professional developers.

And then, finally, all of that built on this planet-scale cloud with, for all practical purposes, infinite storage and compute capabilities. And all of this stuff, every one of these pieces, is required if you're going to go on a holistic digital transformation journey.

I'll go back to the example. All of the telemetry coming out of those self-driving cars, all over planet earth, you've got to capture all of that data. You have to have a place to hold it. You have to be able to comply with nation-state regulations about data sovereignty in certain geographies. And so having this planet-scale foundation to collect all of this data that you can then make value atop is really something I think only Microsoft can provide -- only Microsoft.

We have all of these pieces, and they were built to work together, they were built to be self-reinforcing, and it's an incredibly powerful platform for digital transformation.

So let's focus now on Dynamics 365 and then as we go through the day here, through the next hour and a half, we're going to pick off pieces of Dynamics 365, show those off, and then we're also going to show some of the platform capabilities that I talked about, and we'll hit hard on artificial intelligence and the work that we're doing there.

You don't have to be an Einstein to know that AI is hot right now. And it's something that Microsoft has been investing in, innovating around, and delivering primary value now for decades. It's part and parcel of what we are and what we do.

So let's look at Dynamics 365. Now, the business applications space has evolved over the last several decades into this very vendor-outward kind of configuration. I've been a CEO multiple times, many executives, I never think about my business in siloed terms.

But we've got CRM, front office, customer engagement, ERP, back office, operations. When I'm thinking about business, if I'm going to spend money on a marketing program to generate leads, I want to get paid eventually. If I'm out selling capital equipment to a customer that trusts me to deliver, I want to understand my inventory position so I can promise whether I can meet those needs or not.

And so we think holistically about our businesses, and yet we've been forced into these silos because it sort of made sense for someone who wanted their stock ticker to line up with one of these three letters.

In reality, with Dynamics 365, we've been able to break down those silos. We've brought together what was CRM and ERP into a holistic business service called Dynamics 365.

But we've done it in such a way that we give you onboarding options that don't require you to rip and replace these large, monolithic systems. And so across marketing, sales, service, operations, finance and talent, we have a collection of products and services in the cloud, and by the way, also on premises, which is a remarkably important characteristic in a world where a lot of your stuff still lives on premises. Microsoft however shipping software on prem for the last 40 years, we kind of know how to do that.

And so as we also move you to the cloud, connecting those two worlds together is something that we think we're uniquely capable of doing.

And so across all six of these domains, anywhere you find a CXO for all practical purposes, we're going to have a collection of products and services that allow our customers to go on a digital transformation journey, starting from where they are.

So let's sort of -- I'm going to talk about our approach, and I'm going to start with talent, I'm going to pick on talent, but what I'm about to say applies across all six of these.

So in talent, again, across all six, we have a collection of offerings that starts with sort of a core offering. And so for talent, we have Core HCM, human capital management, part of what has traditionally been an ERP category.

And these systems are administrative in nature -- payroll, benefits, employee administration, compliance, reporting, and that sort of thing. And we have that. We have

what I believe to be a world-class system that provides for those core administrative capabilities, but what I know is most of our customers have that too. And, pretty frequently, you're not in the market to rip and replace that. And so if all I had to offer you as a customer was to change your payroll system, I probably wouldn't be very helpful as you start to think about how do I transform my talent processes?

And so in addition to that, we just introduced and announced this morning a collection of modular applications for talent, starting with a tract in onboarding where we can do things, and I'm going to show -- so I'm not going to go into great detail here, because we're going to show it, but imagine what you can do.

You know, you take data out of LinkedIn, you build mobile applications for candidates, you build applications for hiring managers, you connect that to whatever core HCM system you might already have in place, and suddenly you can start thinking very differently about how you find the right people, how you engage them through the hiring process, how you bring hiring managers into the loop so that it's not a black hole on either side. I mean, really thinking differently about the core of what really matters in talent, which is finding great talent, bringing them on board and making them successful without requiring you to rip and replace your core HR system.

Now, you may not want to change any of your operational systems right now, and so in each of these functional disciplines, we'll also have a collection of insights offerings that allow you to take data from whatever systems you have from Office, from LinkedIn, and from your existing operational systems and other sources and gain insight into the effectiveness, the operations and opportunities to improve each one of these functional disciplines.

Where do I have employees that are at risk of attrition? Where is my competitor finding talent? Where am I losing talent? What have the trends been over the last year, two years, three years?

And the good news about these is that the more you get, the smarter each of these components becomes. And so if you start with talent insights and you learn where you've got attrition risk, you learn where you're being successful in finding candidates or where your competitors are, you can pipe that into these different operational systems.

One of the things that I'm always asked, every single time I go to hire someone, I open a new rec, the first thing I'm asked by the recruiter is, "Where should we go look for this person? What companies should we recruit from?"

Usually, with a traditional HCM system, it's a blank sheet of paper. You open the rec, and you start talking about it.

With Dynamics 365 for Talent powered by Talent Insights, it's not a blank sheet of paper. You open the rec and it auto populates intelligently based on information, where you

should go and where you'll likely have the best chance of finding the right talent. So incredibly powerful.

But all of this, all of these systems are powered by data. Data is what sits beneath these systems, permitting the ability to go train AI models, the ability to gain insights from both proprietary signals and signals that come from social networks, LinkedIn and other places.

And so a lot of the focus today is going to be on that data, and so let's just quickly take a look at what we mean by data in this context.

Beneath Dynamics 365 is the Common Data Model, instantiated as the Common Data Service. It's the place where our applications store their data. And they store it in a schematized, consistent form across all of our customers -- leads, opportunities, inventory items. And so it allows us to do the things that I talked about earlier.

If I'm trying to make a sale, I want to check inventory, if I'm doing a marketing lead, I want to eventually close the loop with lead to cash. And so all of these systems build upon this common data substrate, but it's not just Dynamics 365. It's Office 365. My contacts, my calendar items, all of the data sitting in my productivity system is now also joinable and joined with my structured business process data, but it doesn't stop there.

LinkedIn. Now I'm able to bring external signals to my own proprietary internal data so that I can start joining that with information that's unique to me. And this is an open platform. Any of our partners are able to build solutions on top of this Common Data Model we announced with Adobe, their commitment to build their marketing platforms atop this same model.

And so we've got this rich ecosystem developing around this common substrate of data called the Common Data Service, the Common Data Model.

All right, so we're going to shift gears now and we're going to go through some of these Dynamics applications, some of our services, and give you a flavor of what's possible when you reimagine business processes, when you reimagine what's possible when you've got the power of data, artificial intelligence and the ability to bring together all of these systems across the entire Microsoft Cloud.

We're going to look initially at what I talked about earlier, and that is the employee engagement, the talent applications, that domain. Moving from a world where it really was just an administrative system that was primarily for the HR practitioner, to a world where it becomes an enabler for a transformed talent process.

And to take a look at this, I'm going to ask Muhammad to come out and give us a demo.

MUHAMMAD ALAM: Thank you, James.

JAMES PHILLIPS: Thanks, Muhammad.

MUHAMMAD ALAM: Thank you. (Applause.) There are three -- if you look at any of the major surveys and research out there, there are three different trends that are affecting the recruiting industry today, and the biggest one is the shortage of talent. Sixty-five percent of all recruiters claim this is their biggest challenge in terms of finding the right talent.

The second trend, presumably derived from the first one, is the candidates are now more in control of the experiences that attract them to a particular company. Some of these experiences that they're looking for is being able to kind of go through the recruiting process on their mobile devices and being able to kind of do their day jobs with as much productivity through the mobility experience as possible. The third one is the role of AI and machine learning into the recruiting process as well.

We, at Microsoft, are largely impacted by these trends as well. James talked about digital transformation, that's affecting a lot of companies and a lot of different industries. Historically, we used to compete for the technical talent that we're looking for at Microsoft with our traditional competitors. But now in today's world, we're actually competing for the same talent with a whole set of companies across a whole set of industries who are looking to digitally transform themselves.

With Dynamics 365 for Talent, LinkedIn and Office 365, we've got a solution that addresses these exact trends by bringing together and providing a consistent and connected experience, not just to the recruiters, but to the hiring managers, as well as to the candidates as well.

So let's take a look at what we have in Dynamics 365 for Talent the lens of one of our customers, Chemonics.

Chemonics, for those who aren't familiar with who Chemonics is, is a large organization, global organization in about 80 countries focused on driving high-impact social impact products. Some of the projects they do are things like driving sustainable agriculture in Afghanistan, AIDS in Uganda, pension reform in Armenia.

So if you think about what they do, recruiting is a big challenge for them. Finding the right talent for the right job is something that they take extremely seriously as well.

So we'll take the role of -- I'll start on with the persona of a recruiter. As a recruiter at Chemonics, I'm going to start my job in LinkedIn Recruiter. The job that I'm looking for, this time around, is for a staff accountant, a staff accountant that I need to be based in Washington D.C., and someone who I would like to be able to speak Spanish because it's for a project that's based in Dominican Republic.

As you can see from a LinkedIn Recruiter perspective, I've put in the filters fairly easily, and LinkedIn surfaces up from amongst the 500 million-plus profiles that they have, the two candidates that actually come up and match the criteria that I've set.

Furthermore, I have the ability to say, hey, who are the ones that have actually in their profile said, "I'm open to looking at new opportunities"? Because as a recruiter, what I really don't want to do is spend time talking to people or waiting for people that aren't really interested in changing jobs, because that just wastes my time from that perspective.

So I can further filter this and say, who among these are open for new opportunities? And you'll see it's Cameron Haney. So as a recruiter now, I can start an interaction and a dialogue with Cameron to see if he's interested and hopefully get him to the point of applying.

Let's change hats. Now I'm the hiring manager of Chemonics, and most of where I'll work in this recruiting process is in the Dynamics 365 for Talent Attract app. And as you can see, I'm in the Attract app as a hiring manager. I'm not in LinkedIn Recruiter. But in the app, I actually have visibility to the rich profile information for Cameron that I can look at and even connect with and communicate with him through the Attract app with the embedded LinkedIn rich profile that's available. And that's available not just for Cameron, but any candidates that have applied to this position.

What you'll also see is I've got a business process guided experience here at the top that's going to be configurable here in the near future that walks me through as a hiring manager what's the process that I need to follow?

For the purposes of the demo, we're going to quickly move on to the interview stage, and the interview stage, typically, what happens is from a hiring manager perspective, this is where I end up spending a ton of time, right? Finding who the interviewers are going to be, finding out when the candidate's available for an interview, and then kind of going into Outlook and opening four or five different calendars, if I have four or five different interviewers, lining up the availability and the scheduling and then sending out the meeting invite.

What you'll notice we've done in the Attract app with the deep integration that we have with Office 365, is really bring that whole process into the Attract app, so I can get the candidate availability, I can choose my interviewers, I can select the sequence I want the interviews to happen, I can mark if I want the interviews to be one on one or a group interview, and then finally, I can actually look at the interviewers' schedule to get the interview scheduled.

For this interview with Cameron, I'd like for it to be on the 28th. And I would like for it to be an online meeting, because being a global organization, most of the interviewers are typically not in the office. And then I'll check online and click "find schedule."

And what this will do with the deep integration with Office 365 is look up all the interviewers' schedules, and not just look up the schedule, it's smart enough to come back, keeping the sequence in mind that I wanted, and propose an interview schedule.

And all I have to do here is just send the request to the interviewers. It will send them an Outlook invite and block out the calendars.

In terms of whether the interviewers actually accepted the invite or not, I can get that feedback directly in the Attract app as well. I can see that Reike is the one that's declined, so I can now take that offline with just that one interviewer to find another time that works better for her, as opposed to the one that I requested.

So that's the scheduling the interview part. Now when the interviewers are done, the other hardest part that we faced was soon as the interviews are done, as a hiring manager, then I need to go chase the interviewers to get the feedback on what they thought of the candidate and should we proceed forward with a hire or not.

What we've done is provided a fairly simple process here where as an interviewer, I can quickly take down the notes in terms of how the candidate is doing, and give my hire or no-hire recommendation as well.

And I can see here Reike, in this case, has already completed the interview and submitted the feedback. The other two haven't completed the interviews yet, but they can easily and quickly, even through the mobile experiences, just kind of type in the comment as they're going to the next meeting or sitting in a cab or going home, and give me that feedback. And then from here, if I'm getting the feedback that Cameron is a good candidate, I can really move to the offer stage within the Attract app.

This allows -- this whole process of being able to collect the feedback in a timely fashion and extend an offer can sometimes be the difference in landing a candidate at Chemonics versus somewhere else. Because as we discussed, the shortage of talent really has a lot of companies focused on getting the few talent, the few skills that are out there. Right?

So now that I've kind of extended the offer, two sets of parallel workflows kick in. If you are using the Core Human Capital Management, Core HCM solution within Dynamics 365 for Talent, obviously, all of this information feeds into that HR system, and your HR folks can continue on the process of setting up Cameron as an employee.

In parallel to that, as a hiring manager, I can set up an onboarding guide for Cameron as well, which is something that we've introduced. So as a hiring manager, what I can do is set up a set of tasks and activities that I would like Cameron to complete before he actually starts at Chemonics, because we need a certain number of certifications and certain tasks for him to complete that he can do before he can actually start us on day one.

This is the view that Cameron would get as a perspective employee coming in. It kind of says, hey, these are the things that I need to go do, and I can kind of mark them when they're done.

Obviously, as a hiring manager, I have a different authoring experience where I can define what those tasks look like, use templates, define templates for different roles and so forth to really make my job a lot easier.

Within this onboarding app, you can also embed specific PowerApps applications as well. So if you need to enable data from other systems within your organization and surface up in the onboarding experience, you can set that up here. So Cameron can really kind of, let's say if you want to select a laptop and you've got a set of options that you provide for your prospective employees, you can surface that up through a PowerApp for Cameron to select.

Historically, the hiring manager would make the decision, and when the employee would start, he would look at the laptop and say, "Maybe I wanted this one." So all of this, while it seems small, it helps towards making that candidate experience a differentiated one, and hopefully something that can attract a candidate to your organization versus somebody else's organization.

The other thing that we provide in the onboard app for the candidate is through the data that we have in Office 365 and LinkedIn is a set of graphs, right, for me as a perspective candidate to see, hey, who at Chemonics -- who may be working at Chemonics that I've gone to school with? Who I may have worked with before in a prior company.

And also, more importantly, who within Chemonics have the same job title that I'm actually going to join Chemonics for? So this allows me to connect with those people, get better acquainted with the company, as well as the role. So when I actually start at Chemonics, I feel like I'm better prepared as well. So we leverage the rich information that's available in LinkedIn and Office 365 to surface that up to the candidate before the candidate actually starts.

So at this point, Cameron has already started with Chemonics and he's on to his first project, which is doing something in Dominican Republic, and he's on his way back on his flight.

The next part of the demo, what I'm going to show you is how we're taking those mobile experiences that you saw here into the actual day job that Cameron has to do from an employee perspective.

So coming back from his trip, Cameron has to -- we're going to move over to the phone here. What Cameron has to do is enter time against a project, because we do track time against every specific project, so we have to provide the transparency back to the donors through the mobile apps. And these are just two examples of a plethora of apps that we have available on the mobile form from Dynamics 365 for Finance and Operations.

I can actually do project time entry, or in this case, we'll go in and do expense management. So I'm sitting on the plane, I've got a taxi receipt, and what I really want to do is just capture this receipt. I'll put in a title, say taxi, and take a photo. And that's essentially it. And then I'll hit "done."

So we'll move back here to the laptop. And if I move on to the next screen, here is Dynamics 365 for Finance and Operations, you'll see those transactions that I've taken the receipts for, show up here where I can easily assign them to a specific project as to which project those expenses belong to, and then complete the task at hand.

All of this accrues to being able to provide a full view from a transparency and accountability perspective for Chemonics in terms of where the projects are, what are the expenses against that project? So us as an organization, us as Chemonics can provide that same level of transparency back to the donors that are investing in Chemonics.

So that's the demo for talent. I'll invite James back. Thanks, James. (Applause.)

JAMES PHILLIPS: Thanks, Muhammad. One of the things that really strikes me as I watch this demo, and sort of the word that pops into my mind is "empowerment."

The thing that I hear frequently from candidates is once they submit an application, it's like a black hole. There's no way to understand where they are in the process, whether they've been contacted, sort of if they're getting teed up for an interview.

With Dynamics 365 for Talent, we provide an application for the candidate. We provide an interface for the hiring manager to understand what the recruiter's doing, who am I looking for? Am I finding potential candidates?

Alyssa Taylor, who's my marketing counterpart at Microsoft, forwarded me an email a couple of days ago from our field sales organization. They've started to adopt, just virally within the company, Dynamics 365 for Talent because they finally get to understand all of this open headcount they have, if someone's on the other side actually starting to fill their pipeline.

And so these applications are super easy to adopt, they can be done so at a departmental level, they can hook up with whatever systems you already have, and they really do bring empowerment to constituents in these business processes who previously have been unempowered.

Now, data is what makes it possible. If you look beneath this application, we were able to pull data from Office 365, from LinkedIn, from your core HCM system, and line all that data up to fundamentally reimagine this crucial business process.

And I'm going to go back and sort of hammer on this point. The core administrative HR system that you already have in place is not something we're asking you to rip out and replace in order to go pick off your high-value processes.

And I'm going to argue that it's these higher-value business processes where you can really move the needle for your business, versus worrying about your administrative systems.

And so a lot of power, a lot of power, the more you use. But we're not forcing you to forklift upgrade your systems in order to move down your digital transformation journey. We meet you where you are, and we give you a menu of options that allows you to further your journey.

So let's talk about sales. So salesforce automation, CRM historically, you know, people call it a "system of oppression." You've got sales management that forces the field sellers to fill in their things so you can get pipeline reports and better manage your sales. People hate these systems. And they don't want to use them. They get made to use them and they resent it.

What if you could take data, you could take intelligence, and you could turn these systems of oppression into systems of empowerment? If you could give sales people insight into what's my next best action? How can I find someone out of my network or my friends' networks to help me move down the path of closed with a higher probability? How can you fundamentally reimagine the process of selling in a world where you've got all of this information available to you and you can intelligently leverage it and inject it into your business processes?

To talk about this a bit more, I'm going to ask Doug to come out from LinkedIn. Doug?

DOUG: Hey, James.

JAMES PHILLIPS: Hey, Doug.

DOUG: How's it going? (Applause.)

JAMES PHILLIPS: Doug and I have known each other now for quite a while. We've done a few of these things together. It's always fun to see you, thanks for coming out.

DOUG: Thank you.

JAMES PHILLIPS: And you spend most of your time I think out talking to people who are living the sales thing. What are you hearing?

DOUG: Well sales, as you know, is changing a lot. I think it's really about relationships. I mean, if you had called me in for a sales meeting 10 years ago and you had looked me up and kind of cyberstalked me beforehand, I'd be kind of freaked out. To be honest,

now I'm kind of annoyed if you haven't done that. If we go into a meeting and you haven't done your homework on who I am, what's my background, what my organization is about, let's get past that stuff and let's move on to the business of understanding the business. That's one.

I think another big change that I'm seeing is how you get in. I think we're all developing this kind of pattern detection around cold calls and template emails. And I think that at LinkedIn, our No. 1 source of lead referrals is warm introductions. So that warm introduction where you can say, hey, I actually know somebody who knows you, find that best connector, and get in. It's the best way. And that's a lot about how the relationship of sales is changing.

JAMES PHILLIPS: Got it. Got it. And so I know you've got a product, LinkedIn Sales Navigator. Talk about that for us. What does it do?

DOUG: So Sales Navigator is the best version of LinkedIn for salespeople. And the thing you have to realize about LinkedIn is LinkedIn is not just a static list of people and companies, it's this living, breathing network. And so Sales Navigator is really taking advantage of that.

And there are three things that we talk about when we talk about Sales Navigator. It's target, understand and engage.

So the target is how do we give you the most powerful search tools to not only reach out and find leads and accounts and bring them in, but how do we push stuff to you? How do we make recommendations based on what you've closed in the past? So that's one.

Two is the "understand." Now, it's nice if I get an alert that it's your birthday or you had a work anniversary, that's kind of nice to have. What's really important, though, is if you are the key decision-maker on a deal that's about to close this quarter and I find out that you've just left the company, that's what we call a money alert.

JAMES PHILLIPS: That's a problem.

DOUG: I'm going to lose money if that happens. So I want to know about that right away and Sales Navigator helps you with that.

And then the final one is the "engage." And this is kind of where the warm intro piece comes in.

So we all have our own LinkedIn networks. But imagine being able to tap into the network of your entire company, and even beyond, to find out who is that single best person to go get you in the door?

JAMES PHILLIPS: Got it. OK. And so it's interesting. LinkedIn Sales Navigator, super successful product.

DOUG: Yes.

JAMES PHILLIPS: But it's better together with Dynamics Sales.

DOUG: Yes.

JAMES PHILLIPS: So the ability for Dynamics 365 for Sales to connect up with Sales Navigator is what we're going to demo in a second, but I think we're talking about some new capabilities actually that we just announced.

DOUG: Yes.

JAMES PHILLIPS: Talk about what we're doing together.

DOUG: So in the past, we had a lightweight integration with Dynamics where you could see Sales Navigator information directly in a Dynamics interface. What we're showing off here today and throughout the conference is going that one step deeper. And so it's really about bringing just that right piece of Sales Navigator information at just the right time into the right place of Dynamics, and we're going to go take a look at that as well as some of the PowerApps and Power BI stuff this week.

JAMES PHILLIPS: Super cool. Hey, thanks.

DOUG: Thanks. Good to see you.

JAMES PHILLIPS: Good to see you, Doug. Thank you. Thanks, Doug. (Applause.) Thank you.

So I'm going to ask Param to come out. Param is going to demonstrate Dynamics 365 Relationship Sales. And we'll take a look at some of those integrations that we just talked about. Come on out, Param.

PARAM KAHLON: Thank you, James. Thank you. Thank you very much. (Applause.)

So at Microsoft, basically our sellers are leveraging Dynamics 365, Office 365 and LinkedIn to fundamentally go through a sales transformation process.

It wasn't always this way. Historically, our sellers would send emails, use social media tools, use a CRM system as disconnected silos.

But what we're trying to do now is, you know, through technology, connect all the data, the processes, and insights to be able to build a system of engagement, not just system of record, build a system of engagement that helps you connect with your prospects better. So let's take a look.

So what we see here is an out-of-the-box machine learning model that helps you, you know, score your leads. So as a seller, I've got a lot of leads that I have sitting in my inbox at any point in time. I need to find out which ones should I spend time on right now so that I can meet my numbers.

So here I can see in my dashboard right here, all my leads have been categorized into either grade A, grade B, grade C and grade D.

If I'm smart, I'll focus on the grade A leads because my grade A leads, based on the machine learning model that's been built, are four times as likely to close as an average lead that's in there.

So, again, this is based on historical patterns that actually tells me that these kinds of leads are more likely to quality and move them further along.

Now, we've got a machine learning model that's out of the box for lead scoring, but what we've done is that if you wanted to build other sorts of machine learning models, if you want to do customer churn analysis, if you want to detect fraudulent activity, if you wanted to do predictive service models, it's super easy to be able to build these models. Any data analyst, any sales operations person can very quickly create these models by just pointing data that shows positive outcomes and negative outcomes for the outcome you're trying to predict, and you're able to build that model quickly.

Now, these models, if I drill into a dashboard here, this basically tells me that this model is actually getting better as I throw more data at it, as I qualify more leads, as I work with my system, I'm actually able to make better predictions over time.

Now, as a sales person, what I'm going to do is I'm going to come into my dashboard. I've got a set of marketing-qualified leads that are in here. And I can see those leads. But what I can also see in the right-hand column here is my score. The score is basically predicted by the machine learning model, and if I'm working on a lead right now, if I have some time to call the customer, I'm going to pick the score that has the highest score and I'm going to work on them.

And as I open one of these leads, let's say Justin Gurney, that information from that machine learning model continues to flow.

So what I can do here is I can see that the score is a grade A lead, which means score's pretty good, but it's also telling me why the machine learning model, the factors that it extracted from the data and the lead, why it was scored a certain way so that I can focus on the things that actually will help me progress further.

So let's fast-forward a few more weeks, and let's just say, you know, I contacted Justin and tried to contact him through email and I progressed this lead into an opportunity and we think we have a good business here.

So what I want to do is -- one of the other things I do is using Power BI, I do my pipeline analysis on a regular basis. I want to find out, you know, how is my quarter looking? How's my period looking? Am I going to make my numbers or not?

And one of the things I can notice on this Power BI chart is that I'm about a little bit behind for my current period. I need to focus on the things that can help me get to my number and help me make my number.

So what I'll do is I'll drill on this pipeline gap right here. And what that does, it shows me the list of my opportunities that are there that I'm tracking for my pipeline that can help me meet my number.

So very quickly, I can notice here that there's the X axis here shows me the estimated dates that I'm expected to close, right? And it shows me that I've got an opportunity closing, you know, pretty cool. And it seems like it's exactly the kind of number that I'm trying to achieve.

But what's good in this chart here, it's bringing data not just from my sales app, but it's actually conflating that data, it's actually making the correlation off that data together with the data that I have within Office 365. So it's predicting what the relationship health looks like for this opportunity based on the number of touchpoints I have with the prospects for this opportunity, not just based on the activities that are in my sales people, but based on everything I'm doing with this customer across Office 365. Every time I send an email to the customer and they respond, it adds to my relationship health score for this. Every time I set an appointment and meet with the customer, it adds to my relationship health score. So I can score it based on that.

In this case, that health score is reflected on this axis right here, and I can see that this opportunity here actually doesn't have a good health score. So if I want to convert this this quarter and really close it and make sure I can meet my number, I need to figure out what I can do to improve the relationship of this particular opportunity.

So what I do is drill on this opportunity right here and go to what the opportunity looks like. Over here, I can see that, first of all, I notice that there's only one stakeholder in this opportunity. I'm betting the whole farm on making sure that Justin engages with me and does business and helps me close the business here. But at the same time, I can see that, you know, I sent Justin an email some time ago and Justin hasn't responded.

So what do I need to do to get Justin's attention? What do I need to do to get Justin to respond back to them? Because traditional channels of contacting the customer through phone and email aren't really working in this case.

Well, the nice thing is that with Sales Navigator, I now have ability to figure out if there's other people within my organization that actually have a relationship, have a connection with Justin that can help me get that -- some engagement happening with them.

So I can basically click on "get introduced" and say that Justin at NBA, has a lot of people here. For example, I can see that Steve Kaplan in my organization seems to have a relationship with Justin.

So I can go ahead and click on Steve and say, "Hey, Steve, I want to ask you for an introduction." Because there's a very high likelihood that I can, through this warm introduction through Steve, that I will get Justin to be able to respond. So I'm going to click on this "ask for introduction." And right then and there, directly within my system, it basically logs in and opens the LinkedIn in-mail editor so that I can now start to say, you know, send something to Steve so that Steve can forward it and get me introduced over to Justin.

So I'm going to quickly type in some topics here and some comments. I have a stalled deal, can you help me move that forward?

So I've got this thing typed in. Now, one of the good things with Sales Navigator is, traditionally, if I wanted to send some collateral to my customers and prospects, I would attach it as a PowerPoint or something else, and I have no idea if my prospect actually ever read that, actually opened that or not, and it was sort of not as a warm thing.

What I can do now is I can click on this point drive right here, and using this, I can create a personalized page that I'm going to send to my prospects. I can put whatever content that I want to put on that page. I can put, you know, videos, email, the appointments, all of that stuff directly in this page and I can quickly get the link for that page, copy that, and move over to my opportunity and be able to -- sorry, let me go back to that -- and basically copy that and add it embedded directly into that application as well so that I'm able to now, when I talk to Steve Kaplan, I can take it here and I can copy that in place and that will basically be able to send that link over to Justin.

Now, what's nice about that is once I get that link in place here, I'm actually able to get my engagement activity as well. So if I wanted to know, once that page got sent, did it actually get opened? How many views were done for that page? How many data was created? I can get all of that and I can very quickly create and know the person that I sent this content to has actually engaged with that or not.

Now, you know, if I'm a sales person, I'm spending a lot of time on the road. And, you know, on the road, the only device that I have is my phone. And if I wanted to kind of make sure that I stay productive on the phone as well and know that if someone's contacted me I should know.

So, for example, when I come into my phone and open the Outlook app, I can notice that Justin actually is now responding. Steve made me a warm introduction that actually got Justin to engage with me, and Justin has sent me an email, and very quickly now on the phone itself, I can see that, you know, Justin is here and we're engaging with Justin.

One of the things we can do here, as we get that email as well, we can now start to get some information from Dynamics 365 directly through this within the Outlook application as well. While I can use the mobile application that Dynamics offers, but can also just directly within my email, if I want to quickly find out, you know, who is Justin, what am I tracking with Justin, are there any support requests outstanding with Justin? Or if I wanted to now take this email and move it to my sales application so that the rest of my team that's working with me on the opportunity wants to know that Justin is now engaging with us and send me back and opportunity and would like to discuss a proposal. I can basically come in and click this track button and automatically this opportunity will basically get tracked directly in place. And I can track it regarding the NBA 365 opportunity.

And now I've got that system automatically move the email automatically moved over to the sales app, and now either way, when I go, I'll be able to see the communication that I'm having with them, it'll show up in my timeline for that activity as well.

As Doug mentioned earlier, that's not all. What we're also doing is, you know, through Power BI, we're now creating some dashboards that will actually measure the amount of interactions that my sales team is having with Sales Navigator, how effectively are we leveraging Sales Navigator?

As you can see, you know, sales transactions are a lot more effective when we go through a connection, when we engage with customers using LinkedIn mails or using my connections on direct messages with them.

So we're now able to track sort of as an organization, we set a certain threshold that this is how much we're going to use. Through Power BI, now we're able to get those insights directly in place as well. For example, if I wanted to look specifically on either one person or multiple people, I'm able to do that. I'm going to click on Param here, and my record as well, so I can see as a team we were doing pretty well. But if I wanted to find out, you know, what my personal statistics looked like, how engaged am I in this as well, I can see that I'm leveraging these engagement tools pretty well.

But it seems that I'm not making enough connections as I used to make, so maybe that's an indicator for me and my manager to coach me on whether you really can do more with Sales Navigator so you can do more things and effectively close more business out here.

As you can see, we're leveraging this now within Microsoft, but you as our customers as well are able to get the true benefit of ensuring that Office 365, Dynamics 365 and LinkedIn seamlessly connected, have data, have the processes, and more importantly, have the insights to be able to tell you how you can use the system to really be more effective at the process of selling to your customers.

So with that, I'll turn it back to James. Thank you very much. Thanks, James.
(Applause.)

JAMES PHILLIPS: Thank you, Param.

PARAM KAHLON: Thank you.

JAMES PHILLIPS: All right. Once again, data. Data is at the core of this experience. You know, the ability to pull data out of Office 365, LinkedIn, out of whatever operational systems you have in place, and to line that data up to fundamentally reimagine that process, you know, that's the power, ultimately, of the Microsoft Cloud and Dynamics 365 as part and parcel of that larger set of capabilities.

Now, data is just data if it sits there. You've got to do something with it. You have to learn over it, you have to train models, you need to analyze it. You need to then take all of that analysis and pump it into your operational systems in order to make them smart.

You know, I'll be sort of transparent and frank for a minute. There are a lot of organizations on planet Earth that would love to say they're AI companies. They'd love to be in that game. They make up fancy names and they talk a lot about it. And you go to their products and there's a big gaping hole.

At Microsoft, we've invested billions of dollars over the course of decades with primary research out of Microsoft Research to lead in thought leadership and in the development of artificial intelligence that we have perfected over the course of many, many years behind Bing, being Xbox, being Xbox Live, behind Office 365, behind Dynamics. It is what we are, right? It's at the core, it's at the essence of what this company provides.

And so while others may be entering the game, we're sort of entering the ninth inning of the game. And a lot of the capabilities that you see across Dynamics 365 are enabled as a result of those deep investments and of the state of the art, frankly, that Microsoft has helped move forward in the industry.

Now, one of the things that we have introduced today is a new collection of AI-first services under the Dynamics 365 family that allow organizations with complex processes, lots of proprietary data, to get help in certain areas of their business creating tailored solutions that take the power of Microsoft AI and surface it in the context of their unique systems and unique capabilities.

The first solution that we have introduced is Dynamics 365 AI Solution for Customer Service. And to take a look at how that's being used at HP and other locations, I'm going to ask Farah to come out and do a demo for us. (Applause.)

FARAH SHARLEFF: Thank you, James.

Hi, everyone. I'm excited to talk about how one of our first Dynamics 365 AI solutions is revolutionizing the area of customer support for your consumers, your support agents and your support business leaders.

Show of hands, how many of you get frustrated every time you have to call customer support? Exactly. It can be a rough experience.

But the answers to all our support questions already exist somewhere. AI helps extract knowledge from these scattered knowledge sources like support documents, FAQs, or in the millions of support interactions that are happening every year already. And then AI builds a contextual understanding of all of your support problems.

Let's take a look at how our solution's intelligent virtual agent helps customers get to their support questions and resolutions quickly.

When you ask a simple question like, "I can't sign in," search would give you a bunch of general results.

But what we've built is a deep-learning-based conversation engine that dynamically figures out when it needs to ask a clarifying question like, "Hey, what product do you need help with?" And then delivers the one accurate solution.

And it doesn't do this using static decision trees, it's actually truly intelligent, and it's learning using past conversations that have already happened.

So let's jump in and take a look at the virtual agent that we've recently displayed for HP, Inc. I'm going to ask it a question about my HP Pavilion laptop backstage being a bit slow today.

It confirms my intent, and on the surface here, it looks like I just got an answer to try. But, really, what has happened here is that the conversation engine has automatically skilled the troubleshooting steps that are not relevant to me like issues with malware or disk space.

And you'll notice that it didn't even have to ask me a question about, "Hey, how much disk space do you have?" But, instead, it automatically checked my PC for all of those issues by having access to HP's device information APIs.

Remember, nobody had to write a sequence of steps in a decision tree for it to be able to do that. That's the kind of minimal effort support that customers want, and no other virtual agent out there can do this.

Even better, the virtual agent enables the user to get to the suggested actions with just one click. No more go to start, control panel, navigate the user to the solution. Another pain point gone. Isn't that awesome? (Applause.)

Now, what if I was the customer that still really, really, really wanted to talk to a support person? The live agent enables me to simply ask the virtual agent, it checks my warranty status, and then patches me through. Now I'm able to connect with a live agent via chat.

So if you're not impressed already, let me show you how AI is going to be helping your live agents.

We've built a smart assistant for your support agents that provides them with AI suggestions, improving their access to knowledge, improving customer satisfaction, all while reducing case handle time. And in the background with the power of reinforcement learning, the engine is continuously improving by watching these interactions between the agent and the AI suggestions.

So let's go back to our PC being slow example. The agent assistant here can integrate with any CRM solution. HP here is using Dynamics 365 as their customer service solution, and you can see that on the left, the agent would see my full customer history, all of the different cases, and on the right, a full history of the chat I've just had with the virtual agent, allowing them to seamlessly pick up where it was left off.

Now, let me point out what the AI is doing here. The agents get suggestions on relevant probing questions used by other agents in the past who have dealt with similar cases. And they can send it over to the conversation just by clicking on it. The system also searches relevant solutions from suggested documents, FAQs, and other content sources, and then again, presents them to the agent in the agent assistant. They can simply click and it gets added to the conversation with just one click.

They can do everything now from research to chat to case notes from one integrated place.

And that's not all. The agents also see other issues that the user might run into in the future, and the system highlights these preventative support opportunities for them. Here, you'll see that the agent is able to provide me support with an ink subscription expiration that I might run into. It's like your most experienced support agent riding shotgun with all of your support staff.

So now let me put my support leader hat on and show you how the solution is complete with detailed analytics that allow you to peek into the data that AI is using to learn.

The solution also provides you with a conversation editor that allows you to rapidly respond to events like service outages or new product launches.

I'm going to show you a dashboard. I'm not going to be able to show you HP's data, but I'm going to show you a small data set that we use for testing.

So here you can see that I get valuable insight by looking at the top trending issues that customers are having. And then this high abandonment rate of the OS update issue catches my eye. Let's dig deeper.

Over here, I get a detailed breakdown of all of the traffic for all of the terms across all conversations for this issue. I can even go read actual chat transcripts if I want.

And let's say after having done that, I identify an improvement that I can make. My customers are talking about OS update and driver update issues all as one software update problem.

So now all I need to do is link the two from the same flow. Let me show you how easy it is to do that. I'm going to go ahead and add my other update scenario and link the driver update and answer. And then, just like that, now my AI will handle the rest with the dynamic conversation engine. I can push the test and deploy when I'm ready.

You can see how easy it was for me to identify an improvement and train the AI, make changes in a few easy steps from one simple tool.

This was just a quick overview of what our solution can do for your support business. To learn more, come check out our session on Wednesday morning. We're very excited to be deploying this externally with our partners, and go to microsoft.com/ai to learn more. Thank you. (Applause.)

JAMES PHILLIPS: Thank you, Farah. Super, super cool.

So, surprise, surprise, data, again. I feel like a broken record. Data is the power beneath this transformative business process. Data with the Azure AI platform. So the ability to take the data that has landed in the Microsoft cloud and to extract value from it, and then to deliver compelling solutions on top of it, that really is, it's sort of that composable power of the Microsoft Cloud that allowed us to pick that data from across various systems, pull it together, learn on top of it, and deliver compelling experiences that ultimately changes the nature of the way that you support your customers.

I think sort of the cool thing about this solution is that on one hand, it's a tailored solution. You know, we built this hand in hand with HP, we've built this hand in hand in Microsoft and with other customers. And, yet, it composes with the larger Dynamics 365 family. So if I'm using this, I'm also integrated with all the other sort of channels that interact with a customer. They call my call center. I can talk to them and see exactly what's going on. They're using this intelligent virtual agent. Same sort of backplane of data, same sort of back plane of business processes powering all of those interactions.

How many times have you called and get transferred or come in and you have to re-tell your story every single time? It's completely infuriating. And so with Dynamics 365, because we're built on this Common Data Service, because our new solutions are built atop the same back plane, you never have to repeat yourself from a customer service perspective.

All right, so we're going to shift gears now. Now, I'm a nerd at heart, I grew up as a developer. That's where I got my start in this world, and frankly where my heart still is in many ways today. And though business applications are always the fastest path to digital transformation, if you can find an app that just works, use it. What we all know is

applications are never exactly what you need them to be. There's always a need to tune them, to integrate them, to make them sort of what you need them to be for your business, and frankly if you think you're done, you do an acquisition the next week or you change your business process the following week and you need to sort of go back and make those adjustments.

And so these are organic systems that live, breathe and adjust. Assuming that you want to stay relevant in your industry, which obviously we all do.

And so in addition to our packaged applications, or services, with Office 365 and Dynamics 365, we've got this rich set of capabilities that gives you a set of options for making our applications your own. The first is AppSource. AppSource is our marketplace for partner-built solutions that allow you to take Office and Dynamics and tailor your experiences for your industry or for your region or for any other need that you might have that's specific to you, your industry, or some larger group that you're part of.

The Power Suite -- Power BI, PowerApps, Microsoft Flow, as I said earlier, consistent extensibility framework beneath both Office and Dynamics. And so let's take a look at both of these quickly.

So AppSource, we launched last year. I think we made it generally available in November of last year. And we have seen stunning growth of this application marketplace. We've got now over 1,400 ISVs, independent software vendors, who are creating solutions that extend and enhance Office 365 and Dynamics 365.

If you've got a problem that you think isn't solved by one of our applications, odds are one of our partners has filled that gap for you, and so you've got this sort of out-of-the-box way to go deploy into your environment and tailor the experience to your specific needs.

But usually that's not enough either. You've got to go in and tweak the system. I mean, we all have custom -- I mean, we wouldn't be what we are as a company if we didn't have some special sauce, if we didn't have something that made us unique. And so the ability to get in there and tune and integrate and make what you need them to be these applications is provided by what we're calling the Power Platform -- Power BI, PowerApps, Microsoft Flow -- that bring a low-code/no-code extensibility capability to our applications to those from our partners built on top of the same platform.

This, to me, is the coolest demo we're going to see. And so I'm going to ask Ryan Cunningham to come out and talk about how G&J Pepsi has used the Power Platform.

RYAN CUNNINGHAM: Thank you, James.

JAMES PHILLIPS: Thank you, Ryan. (Applause.)

RYAN CUNNINGHAM: Good morning, everybody. So G&J Pepsi is the largest 100 percent family-owned bottler and distributor of Pepsi products in the United States.

Which means a couple things. It means that they are servicing a territory of something like 61 counties with more than 400 Pepsi products, they constantly have people driving around into stores and looking at, how are our products performing on the shelves? What kind of shelf space are we occupying? Do we need to order more inventory? There's a constant audit process.

It means another thing, which is at that segment of the market, they're not investing a ton in high production, custom business applications left and right in the classic mode of building them. And, actually, Eric at G&J was able to build an app, a full solution on PowerApps literally in just a few weeks as he got up and running on the platform and put into production that that company is using on a daily basis today.

In fact, you can meet Eric and hear about it at a session tomorrow and hear stories all like this at sessions throughout the week.

But it's one thing to tell you that this platform is powerful and to tell you that it's cool and tell you that it's fast, this morning we want to prove it to you. And so what we'll do is we'll take the use case of G&J Pepsi and we'll build an app from scratch right here before the end of the session. We'll do it together. And we'll start in PowerApps.

Now, if you're seeing PowerApps for the first time, you might think it looks a little bit familiar. And that's not an accident. In fact, there's a lot of inspiration from Office 365 products going on here that people have used for a long time. Screens of my app are visible on the left side, not unlike slides in a PowerPoint presentation. I have all of my formatting capabilities available to me here and details over here on the right side.

Now, of course, PowerApps is about building applications. You know, the bread and butter of business apps is this sort of forms-over-data scenario. And I can very quickly start to point at data that my company is using in the Common Data Service that James talked about.

All of those entities, anything I might build a business application off of -- an account, a customer, a contact, a lead -- it's all just right here. I don't have to think about a complex integration project about how to point to that data, I don't have to think about how to map fields, I can just light up something. In this case, we've got an inspection entity that's kind of our standard step for going and inspecting any particular part of a store, and that just lights up here in PowerApps. In fact, I see all of the possible fields that I could light up for this inspection, and I can really quickly start to manipulate this experience in my application.

Let's grab the area rating and put it up here at the top because that's really important. And PowerApps is aware of the metadata structure here, which means, for me as a creator, I just get great contextual suggestions for what types of controls I'd want to put here. I

don't want my employees having to type too much on their phones in a store, so I can change this to a rating control. And just like that, PowerApps will light it up.

I can even do much more sophisticated things than that. This is a new feature, if you've been following PowerApps, I can start to express conditional logic visually here right on this canvas. I can say, hey, if we give it a rating that is greater than a certain number. If what the user updates this rating to be is greater than four, then we will start to say, hey, that's a great rating. And design the experience of what happens conditionally in the application.

So, hey, if four is a great rating, let's give it a fill color of green, we can make the stars green, too. That's pretty cool. And just like that, we have started to configure what will happen conditionally in our app in just a few clicks.

Now, that's cool. But, of course, this is not just about stars and controls and whatnot, this is also about rich device capabilities. PowerApps is truly cross-platform, and this app, when we publish it, will go on iOS and Android and Windows phones, which means that I can add all kinds of other controls in here just like I can add that rating control. I can add in the camera control from my device.

Now, I don't think you want to see the back of this. Let's go to camera two here. Hi, mom. And really start to build this application out. And you've noticed at this point that I'm actually using the app while I'm running it. So as a non-traditional developer, I've got instant feedback about what's going on in my application. I can start to use all of these same capabilities to just really light up different parts of the app.

So I'm going to go take this list and bind it to our list of stores that's also stored in this common data service. All the locations that we might want to service. Of course, it would not be a business application if we didn't add some custom branding here. Logos are very important to make people feel comfortable. Let's put our G&J logo right up there. And we've got a business app, we're off to the races.

Now, all this is pretty powerful, but if you've seen a business application before, you might be thinking to yourself at this point, OK, you know, it's cool that you can drag and drop a camera, but I've seen a forms-over-data app before. What's new here?

And you're not wrong. There are other low-code business application platforms that can do this kind of thing. But this is also where every other low-code application platform on the planet pretty much stops being low code. And when you want to address a use case that's more sophisticated than this, you really quickly run into a wall or a cliff. Not so with PowerApps. In fact, with PowerApps, we are just getting started.

There are a couple of really important capabilities of the PowerApps platform that I want to point out here that show how you can go just much further than you can in any other platform.

Now, you might not have noticed it, but as we've been pointing, clicking, dragging and dropping around this canvas, we've actually been silently in the background stamping out some very simple Excel-like formulas. In fact, every property of every control in this application is configurable with a simple expression in a language that millions and millions of business analysts and users already speak.

And it means we can do very simple things like instead of just putting a static heading at the top of this new screen, we can say, "Hey, go grab the name of the selected store out of that previous gallery screen and map it right here."

And that becomes really powerful, and we'll come back to that in a minute.

Now, the other thing we can do, importantly, here is we're not just bound to the data platform that's onboard in PowerApps. In fact, we're able to connect to literally more than 100 -- in fact, 160 and counting today services and applications that are commonly used in business right out of the box. And I'll go fast over this list, but you can check it out. This is everything as innocent as a filtered feed of tweets about our company, all the way to a -- you know, a SharePoint site, even a SQL Server running on prem, all of our core systems are all accessible here.

And in this case, that's important because we actually have information in SharePoint that's relevant to this business scenario as well. In fact, it's really important to know for G&J exactly where in the store our products are. And then we want to send people to the right locations in those stores so that they can get their work done, and all those store floorplans and schematics are stored right here in SharePoint.

And with PowerApps, getting access to that, pulling those in is a breeze. In fact, I can point at that SharePoint site, I see the relevant lists in SharePoint that I can correct to, and I can grab that data and drop it right into my application and start working with it. In fact, because we've done a little bit of prebuild here, it just lights up.

In fact, that same Excel-style expression language, there's just one line of an Excel-like expression here, I can go now look up information from that Common Data Service all the way into Office.

And so just like that, with one line that I can learn in an afternoon, I can now mash up data from the Common Data Service or any other place with data that's in Office or SharePoint or anywhere else beyond that.

And, of course, I can go further because in PowerApps, we're not limited to forms and lists and static structures, this whole canvas is available for us to work with. So I can go drop rich controls onto this canvas and manipulate them either with my mouse, exactly like I want, or I can start to -- in fact, let's make this round, I'll do it right, there are some designers in the audience, I can tell. Oops, 120, let's make it look like a circle. I think red is a nice color for this hotspot. And just because we're feeling fancy, we'll give it a little bit of a transparency.

So we can start to make this look like what we want. But, of course, we can use that expression language to start to bind this to important factors.

So, for example, we're pulling out of the SharePoint list now. Let's grab the name of this area of the store, this is the salty snack area, for those of you who can't see it on the screen. Of course we can start to configure the positional properties dynamically as well, right? So move that over here. So we'll grab the X property out of this particular list item, and we'll grab the Y property out of this particular list item. This is my kind of programming. And we'll just button this thing up.

And all of a sudden, we've got an application now that is doing something pretty special. It's saying for any given store, let's go grab a floorplan schematic of that store and tell people who are walking into it exactly where to go. (Applause.) Yeah, thanks, it's pretty cool, right?

I don't think your other low-code business application platform can do that, right? We did that in just a couple of clicks, and that is pretty powerful here.

So there's really -- the sky is the limit on what is possible in PowerApps. Of course, you know, at some point, you will run into a more sophisticated situation. And at some point, you will need a professional developer to engage. And, again, in a lot of other low-code platforms, that's where you sort of hit that wall and you've got to start over or you use it as a prototyping tool. But, again, not so in PowerApps.

As James mentioned, PowerApps is really built to integrate with those professional services atop Azure and bring all of the capabilities that are available there to play right here.

And, in fact, it's relevant in this scenario, too, because I kind of cheated on this screen. I just put in a list of all of the stores that G&J Pepsi services, that's hundreds of stores across the 61 counties. That's not that useful, right? I want my average driver going out in the morning not to know about all the stores, I want them to know exactly where to go next. And that's a problem that's a little more sophisticated than we're going to write in an Excel expression, although I see some of you trying to try it.

We're actually going to write that as an Azure Function, right? This is a great place for a pro developer to come in and write a route-mapping algorithm. And with PowerApps, you can do that pretty much anywhere you want. In fact, anything you can put a REST API on the front of, you can come plug into PowerApps as a building block for your power users, and use it just like we used everything else.

Now, of course, here, Azure Functions is a great serverless way to do that, and when I write it as a function, we've snubbed it out for today, I also get this great experience that helps me export it to PowerApps and Flow, literally walks me step by step through how to make that available to the power user.

So when we flip back over here to the creator persona, I can start to take an API like that and I can, you know, design out a nice screen, use all the things that I would in this very friendly way, but now I can add that data source just like I did SharePoint, just like I did the Common Data Service, in fact, that route-finding API lights up for me right here, and all I have to do is click on it and then use a very similar expression -- let's wrap this thing up here.

I'm going to pass it my location, my latitude and my longitude. We know that off of the device. And just like that, it's going to light up.

So here, in a few minutes, we've taken this from a pretty simple forms-over-data application to something that is richly intelligent, that is telling a driver when they get up in the morning, based only on their identity and location, where to go and where to go next and where to go after that.

And once they get there, exactly what to do in that store. In fact, it's following them all the way through this very rich visual experience for configuring a rating and inspecting an area, and then we didn't build this screen, but we go all the way down to actually ordering more inventory. Let's go get 22 more cases of Mountain Dew. That's how we power our development process here and get it all the way back.

So this is powerful, right? I mean, we haven't even had our first Pepsi yet today and we have transformed this business process. And that's awesome. But, of course, no application lives in a silo. And where people and the broader platform really become powerful is the way that they integrate into the fabric of everything else that you're using in your company. And they do that in a few different ways that I want to show you today.

One is about Microsoft Flow. Now, Microsoft Flow is a workflow automation service that sits alongside PowerApps. It's great independently for automating a bunch of repetitive tasks, but of course it gets powerful when you start to use it together with PowerApps in this environment.

And so we've built out a Flow here using, again, very visual tools. Just like we'd draw this process on a whiteboard, you know, we say, hey, when a record is updated in that Common Data Service, when a new inventory request is made, let's go start an approval process. We need somebody to actually say, "Yeah, it's OK to send those 22 cases of Mountain Dew to this particular location." And we can start to use all of the information from all of the previous steps, grab all the data out of that form that was filled out by a user in the PowerApp and start to pass it into this flow and decide what's happening.

And, in fact, all of those same data connections, if we want to go add an action to this flow, all those same connectors are available here as well. So hundreds and hundreds of triggers and hundreds and hundreds of actions that we can go automate across all of the applications that we're using.

Those solutions we're building are, in fact, standalone, they can very intimately integrate with each other. So in this case, you know, I ordered the Mountain Dew, in fact, we see the new one just came in. And a richly generated approval email will get sent and I can go pop in here and actually approve it and give comments right in context of my email account, all of that is stored and managed on the back end.

So that's cool. But there's another way in which these applications get integrated into the fabric of our lives, and that's through an integration that really only Microsoft can do. And that's by integrating these capabilities directly into the user experiences of Office 365 and Dynamics 365. And SharePoint is a shining example of that at work.

Today, in SharePoint Online, I can create a Flow based on a SharePoint list right in context and get targeted recommendations for what I might want to automate or approve right on this list. And more than that, in fact and this is new today, I can actually start to replace the standard forms that come out of the box in SharePoint with richly customized PowerApps experiences.

You might have asked, "How exactly did we know the X and Y coordinates of the salty snack aisle back in that PowerApp?" Well, I can actually customize an experience in SharePoint for my business office admins and get them to really richly start to turn this not just from a static form, but to an interactive experience for mapping out exactly where we need to go.

And so that's where we really start to transform here, right? This is not just a collection of neat tools. This is really a whole different way of working between professional developers and people who understand their business problem, between the business and IT, and all of those skills, the disparity between the folks who are traditional C# full stack developers in your org versus the much larger number of people who know their way around a pivot table, who can customize a SharePoint list, who can create an Access database is just mind boggling. The ability for those people to work more productively together is very powerful.

And, of course, unlike those tools of the past, these are not just sitting under somebody's desk somewhere. These are richly manageable. This is built on an enterprise-grade platform with full security control, full role-based access control, environment support, in this case usage analytics. I can see exactly who's been using this application on what device and where and just get rich visibility from the business perspective all the way down into what's happening here without hampering that ability for people on the front lines to solve their own problems.

And it's that kind of transformation that is powering customers like G&J and many others that we get super excited about, and we are very excited to see what you can do with it as well. Thank you, James. (Applause.)

JAMES PHILLIPS: I don't want to stop now. It's so amazing what you can do with these tools. It really is. And, you know, while we have fantastic, world-class, off-the-shelf business applications in Office 365 and Dynamics 365, you know, it's often that the most important application for you, for your business, is the one that no one will have available. You know? That very bespoke application that automates the process that you used to run on pen and paper and sticky notes and whiteboards is the one that really makes you special, and yet because it's sort of a market of one, no ISV community emerges, and so you've got to go write an application. Frequently, you just can't afford to do that. You can't take the risk, you don't have the skills, you don't have the capabilities.

This platform allows our customers and our partners to go start knocking down the millions of applications that never existed that should exist if you're truly going to digitally transform your business.

We've got a customer, IPS, I'm going to ask Scott Melzer to come out and chat with me about what they've done with PowerApps. Scott, welcome.

SCOTT MELZER: James, thank you. Thanks for having us. (Applause.) Glad to be here.

JAMES PHILLIPS: So this is -- last March I think it was, I met IPS for the first time. This is an amazing company, a company that's been around since 1903 in one form or another. They are in the business of repairing electrical motors and generators. And they have one of just about everything. Every kind of app you can imagine, they've got ERP, they have -- in fact, they use Dynamics CRM, but this is their core business process and yet we'll talk about how they were running it.

But tell us what's happening here, what is this process?

SCOTT MELZER: Yeah, so this is one of our shops. This is a large motor shop that we have in Houston, and these individuals right here, they're actually winding a large motor. And you can see they can almost stand inside this motor. We repair them this size, that big, and all sizes in between. The fastest growing segment of our business is wind generation. Wind generators, that's really taking off, and that's created a little bit of change in our company.

You know, just one thing to kind of hit on here. For the majority of our history, we were underneath an OEM. And so we were kind of seen as a value-add to sell new motors. And 10 years ago, they unleashed us and created Integrated Power Services with the charter to become the leading motor generator repair company in North America.

And that's kind of what's fueled some of the innovation that we've tried to digitally transform our company and get it going.

JAMES PHILLIPS: Super cool.

SCOTT MELZER: Yeah.

JAMES PHILLIPS: So it's interesting, so the company's been around 10 years in independent form, over 100 years in one form or another. And this is the core of their business and this is their core business process. This is how they actually run that process. It's paper, it's pens, it's sticky notes on whiteboards.

SCOTT MELZER: That's right.

JAMES PHILLIPS: Can you tell us how you were running the process?

SCOTT MELZER: Yeah. So that one step, that winding step would have been one of the processes in tearing it down, figuring out what's wrong with it, repairing it. That's essentially how a motor repair goes. But, you know, there's a lot of steps in between that actually make up how we actually look at it and collect data. And the bottom right, that packet, we actually --

JAMES PHILLIPS: That's you?

SCOTT MELZER: That's me. We actually have a name for that packet, it's called a "traveler." And that thing, that envelope would go with each motor. And over the course of that repair process, we would collect a series of paper forms. And we would take digital photos, and then at the end, what our customers expect from us is a report. And so we have to collect all those paper forms and put it in some sort of electronic format, collect up the images, put all that together and produce the report for our customers.

And in cases of the wind generation business, it was taking up to two months to get about a 20-page Excel packet put together. It was really hindering our performance, and we saw PowerApps as an opportunity to really transform our business and speed up that process.

JAMES PHILLIPS: Yeah, I think the thing that's interesting to me is that not only did you have an opportunity to rethink the process itself, but as soon as you finished one of these paper processes, when you pull the sticky notes off the whiteboard, I mean, all that stuff hits the trash can. And that's data. The data is getting sort of taken out to the dumpster. And so when you create a PowerApp, and this is a look at the PowerApp that you've created, all that data is actually captured. It's kept in the Microsoft Cloud, you've now got the ability to go get more value out of it, to learn, to train models and to really improve your processes.

You know, I actually just accidentally stumbled across your website and this picture is on your website. We didn't ask you to do that, I don't think anyone asked you to do that. And, yet, you were so proud of this application, that you decided to feature it in the "about" section. What kind of difference has this made for you?

SCOTT MELZER: Yeah. So this is something we see as a key differentiator in our marketplace. We're trying to differentiate ourselves from our competition. You can see the app is kind of looks like it fits on a tablet. Obviously, the camera is embedded in there, so we were able to kill both of those birds with one stone. It's just been so exciting.

And then, you know, in all the -- both the presentations we've heard this morning, they talk about empowerment. Well, one of the things we were able to do, which is just something that I'm most proud of, is we didn't build this app and, you know, I think you called it "oppression." We didn't push it from the top down. Our employees actually took our paper forms and helped us reengineer these forms in the way that they work so we are able to now take a user through a tablet screen by screen in the way they would tear down and build back up a motor. And they feel, you know, they're able to give us feedback, they have technology now on the floor that they didn't used to have. And it's really exciting. They own this, they have built it with our help, obviously, but the feedback, the continuous improvement process has just been fantastic. And just giving them the empowerment to have a computer, if you will, or a tablet on the shop floor, it gives them a voice to IT and gives them a voice to the rest of the company so we can continually make improvements.

JAMES PHILLIPS: Cool. Thank you very much.

SCOTT MELZER: Thank you, James, appreciate it.

JAMES PHILLIPS: Yeah, absolutely. (Applause.)

So this application was built hand in hand with one of our partners, Confluent. I'm going to ask Evan who came out last March as well. And introduced us to IPS. Thank you, Evan.

EVAN: Thanks. (Applause.)

JAMES PHILLIPS: So tell us about the process. How did you go through and work with IPS to solve the problem?

EVAN: Like Scott mentioned, it was an extremely complex set of requirements. We really had to make sure we understood the inputs, what the technicians and mechanics had to write down, what types of pictures they were going to take for all of these different types of motors.

So what we did is we knew we had to go. So we started off with Houston as our first pilot location. We went there, we went physically. We stood and watched what the mechanics and machinists were doing.

And then we started to listen. And we started to really start asking lots and lots of questions. And then what we did is we went back to the conference room and started making changes and started updating the process as they went. And then we'd go back

out, show this is what we've changed in PowerApps, is this what you're looking for? And started to go through that process over and over again.

JAMES PHILLIPS: Got it. So one thing that's important to note, and I'm not sure if it was clear. So PowerApps and Flow and Power BI, these are rapid application development systems. You know, this mobile application that they're using on the shop floor, you know, there's no coding compiling, submitting to an app store, waiting for that. You can run that application right here and now. You can make it as you are sort of dialing it in with your customer.

EVAN: That's right. We were able to do it all in real time at their facility. We also do that ongoing now with IPS, so we have a team of business process experts that do that nonstop with IPS, and we keep finding more and more opportunities to help them streamline their business and find new ways to improve.

JAMES PHILLIPS: So there's another company, Seneca, that you're working with. And the thing I want to sort of call out here, and this is phenomenal, so Confluent has been a partner of Microsoft for many years, a very good partner. And when they discovered PowerApps, and when they engaged with IPS, if you go to their website today, you will see that they now call themselves "the PowerApps company." I mean, you talk about buying into a vision for a platform. Tell me about the work you're doing with Seneca. Talk a little bit about why you made that choice to sort of shift your business in this direction simultaneously.

EVAN: Yeah. So when we discovered the whole Power Platform, it was really a game-changer for us. We saw where we could really help enable businesses to change and be better companies than what they are today. We noticed with a lot of our existing customers, things just like you saw with IPS, people who had items and data in Excel, data in Word, just data scattered around on pieces of paper. And they needed a better way to mobilize their workforce.

And we did the same thing with Seneca. Seneca came to us and said, "We need a process and application very quickly. We need you to take what we have in Excel, we need you to automate a report that we manually create and build it all in PowerApps."

And that's what we've done here. So we've done things above and beyond what they used to be able to do, now they can capture all of the pictures digitally. We have maps and driving, turn-by-turn directions built in so we can help guide their technicians out in the field to go exactly where they need to go, capture all that data, and then automatically generate the report as soon as they leave the gas station.

JAMES PHILLIPS: And I think you're working with -- we were talking backstage, you've got dozens of other companies that are coming to you now with their business processes they've never been able to transform asking for help. Thank you for everything that you're doing, appreciate you coming out, Evan. Thank you very much.

EVAN: Thank you. (Applause.)

JAMES PHILLIPS: OK, so that takes us to the end of our presentation. I want to leave you with a couple of things. The first thing is the power of this cloud. It is, for me, astonishing what we've been able to assemble as a company for you over the last several years starting with productivity applications, business process applications with Dynamics 365, the Power Platform, all built atop Azure. There is no other cloud on planet Earth that gives you all the tools you need in an integrated, unified way, one throat to choke, to go transform your business.

Dynamics 365 is the fastest path to digital transformation. The most important thing is to take that first step or that second or that third step. Every industry is transforming, every company is going to transform, we've given you now the platform that allows you to do it. Can't wait to see what you do with it. Thank you very much. (Applause.)

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