foreign [Music] there's more seats over here if people want to take a seat we can just extend networking lunch for the whole time if people would prefer that so just to give everyone a sense of what the next hour looks like you'll get to hear from me I have some opening remarks for the next 15 minutes or so we'll then bring up Greg Nelson from Highmark Health to talk about the living Health strategy and then we have an amazing panel discussion we have some Rowdy people in the back I'm looking at Harris and Aaron so it's become a summit tradition for data bricks to recognize leaders across all Industries in categories like using data for good and democratizing data so if you were here earlier in the week on on Tuesday evening we had this award ceremony and we're really honored in healthcare and Life Sciences to have peers have organizations that were finalists in these categories so I want to acknowledge I think some of these organizations are in the room CareSource healthverity on Tata GSK and Humana so maybe we give them a round of applause [Applause] as well as Tufts medicine so Tufts medicine actually won the data Visionary award for its wise platform and what wise does is it brought together uh more than 50 disparate EMR systems which led to novel applications including AI based applications like patient schedulers so also want to give a shout out to Tufts and then [Applause] we select one additional winner so each industry gets to select one additional winner for data transformation so this year I am thrilled to announce that Humana has won this award for healthcare and life sciences so what Humana has done um if you've heard them they've presented Summits passed they build out their foundational machine learning workbench on databricks and what's really been incredible to see is that platform become more embedded in the business so the first stage was very foundational bring in the data do feature engineering start standing up models but then over time where the value really comes of course is putting those models into production and these programs contribute by humana's account more than 400 million dollars annually in benefits like higher member retention lower fraudulent and wasteful spending and improve patient outcomes like reduce readmissions so big shout out to that team at Humana as well okay so the theme for my remarks here and really for the entire session is around collaboration data and AI collaboration on the lake house so you know we'll start with some some stats here um and only the sis speaking absolute if there's any Star Wars fans in the audience but I'm willing to wager pretty good money that every single organization in this room participates in some form of external data sharing in our industry that could come in a number of ways that could come in the context of collaborative research it could come in the context of required uh regulatory reporting it could be with a care delivery partner and we see some of the advantages here that sort of cover different industries that we represent there was some research published in the American Journal of Managed Care last December that pointed to the benefits of data sharing between Health Plans hospitals and providers in terms of care coordination in terms of lowering costs managing population health and really addressing some challenges around Health Equity and what we're seeing now is many insurers and health plans create incentives that actually encourage information sharing as part of quality programs and reward structures on the life sciencesci and there's lots of similar research Deloitte recently sponsored research showing that data sharing in the context of drug development reduces that timeline by two years which equates to 260 million dollars per drug depending of course on the benchmarks you're using and Gartner recently did some research in the context of digital Health businesses and found that those businesses that Embrace data sharing Saul is three times return in terms of economic benefit but of course it's not that easy so what makes collaboration difficult and we'll we'll talk about this throughout the session today and certainly on the panel and we know that in healthcare in particular we're faced with data silos that leave us with a fragmented view of the patient we have many existing Data Systems and technologies that are proprietary which tend to lock providers and consumers into a single platform we of course have additional constraints through the highly sensitive nature of patient data and all the associated privacy concerns that we need to take into consideration and of course we not only need to limit ourselves to data we also need to think about collaboration in the context of analytics and AI because data really is the foundation it is the beginning so as you've heard all week at Summit if you've been in any session the lake house is the perfect solution for this it's built for collaboration it supports all your data with open source and Open Standards delivers unified governance across all personas and tooling and it delivers uh you know the ability of course to collaborate with data sharing technology that we'll talk about so what I want to do for the next 10 minutes here is talk specifically about how we further have invested in

collaboration through important Partnerships in healthcare and life sciences so I'll do this through a few ways one is a technology partnership that's focused on Healthcare data ingestion another is our Marketplace for data sharing which as of yesterday is now in uh has has gone GA so we're very excited about that we'll take a look at the future of model sharing and then we'll also do a preview of clean rooms which are in private preview so let's start with Healthcare data ingestion because every conversation that we have with a health system or an insurer always starts with some frustration about receiving data from Partners extracting data from Source systems we often hear that epic is a four-letter word so ingesting an integrating Source data in healthcare this remains a huge challenge despite standards like hl7 and Fire partly because there are so many standards and so many file formats across these different data modalities that we need to deal with organizations also need to manage a variety of authentication methods and communication methods with these Source systems and deal with challenges around data updates Additionally the data of course must be curated for analytics so you need some sort of ontology you need mapping processes you need code set normalization not to mention natural language processing pipelines for clinical documentation this is costly and time consuming to build in-house we know many organizations that want to accelerate onboarding of advanced analytics and they're sort of stuck on how do we bring data out of source systems into databricks it requires engineering resources that you would need to build the build the pipelines in the first place and then of course maintain them over time so enter redox redox is one of our newest technology partners and they've been at it for a long time including with some of you here in this room EHR integration is their bread and butter they can connect to well over 90 of them not to mention connecting to Public Health agencies to Care Quality to digital Health Products to hies redox has completed well over 5 000 Integrations in healthcare so they have experienced with many if not all of the source systems that your organization is dealing with so what this means in the context of databricks customers is that redox can serve as a single point of connection into the lake house for dozens of different Source systems in your organization they can manage the historical backloads they can manage the real-time integration to fuel these use cases without accumulating Tech debt of building out these custom pipelines on your own and it can get you into production much faster so these pipelines can support everything and we have great examples of how this has supported use cases ranging from operational reporting to omnichannel marketing to clinical risk prediction so if you're interested you know please reach out to us at redox to learn more so data Marketplace data Marketplace is a personal sort of passion project of mine within databricks my background prior to joining databricks was leading the real world Data Business at Optum so very plugged into aggregating data using data for research and thinking through some of the Dynamics of data exchange and data sharing so we're thrilled that data Marketplace has gone GA as I mentioned I think last year at Summit we just were in private preview we went in we went in public preview uh most recently in April so with data Marketplace think of this as a white pages sort of directory to discover data assets uh and not only data but also other products like notebooks that you can use alongside of the data so there are other data sharing sort of marketplaces Technologies what makes our Marketplace a bit unique really is that you can share more than just data you can share notebooks that will accelerate time to Insight so what are the benefits for data consumers and by consumers I mean organizations that work with secondary data assets which we know is probably every single organization in this room well one it's easier to discover data through Marketplace listings it's easier to then access the data from a technology perspective via Delta sharing and it delivers faster time to Insight because of these notebooks that I mentioned that providers are making available on Marketplace and I want to give you a sense specifically of some of these wonderful data providers that are now part of our Marketplace that again is generally available these are assets relevant to you in healthcare and life sciences so you'll hear more about Jon Snow labs and datavent later in my presentation today you also get to hear directly from iqvia and on Tata on the panel in a little bit so some of the other organizations I want to call out trinetics which offers curated electronic health record data used for real world evidence definitive health care which offers data around prescription activity as well as the atlas reference and affiliations data set so this includes granular information on Healthcare professionals and organizations so if you're looking to understand things like referral patterns kythera which transforms raw medical and Pharmacy claim data into patient journey and encounter based assets ranging from specialty areas like oncology to Chronic

conditions and chronic disease management ribbon Health which provides access to comprehensive provider information including location directories and I'm going to scroll because I'm going to lose my note here and I don't want to miss anyone Veritas so Veritas has a comprehensive index of U.S mortality data so this is from 2010 to present if you're engaged in any sort of observational research this is a very important outcome to understand and to study so we're very happy to have Veritas on the marketplace and lendrx is another they provide Dynamic company and sentiment information on uh on drugs so if you're on a Pharma brand team that may be of interest to understand sort of external Market perception uh in terms of your brand they're also on top of this are organizations more horizontally focused but providing Assets in healthcare and Life Sciences like rearc so re-arc makes available demographic and behavioral data that can be better used to understand things like social determinants of Health so expect this list to grow by the month if you're on the data provider side and you're interested reach out to us we'd love to expand the program uh and include you as well so a bit of a preview so bills and team will be joining us on panel later iqvia and there are a number of IQ via folks in the room if you'd like to connect with them they're a leading provider of Data Solutions analytics and Technology they have more than 100 billion Healthcare records processed annually 100 billion so absolutely massive Global reach available at QV assets include their hcp and product reference data as well as sales and prescription data and longitudinal patient data so we're thrilled that they're a launch partner with us on Marketplace I also want to offer a bit of a preview for Juan Mayo from ontata who will be joining us on panel as well so antada is a division of McKesson and we have a number of McKesson folks in the room that offer very deep data specific to oncology so they support more than 80 different cancer subtypes and have millions of patient records for this very deep longitudinal patient research as you heard earlier they also were a finalists in the data for good award for the incredible work they're doing to support oncology research uh so very excited about data sharing in Marketplace the future for Marketplace and there were some previews and hints at this throughout the week is around model sharing so how do we go from a Marketplace of data sharing and sharing notebooks for exploration to actually being able to serve models including large language models and you've heard this throughout the week lake house is the ideal platform for generative AI development and deployment we want to build the ecosystem for organizations to be able to deploy models that they build on databricks as well because fundamentally We Believe organizations are going to embrace this best of breed approach to models that includes building on top of Open Source models and libraries not just models relying on proprietary apis so we've built some of our own Solutions using Dolly and Lang chain this is one example around biomedical information retrieval there's a huge Corpus as you know if you're on the sort of r d Side of Life Sciences a published medical literature that expands really by the day so llms are a terrific way to support summarization and question and answering of these data assets and we can do a demo for you down at the Expo if you're interested we're also working with Partners like Jon Snow Labs also here in the room I think in the in the corner over there they're building state-of-the-art llms based on open source models so this is an example of summarization from Clinical notes it's taking a very complex procedure note that you probably can't read which is part of the point full of medical jargon and abbreviations and it's summarizing that procedure in a more easily digestible form so this is the potential to both reduce clinician burnout in terms of care transitions really improve continuity of care for the patient and it can support specific use cases like prior authorizations so I think as we think about some of the use cases for loms in healthcare probably won't be diagnosing patients today but starting with something like clinical note summarization is a really great way to start to work with you know these Technologies and really improve information sharing across your organization so Jon Snow Labs we work with them quite a bit we have a number of solutions we've built on more traditional natural language processing pipelines they're the leader in NLP and AI for healthcare and the state-of-the-art large language models that they're building specifically for the medical domain uh you know really have just over the last few months taken off and have a lot of key applications around things like clinical entity recognition as well as extracting diagnosis codes and Johnstone Labs will be a launch partner as we expand Marketplace to support model sharing in the future so one more for me one more exciting announcement and that is around clean rooms so clean rooms is a brand new offering for databricks it's in a limited private preview now but we have engineering teams that are doing a lot of development on it um and what what are clean rooms so they fundamentally they take

advantage of Delta sharing capabilities to enable multiple collaborators to share data into a secure neutral environment where only the authorized users can then access and analyze the data what makes us unique in the context of databricks well due to Delta sharing the data exchange is frictionless it doesn't require data replication the solution can scale to multiple collaborators so it's not just limited to having two collaborators in a clean room solution it can accommodate all programming languages supported by databricks we see some other Solutions emerging on the market that are only SQL based Solutions and perhaps most importantly there's built-in workflow functionality that makes it easy for collaborators to review and improve code in analytics which protects sensitive information so this is big applications we see on Research context is Big applications if there are collaborators who are concerned about sort of giving a partner access to their full data yet there's certain analytics that they can ordain within this clean room environment and we're very excited to partner with datavant and they're here uh in the front table here to bring the clean room solution to healthcare and life sciences so datavance mission is to connect the world's Health Data for better patient outcomes and I know many organizations in this room already take advantage of data advanced technology they're well on their way to doing this as a trusted partner to healthcare and Life Sciences organizations and what they've done is they've assembled the largest Healthcare Data Network in the world using its tokenization technology so this offers a secure method to link data on Direct identifiers meaning if you have two different organizations that want to link data they don't want to exchange pii they each can run the tokenization engine on their respective side of the firewall it creates a secure link for them to bring that data together and their network using this technology includes thousands of hospitals hundreds of health plans as well as hundreds of real world data organizations and what they're now doing in the context of databricks is building native tokenization capabilities on databricks so that will launch in August uh looking a little further ahead when databricks moves into public preview for clean rooms and we're targeting that in the September time frame we'll bring this capability into clean rooms by enabling on-the-fly tokenization and encryption keys that can support secure analytics across multiple collaborators in this clean room environment we're also in the early stages of thinking through a Services workflow around de-identification so datavant owns privacy Hub which is the largest service provider of expert determination de-identification services in the United States and given the controls in place with clean rooms for example you could restrict uh collaborators from from you know viewing record level data we aim to offer a solution whereby the outputs of the analytics could be certified rather than necessarily needing to certify the underlying data itself because we've have this new technology enabled approach to putting appropriate controls and guardrails in place with clean rooms so very excited for this to come so ultimately our vision is that when Healthcare data is securely connected and we're able to integrate the data with the Analytics we have the power to do incredible things we have the power to detect rare disease we have the power to deliver personalized care to patients and the power to discover new medicines so very exciting to see the technology come together for the vision that many people have had and been talking about for quite some time and we'll hit on some of these in the panel as well but with that I'd like to turn it over to Greg Nelson the VP of data operations at Highmark Health to share their living Health strategy and what it means for data collaboration thank you [Applause] they turned it on too soon wow that was painful let's see if we can get the slides moved over okay good afternoon everyone this is the interactive part of the conversation all right you all ate lunch you all sat through Mike's talk for 20 minutes take your fingers roll them in the air let's get some blood flowing um I'm excited to be here um as Mike said this is a really exciting time to be in healthcare I'm super excited about the technology and the collaborations meeting new friends new friends Danielle as well as seeing people that I've known for 30 years it's super super exciting to be here my goal today is to talk to you a little bit about Highmark health and our living Health strategy the reason this topic becomes important for me is that I'm one of those crazy people even at my young age that I think we can fix Health Care I'm excited about being able to fix health care I was having a conversation with my wife the other day and there may have been wine involved and she says you really think you can fix Health Care don't you and like she was surprised I was like okay you don't know me very well and the reality is for those who have been in the industry for a long time know that we are the technology has certainly changed the problems are often the same that we that we've seen 20 years ago 30 years ago it takes a lot of work to go from idea to bringing in data to integrating data to managing and enriching

and augmenting data and for what purpose we're exhausted by the time we get to the point of actually wanting to use that data the use cases my hope is really before I retire my impact and my organization is that we can do this with fewer hands fewer eyeballs fewer fingers on the keyboard so we can take that and transform that Workforce into impact so that's what I truly believe and I I think we have an opportunity to do that so I was in Intermountain Healthcare before I came to Highmark about eight months ago and one of the things that was fascinating to me about Highmark is for those in the health and Life Sciences industry you know what a pay writer is it's a payer and a provider so that's essentially what Highmark health is what was different about that is they didn't treat them as different P L's they didn't treat them as different organizations it was person-centered that becomes really important when we talk about how we deliver experiences to this model so our mission is about creating a Remarkable Health experience so in a blended Health Organization like Highmark we have members those are people who go through employers or Open Marketplace or Medicaid for the government and by insurance and anybody who's out dealt with an insurance company knows that that's just a wonderful experience that's up there with at T sorry nobody from att's here right but nobody wants to talk to their health insurance company they want to have that frictionless they want to understand how do I find care how will I know it's actually going to get paid so before I go that's the whole price for interparency stuff is about how do I make sure that I can reduce that that uncertainty that friction that exists so if we really believe this and we think about this as an opportunity that's where I think a scale of a high Mark or an Optum or a Humana can really start to change the nature of the of the work of the world that we live in so I believe that so hi Mark at a high level 42 000 employees about 29 million lives under contract which means mostly we're an insurance company but about 10 years ago we acquired Allegheny Health Network which is a provider system about 10 to 12 hospitals and it really started to change the culture internally for wait these are not just members these are actually people receiving care I can't just deny a claim and and then not have to deal with the outcomes and that's what I think is pretty exciting about this one thing that's important to note is Highmark is a pretty complicated organization we have I work for Highmark Health which is the big circle as part of that we have a set of a number of Diversified portfolio companies including a stop-loss company a dental dental company we have a technology arm that delivers platforms to to different Blue Cross customers across the Across the Nation of course our own health plan and the list goes on so it's a very complex data State my role at Highmark is uh I I essentially care for our data any data that comes in and out of the organization goes through our platforms so I have responsibility for both on-prem and Cloud which really presents some unique challenges and I'll talk a little bit about some of those challenges before I do that I want to personalize our work a little bit more I want to introduce you to Felicia Felicia's 34 years old she was a real patient fictitious name and I protected all the Phi and everything else but replace this story with your own stories that I know that each of you have about where the Health Care system has failed you whether it's me personally wanting a Dermatology consult and saying oh great we can fit you in in May of 2024. my next appointment is not going to be for another year that's broken that's broken that's a broken Health Care system so in case of Felicia she went to the Urgent Care she had she had something that she was concerned about dermatologically Physicians saw them were not very well connected they they printed out the referral because you had a referral in order to get paid the paper got lost the referral never happened and it turned out that she would she indeed had metastatic metastatic melanoma so the delay in care impacts real people right so how do we change that Dynamic so when I think of her journey there are literally hundreds of thousands and millions of patient Journeys that we all go through every single day Felicia is just one and by the way this was something in Felicia's life that happened at a period in time whereas 10 years later it might be something different it's always going to be something different with health care the inevitability of The Human Condition is that we're always going to need care and so if you think about this as a journey map there are so many opportunities to affix that well most of us are technologists and I'm I'm actually a well-trained husband as well which means it only took me 15 years to recognize that when my wife presents a problem to me she doesn't want it fixed so as technologists we see this problem of Felicia and we're saying let's fix it let's solution it but we really need to understand what is the actually good look like what is the actual conditions under which this has to happen so if we look at happiness and sad I'm happy that somebody listened to me they diagnosed my condition and they referred me to somebody but all of a sudden we get into these

doubt modes where we say well is this going to be covered by insurance or which specialist should I see or how long is it going to take for me to get in and will it get paid and and how quickly could this happen because this is devastating to people we know as people in data science and Ai and data that there are lots of potential Solutions in the marketplace to actually address these right patients like me automated specialty referral finder based on the fact that you know what insurance I have you ought to be able to connect me before I ever leave that place how often have we been in in a healthcare environment and somebody says well you got to do X Y or Z next but they don't make it easy I give kudos to organizations like CVS who just make this stuff easy I had a birthday I got a text that says hey you know you're at an age right now or you could use some care would you like to go ahead and schedule this whether it's a vaccine vaccine or colonoscopy they make it easy that next best action at scale to account for the lifestyle the history really is an important element of what we can bring to the table this is our voice this is what we can bring to the table so living health is really about a proactive nature of how we deliver experiences and and treat people like people like humans as opposed to a member ID or a patient ID this is about changing how we deliver health care and so to me it's it's really about being predictive and comprehensive real time and and really it's about the outcomes that people can achieve no matter the choice of device or modality how many of you are involved in your organizations with cpcm programs consent preference and contact management okay Healthcare is doing a pretty poor job at that aren't we marketing has got it right I mean they're at least they're getting better at it right how we actually take preferences of a customer and design experiences that take those into account so if I want to be called I can opt in if I want to receive my eobs as HTML I can do that I can make Express preferences so part of what we're trying to do is actually design the substrate of our ecosystem around how do people actually want to hear from us how do they want to engage with us so I work for the office of the Enterprise of the chief data officer our Enterprise data office this is probably not dissimilar to many organizations and how they architect the technology we use obviously databricks on gcp when we think about the use cases the bulk of the work I won't tell you how many but we have literally hundreds of people that all get us to endpoint use cases and then the analytic team picks that up and takes it the last mile but wouldn't it be nice if we didn't have to spend so much time engineering and matching and merging and integrating I was discussing with my friends at redox the biggest challenge we have in front of me today I've got to integrate 36 different new vendors in six weeks how do I do that at scale I can't have fingers on the keyboard that's just not going to be helpful so I've got to figure out how do I automate a scale how do I integrate scale where the eyeballs and the fingers are really focused on um the the quality of that data the provenance and ensuring security and confidentiality so as we think about the focus of our work it's about acquiring uh organizing managing protecting and then delivering and I my proposition is how do we do that at scale and how do we do it faster so just a few numbers of about this is probably not dissimilar to many organizations um unless you're a startup and startups always come to me and said hey Greg we can solve your data problems I'm like really how long have you been thinking about this one because we've been thinking about it a long time and it's hard I mean there's one famous politician once said who knew Health Care was hard sorry that was a joke so organizationally we deliver about 80 000 extracts a year so you talked about data sharing Mike that's what we do data coming in and going out of the organization at scale and so we just stood up our HDE which is Google's Health Data engine in a matter of two months we have over that's wrong it says 221 million fire resources we have over 2 billion that's amazing the the volume of data coming in we do about 5 million eei exchanges every single day so being able to do a lot of what we talk about at scale is really challenging so we knew that part of our journey to get to living health I I was at Highmark for maybe a month and I have an opportunity to to sit on a an executive meeting talking about where we're headed with our Enterprise data platform and one of the comments was from the most important person in the room and she said I refuse to let data set the pace for our strategy man that keeps me up every night so how do you do this how do you do how do you do this at scale so we've got to figure we got to think differently we got to think about competencies and skills we've got to think about Partnerships and we got to think about design patterns that allow us to do this in a very very different scale than we've had to before so part of our data strategy we went live in April April 19th the day that she'll go down in infamy we went live on gcp and part of the reason was really three business case elements here one is the technical complexity of we had to reduce our technical

complexity I'll show a little bit about some of that we have a long history of legacy of technical complexity in our organization Mainframe Cobalt db2 and we have I I think we really love vendors so if there are any vendors in the room come on over because we collect them so that was one of the problems I got to reduce the technical complexity because I can manage it uh in a much better way simplifying the data ecosystem the senki diagram no relationship to Mike in the middle was actually part of an assessment that we did where we said what are my what are all my to and from data sources that told a story that told a story of how much and how brittle our environment was because of the complexity of those data touch points and everybody wants to hear about how we're going to lower cost because moving to the cloud will absolutely lower your costs you said every sales rep that was trying to sell Cloud technology so we knew that in order to reduce the cost we actually had to prove it and so we actually set ourselves up with a couple of bets so part of our initial platform build for Google was we were very intentional about what bets we wanted to make and the first bet that we wanted to make was around our common ingestion framework and we were really trying to address the question of how might we um reduce the complexity and time and the skill set that it takes to onboard new data that was a bet we were willing to make we did a benchmark and it took about 145 hours to take one table from on-prem into the data warehouse one table my challenge was ten thousand tables so do the math and that's about 450 person years of effort so if I went to my boss and I said hey can I hire 450 people to just do data onboarding what kind of response do you think we'd get especially in this climate with Healthcare right so we needed we knew we had to make a bet and if I could change the cost curve on that that's really what we're trying to attack now we got it down to about 40 hours or one table still got a long way to go I'm going to reduce that to minutes crazy now all the data Engineers are the problem but you don't understand it's complicated I got to Source the target mappings I got to ensure referential keys are intact and I got to do this and I got to do this but that's a challenge if we get it hours and I fail to get it in minutes I'm okay with that just don't tell my team so we think about all the bets we've made on the platform the common digestion framework was just one of those so as we look at this pipeline of components about how do we actually go from left to right classic data warehousing Inman Kimball imhoff sort of modeling guess who built our new platform people who grew up in that same mindset I want to think about this in a fundamentally different way and there's no way we're going to do it if we continue to use the thinking that got us here to get us to that next level and that's going to be our fundamental challenge so it's good it got me down to 45 hours but I really want to take this and automate the entire pipeline and what's going to be really important with the volume and velocity of data that we're now seeing is how do I do this with complete observability I got to have data quality that can't go down I've got to do it fast so we talked about the speed and I have to know what's going to likely go wrong General Electric one of my clients when I was in Consulting we did some predictive maintenance for aircraft engines and they wanted models before AI got really fun and popular they wanted to say look I need to predict whether a Shell Oil Company when a drill bit was going to break before it broke because it was really expensive to pull the rig out of the thing if if it's broken but it's really cheap comparatively if I can pull it out of the ground so using those same mindsets how do I predict when pipelines are going to fail so I was super excited to hear when databricks announced the monitoring observability work and more to come on that I guess this year but hopefully you Carolyn you said it was going to be done by the end of the month oh but it's these things that help us grow at scale which I'm I just have to say it's a wonderful time to be in health I.T in data and analytics and AI because this this is the model of yesteryear we've got to really change the Dynamics of this of this model so the ingestion patterns that we focused on for go live back in April were really for I wanted to be able to do change that to capture on databases we have a lot of Legacy databases Oracle db2 teradata and I needed to be able to replicate those tables and know when either the schema changed or the actual underlying data and then stream that into uh coffee topic so that was one pattern we needed to support the second was we receive a lot of files so being able to import Json and XML and csvs all of these things at scale without having to have manual intervention was a second database batch ingestion a lot of vendors want to say hey we'll do we'll do a dump of our star schema can you can you ingest that so that was the third one and the last one is we actually wanted to be able to modernize to ingest on apis because that's where I think the vendor partner ecosystem is really going to be fundamentally changing the game on this so we went live with those things and that was that was really important work so the

proposition today you said you kind of see the option one option two option one was do nothing continue the trajectory that we were on before option two is let's build something that will actually get us there so that's where we're at today so option two we built we went live with it we're doing a pretty good job but we can do better so being able to change the cost curve on the resource stuff so I'm sure that I'm not going to go through these bullet points but I'm sure these resonate with a lot of organizations about what current state looks like and future state looks like we've got to be able to deliver data at scale we've got to be able to understand the provenance of data the quality of data we've got to deliver it in formats that people understand and want to use and we've got to spend more time on actually use cases rather than playing with data so the impact for me there's lots of economic impacts there's there's good things that are happening in the organization you know this is all good stuff right for me it goes back to what our CEO said in that meeting I want to outpace our strategy I want to be ahead of the strategy so that when I deliver when they want to try something new I want to be able to support tens of thousands of experiments in the business and not be the rate limiter because right now I feel like I'm an order taker that's got to change so going back to Felicia if somebody says Hey I want to in inject this next best action into epic player payer platform as an experience for the provider I'm going to be able to do that scale say oh yeah we got the data what's the endpoint and we're essentially configuring data connectors rather than building them each time so I'm excited to it's a great time to be in healthcare as I as I said I'm super excited about this conversation because it's the people in this room they're going to change Healthcare so I would encourage you to reach out to me and connect I'm happy to connect happy to have conversations and I was joking about vendors please don't contact me thank you very much uh we don't need it okay or you can go to the next one if you want okay everyone miked up got it hello hopefully yeah all right it's like the exit road test yeah uh well let's start with Nick because we everyone knows Greg at this point uh and we certainly made reference to Bill from iqvia and Juan May from ontata so Nick Woodbridge is from GSK I think GSK is a household name they're a global biopharmer manufacturer consistently rank in the top 10. uh in sales and they have a really unique portfolio because it is so broad it's oncology it's vaccines it's specialty areas it's respiratory conditions so one of the things that Nick has to think about a lot in his role is how does he make data available and also models available across different geographies and different markets as you know you're building things out in commercials so we'd love for you to just spend a few minutes because I know I've talked to various folks in commercial farming the U.S May build a great model how do they make that actionable in other markets and share that yeah it's a great great question um so so from a kind of an enablement perspective I mean how we're thinking about this is we we want to connect you know our data providers so so our QV has our you know specialty data providers we want to connect those in through the the kind of central function the central organization and then and then we want to expose those out to the individual markets because you know if you are in an Emerging Market you know you you don't have maybe some of the needs around digital customers Journeys next best experiences you know some of the more advanced you know capabilities you're still kind of in a you know one-to-one rep to hcp um you know provider kind of kind of example so so what we've had to do in the past and kind of why we're really excited about uh the the data exchanges that are coming on is is you know build out all those automated Solutions right you know build out the automated data ingestion Frameworks uh build out you know Advanced you know security models that you know allocate data to you know one region but hide the data from another region you know expose all that and we had to make those Investments you know inside in order to drive the the business forward and and I think just like everybody else here in the room you know now now the pace of innovation is is just accelerating right um uh you know we're we're you know obviously getting ready for a major RSV launch and you know our us business is coming to us well you know hey we want to onboard you know 20 new data source is that we've we've never seen you know from a data platform perspective so they're always looking for that edge you know as part of their go to market strategy and and and having to manage and maintain these kind of Legacy pipelines you know from an ingestion and data onboarding perspective and then from our side also then having to map it into this kind of complex data estate um you know it takes it toll right I mean there's no way of getting around it I mean even if you build the world's best mousetrap for data ingestion pipelines you're going to have you know a developer make an errant commitment and your data pipeline is going to go down uh you know your your Cloud infrastructure is going to have issues for

those who are on Azure uh you know a few few months ago you know all these kind of things are going to impact your your your ability to make data available and so so we see this data exchange really enabling the Future Vision where we can connect our data providers our producers of data's with with the data consumers and do it in a world where we don't have to make these kind of core I.T Investments once those resources then get freed up then we're talking about model enablement model development model sharing so we can move really higher up the analytic stack and not be focused on undifferentiated uh you know just kind of like file moving EDI based kind of activities and and now we're really driving inside and we're enabling the business to kind of meet their their sales goals and needs that's great so what do you look for when you Source data you have two data organizations here like tell give us some of your secrets what uh what do you look for in in data partners that are going to be delivering you data yeah absolutely great great question on that side too so so I mean so what we're starting to think about our data is as a data supply chain right so so if we think about this almost from a manufacturing term you know we have our kind of Parts manufacturers right the people that are providing the wheels and the bolts and the you know individual components and elements that really drive and help us build the car that we you know then go on our journey and and through that supply chain mechanism you know we want trusted Partners right so we want people that that are obsessed about data quality data availability we want them to start to think about you know coming up the stack right you know again why should you know GSK manage the data availability when we could leverage our partners to provide managed services to make those those components available to us and and and this is stuff that you know you couldn't do you know five five ten years ago if you're on premise you you struggled with even even kind of pre-pre-data exchange but but what we're seeing through some of our kind of initial proof of Concepts and like developing the business cases around it is that is that our suppliers can actually step up the stack enable it through managed services and really take the ownership of the life cycle and so and so instead of having you know our sales teams our marketing teams come Tai T then Us opening up a sport ticket with our data providers hey why didn't this file drop in this folder why didn't this email come with this file you know instead our suppliers are are shoulder to shoulder with us supporting the tickets you know addressing the physical needs and actually enabling that that next step in the data during the journey so so we see data data Partnerships as being probably the next big wave in Innovation from a from an end-state delivery yeah and I love your framing if you can accelerate the sort of foundational data estate then you can move up the stack in terms of the value chain and delivering Analytics um so Bill I want to give you sort of the inverse question uh so Nick just shared you know what a leading Pharma company looks for and wants from data providers you have a landscape you know you work with probably more than 100 Pharma companies what are they looking for what do they need now and how is IQ via sort of adjusted uh its business around it yeah I think you know with Greg and Nick that you know you told a historical perspective what was the current state like or what was the prior State like and I left Pharma for about 10 years so I was living Pharma I did I've been doing data management for 30 years but I left Farmer for 10 years I came back about five years ago I wanted to quit after my first client call I was like nothing's gotten better it used to take 450 hours to Source a table it now took 550 hours to Source a table everybody was satisfied with the status quo and when you put an order of magnitude you were showing your you know your billions of Records your hundreds of tables my company is a business It's Not Unusual to send 20 000 data files to a customer per year you know today I process over last year over four and a half petabytes of data you know for our customers and the industry was built that we're going to give you a file and then you're going to pick that file up and you're going to figure out what to do with it you're going to QA QC it whether you're a data lake or a data warehouse you're going to go to Raw cleanse integration publish doing Analytics and we knew there had to be a better way but five years ago the Technologies didn't exist you know you got you had to commit everything to somebody's platform you couldn't be on Prem you had to be in the cloud once you're in the cloud everybody had their own instance nothing happened and this this idea of data sharing and it's I'd say it's taking about like three years for data sharing really gets the point where it is today and that refers people to data sharing they're like I don't have to FTP a file anymore okay I want to give you 20 000 tables instead of 20 000 files what what is you know okay I just went from 500 hours to 50 hours maybe what we've looked at is with the idea of data sharing is those 10 steps a customer has to do we don't want you to do those steps anymore we're going to bring the data

together we're going to make sure it's the right data we're going to make sure it's cleanse data if you have additional QA QC checks we do them for you you don't need to do them we build your conforming Dimensions your historical views and now instead of getting 20 000 files from us you access a set of tables a well-modeled database that now integrates with all the other data sources that you have and you don't have to copy data you don't have to move data you don't have to do that and what I'm really excited about now is with the databricks marketplace it's not just data anymore we talk about notebooks we talk about models so I already figured out the first 10 things you did with the data well guess what I have a good idea what the next 10 things of the data you do as well but those are analytics those are models those are building Aggregates and so as as we're looking at the with the entry of the databricks marketplace we say we can deliver the data with Delta sharing we know we can do that we've been doing that clients can access the data now the next part is we know how you use the data let's give us our best practices for how to do you know a patient Journey our best practices on how to do a segmentation and you can tailor them because it's a notebook you can Tower them because it's a model right you don't have to commit to what we do we just give you the best practice on how to execute it based upon you know the hundreds of thousands of other liberals we're doing and so that that shift that that's occurring now is before the impediment of new technologies was I have to rebuild my pipelines I have to rebuild my processes we're saying don't rebuild them don't run them anymore use this up to this point and it's really eliminating that barrier of it's really hard to adopt the new technology um you know we're you know we're working with Nick on this you know we're working with other customers on this is how do we get the benefit from this and it's really this I use the phrase a lot change your relationship with data you know customers they pay us a lot of money for our data they spend a lot more money trying to figure out how to manage and integrate our data so we're like let's reduce that part of that process make it easier make it simple to use our data and then the next step is not just make it simple to integrate it make it simple to create actual insights from that information thanks for that okay um one may I'd like to kick it over to you next um you know we've gotten sort of the Pharma data perspective you have both you're currently tasked with building out data products and solutions at ontata prior to that you were in Merck's observational and real world evidence group you also are at the Department of Veterans Affairs so you've seen it from uh you know really the largest integrated system in the U.S you've been working on standards like the omap common data model like smart on fire clinical applications so how do those experiences from Merck and from the VA inform how you think about building out this product suite at ontata students I'm very passionate about data and a lot of my friends here knows that I have database access I'm actively curing my database to solve some questions in my mind so coming back to the data center right is extremely important right now I'm at ontata which is one of the business units inside the McKesson corporate on Tata is a data science and technology companies focusing on Cancer Care okay so let me take a second to talk about this English word cancer so according to addiction dictionary cancer is Anna but I would argue that cancer is a verb because every single second in our body same you same me that when our cell are dividing some of them are making a mistake right in the DNA encoding if those cells do not get checked by the immune cell and it keep having these magical power to keep replicating itself that may become cancer so that's why I keep thinking about that cancer is a verb not necessarily a noun and also given this fact in the United States of America during a lifetimes of you and me 40 time that you will get diagnosed with cancer and every year there are about close to 2 million new cases reported in the U.S along with uh 600 000 people die due to cancer so it's a very devastating severe disease right but there's also a silver lining associated with that is there are a lot of data that come from the cancer patients if we can share collaborate right we can help improve the patient care as well as accelerating the life science treatment Innovations as well so however sharing data for cancer patients is not as easy that is because that as a patients in cancer they are really require multiple disciplinary services to help them right some of them are like medical oncologies focusing on the treatment immunotherapy chemotherapy or other therapies right and then there is the Radiology departments that doing the assessments of the tumor every couple months and there's a pharmacy side of the house as well as molecular Diagnostic lab right with all these cutting-edge targeted therapy require biomarkers associated with that so the data standards become extremely important to make sure that all these data generated from different organizations right can talk to each other harmonizly so at ontata we heavily leverage on data standard including the

fire R4 as well as the uscdi data center but neither of them is oncology specific so during our projects we augmented with two other data standards to help improve the data quality one is the genomic reporting which is one of the fire sub IG implementation guide along with MCO which stands for minimum common oncology data element So based on this set of standard we actually recently just roll out a network right integration with two leading molecular laboratory so in real time we receive both structured data as well as the PDF report associated with the genomic testing result and put those information right back into our electronic medical record system fit into the clinical workflow for the provider so that they will not miss this information because those information are so timely it needs to be so timely in order to determine the the treatment decisions and by the same tokens using the standard we enhance right our data products completeness of the information consistency because we use standard terminology along with a contemporary the timeliness of the information which can help our life science partner to address their use case and again I think that speaks to the further up that value chain you can go in making the data ready for research you know the easier will be for every organization to really have that jumping off point for Analytics so I want to turn to you Greg and then I want everyone to sort of just jump in there make it a little more Dynamic so the one thing you said that stuck out to me was 80 000 extracts a year and that number is probably growing so how do you think about um managing that from the perspective of trust with all these different partners who are receiving that data and really how do you instill that sort of trust and confidence in in what you're sharing yeah part of it part of it is automation right so when I think about their countless examples in in the rest of the world whether it's manufacturing plants that run on skeleton Crews that before had literally hundreds of people running them or these massive ships um that uh that ship stuff from the Middle East or the or Asia and now they're being run by you know five to ten people it's absolutely amazing so the only way we're going to get there from a data perspective is and I'm not anti-human so I just want to make sure you all know that um I what I want to see is the humans move up the value chain and and really focus on impact um so when I think about those 80 000 files what would have to be true for us to be hands off and to let that operate you know it would have to be true that we had good standards that we would have to understand the right interfaces that that we can talk to people that we would be fault tolerant and resilient in our data processes that would have to be true that we would have to have measurement of quality and monitoring of quality continuously the velocity of data right now there are oftentimes data we just never land so how do you implement traditional data quality measurement on data that never lands and so it's it's really thinking about that holistically as a system that's just got a trend we've got to transform how we do things others on the topic of trust yeah I mean I completely um agree with that from a trust perspective I mean so it's obviously within like sales and Commercial operations you know trust is Paramount and oftentimes in today's world you know our our stakeholders you know the the Field Force the marketeers they're uncovering the issues right I mean because you know we've moved past some of the kind of foundational you know did the file show up you know with with iqb right you know it's I think we're like 50 000 files that we're sharing but but you know it's like we've moved past the kind of foundational aspects of of the data just being transported in from one spot to the other to actually needing to understand what's in inside of the files and and really understand that not only from a you know semantic layer you know yes we've got common data models we've got common data integration standards but but actually to to know okay well you know my sales report yesterday looked like this value today it's 10x well you know we probably mess something up along that supply chain so so we see that as far as a great day in the field oh yeah exactly exactly yeah yeah and so we see we see that that as the next wave because we've we've you know with with this kind of data exchange and I think with as an industry we've elevated ourselves to that layer so in that case you know it's really going to be come down to the augmented you know Solutions right AI I think is good to be a big player in the space because you need you know the individual in the field to empower the systems with that semantic understanding not what happens today which is we say oh yeah file pipeline worked all right we're done like everybody go home pat yourself on the back and then you know we've left the wrong insights out there so so we you know this is going to be a huge up and coming area around trust and and trust and Trust model I can also add some perspective of the data quality so as I mentioned right we are very focused on oncology care there are many several key data elements that we are actively by tracking what is the completeness of the data like the cancer staging should be more or less

Complete because those are very important variables right for for cancer patients and furthermore we are also leverage AI to look into write all the sequence of events happening at the patient right leveraging the common data model and trying out all sequence of combination to see whether they are data that is not necessarily correct like for example you should not have a service date after the death day right things like that but you cannot check out like manually so many table it's very busy work to write those SQL query right and leveraging AI to look into all the combination of the sequence of events that is very helpful to surface up potential data quality issue so a human like Greg you mentioned right it's kind of like bum up in the food chain to look into those um those escalation or the data quality issue and them to figure out whether it's a problem or not and maybe if it is an issue we do need to adjust that I was going to add we look at the the trust aspect from two perspectives one is definitely can the data be trusted and that's where we find often not that our data is never wrong you know there's data quality issues everywhere but how many times do we spend time trying to figure out if something's right or wrong and how do we simplify that and tying that together with the Privacy aspect of trust we're looking at the concepts of the clean room are not just to treat sensitive data you know Greg your side of the end of your business you know who the individual is on my side we're not allowed to know who the individual is and so we've always had a very strict policy in that well yeah we'll do this analysis for you and you'll give you a list of doctors or a list of somebody to contact because there's a new patient with the disease or there's a patient that's having a problem staying on their therapy right there's a limit to what we can do that data is always lagged the industry by 45 the event by 45 days because we're so focused on privacy and not enabling the re-identification of data and so as you know we look at the clean room you know working with data bricks the idea is if can we put that data out there allow companies to bring their real-time data your apis you know the information you're getting from medical record systems bounce that up and mingle that with our data to also get not re data that cannot be re-identified out of those systems and it's a radical change if you take 45 days off of an event 45 days off of the next best action and shrink it down to 24 hours how does the how do you change your business how do you enable that and I think the pain there though is the risk of re-identification and if you merge poor quality data you're going to get the wrong results but then you also if you bring certain types of data in you may expose that information and that's what we're hoping you know I'm working with companies working with databricks is how do we solve that problem and to get that increased value of Speed The increased value of sharing information without disrupting you know the things we can't break yeah I love the comments on clean rooms like what other use cases do you all have in mind for clean rooms anything you're thinking about yeah I don't know so I don't know yet but I was excited we have um we have clients who uh contractually were not allowed to have people offshore work on that data they can't see it um so we're actually thinking about can we use clean rooms to allow people to do tokenization on data where they could actually not do analytics on the data they could actually do data Engineering in a clean room so that's uh that would be a game changer for us we have a goal as part of our business case for our Enterprise data platform to optimize the resources between east and west and right now we're at Max because we've got to have people on Shore who can do data production support and data engineering for those clients and if I can if I can have a solution for that that will change the Dynamics of what we can do offshore yeah and for us we've got you know a lot of use cases but uh the kind of the top three for us are you know from a pure marketing perspective uh you know we we all from a digital enablement perspective we've seen all these wall Gardens you know whether it's Facebook whether it's gcp or Google or you know so so those wall Gardens already have the construct of a clean room and yet you know from from a healthcare and Life Sciences company we can't access it right it's the integration costs and the difficulties of getting that information make it so large that that we don't actually do that as a as a key enablement activity and and so now we see the clean room as that is at inroad in so we can take on like modern marketing you know modern marketing principles uh you know not kind of have the the the the spraying of advertising and make the advertisement a lot more efficient because we're targeting the right customer segments um and then and then in kind of in the same uh vein of uh you know U.S medical Affairs so so we we have a lot of specialty Cancer Treatments those are obviously complex uh uh you know care models and and so we desperately want to help with the patient outcomes in these kind of complex environments and to be able to identify events in the in the EHR systems that that we can then from a med Affairs perspective

Target you know we're really looking forward to kind of injecting that and that has to be done within the cleaner and construct from a from a de-identification perspective and then and then just on the last one from a real world evidence perspective you know obviously commercial farming we are would love to start building out our customer Journeys user Journeys based on the real world data today it's it's too risky you know even even if we separate it it makes it you know our legal and risk compliance would never support it and so we we see that that model with with our strategic Partners in terms of building out that the clean room construct where we can marry the two and go to market more efficiently yeah and what you're referring to right is where commercial there's concerns about the commercial side of the house looking at basically outcomes without having the appropriate protocols in place um but if you're controlling the types of analytics you could actually get a really rich view of that longitudinal patient yeah so I think you guys already had a really good points already so um I think that timeliness definitely the clean room where I can help Timeless acts of data under the compliance god well I think that is the key part that we see the benefit of the clean room yeah cool so uh one more question sort of speed around everyone can answer to bring us home here there's so many announcements at Summit and I won't put you on the spot for your favorite Summit announcement unless you want to volunteer it but a lot of them we weren't even necessarily thinking about in any level of depth this time last year so as you look forward to the year ahead just love to get some of your predictions in terms of what new technology is really going to have the biggest impact on your business here over the next 12 months I can go ahead I think the most exciting announcement that her during the Summit is the lighthouse IQ so I'm a you probably have already figured out that I'm a data person business analyst nature right I see that it really unlock democratize the capability and the scope that a business analyst a researcher can do right because what the my prefer language is English right to to query the database instead of writing SQL so it has been some time that when I'm hiring talents in as a business analyst as well as a data scientist right I have these combinations of skill sets that they must have right understanding the technical part of it being able to self-sufficiently query the data right whether it's SQL python whatever that language is Right second is having the critical thinking and understand the underlying process why the data were captured that way right so those are the combination of talents that I need but with these capability right having a more lateral language interaction with with the data right both structure and as well as hopefully unstructured data as well I see that it definitely style that the dial chores to like now that I think the the talent is more important to have that critical thinking capability and understanding that data capture processes and have that essentially alleviate a little bit more uh about that the technical capability itself yeah and so from it's kind of a weird answer but I'm actually excited about all the unity catalog announcements so I think from a product feature capability perspective we had so much of our semantic data being stuck in you know Legacy Hive databases in you know uh postgres you know uh Oracle instances I mean we have all of this metadata that's in all of these disparate sources and and and even with the kind of current you know state in here it's it's really hard to unify it bring it in and then and then turn it into action right so so you know at the end of the day you want to expose that to your data analyst you want you know I should be able to just pull open my Pane and see all of these rich data sources trust you know see lineage see you know all this operational data you know inside of that that that those pipelines and inside those data assets themselves and and I and I can see the story coming together and we we see that as a major takeoff spot for all of these other initiatives you know whether it's LMS or data exchanges or anything so yeah we're yeah not a weird answer at all because it really gets back to trust the observability is key to to trust and and all the efforts in that space are really focused on increasing and instilling confidence in the data I was going to throw it's wrote the combination of the marketplace um the the announcements with the mark abilities the new capabilities you know we've been playing with Delta sharing with databrick playing we've been using Delta sharing with databricks for a couple of years now you know even early in the beta but the marketplace is creating accessibility to information that kind of like the unity catalog tries to help solve his world well in that you know we're still providing so much information to our customers do they know how to use the data right Community catalog and help with that the marketplace can help with that helping bring in data assets together integrating data assets the combination of those Technologies so having the marketplace the tie in the unity catalog and being able to seamlessly do that so I don't need a formal data cataloging project and a formal data documentation project and a formal data warehouse

project in a formal that's in a formal that is you're working together with your partners you can essentially pre-populate all that information you you don't need to do and you need to worry about what's unique to your business not you know one you know not you know what I think another business does where the data comes from so you weren't willing to accept the next answer is weird I'm going to give you a weird one so I'm a I'm a recovering social psychologist and um that that means I think really strangely and I believe I believe that we are often driven by one of two things incentives or identity the trust framework could be identity Mantra right is right how do we deliver trust and scale and velocity um but one of the things that I'm super excited about and this is probably not the answer you you want to hear is all of the Technologies whether it's Genia cataloging um lake house IQ like house IQ apis clean rooms are fundamentally going to change the culture of our data organizations so how are we going to prepare a Workforce to embrace the change and to understand the positive impact and the identity they can have for our Workforce that's what's exciting to be but also kind of scares me yeah yeah that that will certainly play out um over time here and I think what's what will be remarkable about that is the pace of Change is Going to demand a quicker response in Workforce than probably any transition we've seen before yeah um so thank you again for being on the panel uh we will we will do some questions we have time for uh a few questions from the audience if anyone wants to jump in here hi Siddharth there how are you guys approaching the social determinants of health problem so um interesting question there was a lot of interest in diversity equity and inclusion partially driven by sort of this responsibility Vector but importantly from a member or a patient experience it becomes very important what are the things that actually will improve outcomes if we could enable so transportation for example I worked for ECU Health in North Carolina at the very rural safety net kind of system where seoh factors played a significant role in outcomes and readmissions and to the economics of the health system it was it was a primary driver so I think first of all we talk about data quality um the the big elephant in the room with social determinants of health is that data is horrible primarily because of oftentimes stigma associated with asking people like if I saw you I could probably guess your nationality I may feel less comfortable asking you what your nationality is what your preferred language is what does your sexual orientation um you know non-binary that becomes really challenging from a data quality perspective and I think again going back to the cultural aspects of how do we how do we enable a Workforce that will actually be part of the solution and collecting and Gathering accurate data that's that's huge for us we did an audit back a couple of Health Systems ago we did an audit of our language preference data and it was horrible absolutely horrible and gender actually wasn't wasn't the race was horrible and you know I can flip a coin and pick one of the pick one of the ones and get get an outcome so I think that's probably one of the biggest challenges to actually effectively using seoh data in less best action or unintended um you know machine learning or AI opportunities so yeah I can also add a little bit more about the so determined Health Data so as what Greg mentioned that is or you also probably know that right is that it's such an important factor right to determine the outcomes it's self achievement outcomes itself so in the uh enhanced oncology model by CMS there is a part of the requirement is to help collect right at least ask the patients a number of uh I would say that validated instrument called a nccn uh distress thermometer which capture a number of domains related to the soil determinive health so I at least I think is at the society level right we acknowledge that sdox is so important at least we should start to ask the patient whether they want to have this information documented right of course they can always about and but I think having these even bringing into the conversation using a validated instrument is is very critical over here piggyback on that ties to clean room question if you take sdoh data and add it to any data set de-identified identified how do you guys see that risk date event question too you know how do you see that risk playing into the usability GSK yeah yeah I mean I think the the data van is is kind of the key so so the ability to have to tokenize the de-identified information bring it together for the individual use case I mean that it is I I don't see any other way I don't know if else feels different yeah we have an extra layer like there's there's a tokenization aspect to it so you can't see it but the problem and this is what we're actively working with the clean room Technologies on the the problem is when you bring one data set stay identified another day when you put them together they're re-identifiable and we have you know three month long processes to prevent that from happening today how do we do that in a dynamic nature and going back to trust but so we come to an agreement you can upload a data set to the clean room and use it how do

I guarantee you're not uploading different data than you told me you're gonna update and these are lawyers don't like these types of scenarios I'll just leave it at that but that's you know that's some of the things we're looking at is how do we maintain enough control to statistically prevent re-identification but also give you the actual insights you could have if you had that 45 day process to do the analysis so a few questions oh uh hi this is uh Moody from scan health plan so my question is more around the patient experience so I'm just curious how some of your data transformation projects have helped improve the patient experience you know specifically getting appointments in a timely manner or seeing specialists in a timely manner yeah so being part of a provider system I'll speak from the perspective of a couple of different organizations so Intermountain we did a lot of work on this with experience management we know that there it's not the most comfortable experience to deal with a health provider or a health insurance company so being able to streamline that being able to find and Schedule Care is probably our number one priority um people are having a hard time getting getting appointments that they want and well in fact one of the press Community questions you know to patients after an experience with the health care system is were you able to get the appointment that you wanted right um that is a big challenge um and it requires pretty significant cultural change for providers being able to say yeah I'll publish my my schedule if you've ever done any work in or optimization the number one problem there is that you know surgeons don't want to publish their schedule and they want to block time you know that they're not going to use so it's that fundamental human behavior change so it always comes back to social psychology right so I can also add a little bit more here too is that besides by the patient experience we are also thinking about the caregivers experience as well right as we know that like when we're taking care of the Aging populations right that the patient may not have that technical skill set right to navigate through these complex digital world so when we designed on Tata Health which is the patient portal to help like doing the logistic and things like that we have that designed based on both the patient experience as well as the the caregiver experience right to make it streamline the process so that the patient can get to the appointment quicker right with the help of the the caregivers and I've seen it um my company built an application several years ago and the the issue is prior authorization so a lot of Specialty Products require prior authorization for use they're expensive products and via all the traditional routes where if you went with the payer you went with the provider you went with the pharmacy if one of them tried to streamline that process there was always a bottleneck somewhere in the process and we had developed an application for the patient to give them full transparency to who in that chain was doing what at what point in time and the incredible thing was that the for the particular product we did it for the authorization process went from two weeks to 24 hours if you were on the app you average 24 hours if you were not on the app you average two weeks or more to get your authorization and the ability for everybody to link all their data in one place in real time you know with the trust of the patient to have access to that information and it was it was that transparency so you know getting to a doctor being able to get access to the medications there's things that have to change like we can't process files for 450 hours right we can't do those things and um but just like a slightly different aspect of that all right I think we'll leave it there but we will hold our panelists hostage uh for another 10 minutes so if you want uh we'll be hanging out over here please come up introduce yourself we'll take additional questions but I want to thank the panelists again for all the great insights thank you a little bit [Music]