ENGAGE *and Advance*

Ascend Webinars

TRANSCRIPT: Technology's Impact on Outcomes – ASQE June 2023 Ascend Webinar

0:01
Hello everyone, and welcome to the second of our Ascend Webinar series for 2023.

0:08
Today's topic is how technology's impact creates unique industry outcomes, and we're really excited today to have you all with us.

0:15
So let's get started.

0:18
In today's webinar, you will learn more about ASQE's Insights on Excellence data that identifies the latest trends in quality, including key takeaways around the impact that technology has on quality and performance.

0:31
Nicole Radziwill, today's speaker, is going to share her perspective as a subject matter expert in this area, providing you with deeper insights per her presentation on how digital transformation creates unique industry outcomes, but also how you can use quality methodology to be more successful with your technology-based projects.

0:50
We'll also cover a few key points in our wrap up and then open the floor for a few minutes of questions with Nicole.

0:55
And as a reminder, this webinar is going to be recorded for reference and also has additional member resources including this slide deck for you to reference in our member events portal.

1:06
And all of this information will be shared with you throughout the the experience.

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And we'll also provide links in the chat.

1:11
Today.

1:14
On behalf of ASQExcellence or ASQE, I'd like to officially welcome you.

1:19
And my name is Erin Bauer.

1:20
I'm the Product Development Manager for ASQE, and my team and I lead these member-exclusive events for our organizational member companies and their linked employees as part of our association's initiatives to provide thought leadership and advance the field of quality.

1:36
But before we dive in, and especially for those of you who may be new to ASQE's Organizational Membership, I'd like to take a moment to explain more about ASQE.

1:47
The ASQE is a global trade association with a mission to set the standard for quality driven offerings and insight worldwide.

1:53
And our mission empowers the organizations that we serve to achieve excellence.

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And by doing this, we also work with the ASQ quality community and subject matter experts to bring these topics to life.

2:06
One of the leading benefits that ASQE offers to our organizational members is the Insights on Excellence benchmarking tool.

2:13
And this online tool gives our org members exclusive access to performance scoring across multiple categories of organizational excellence best practices.

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And these categories include operations, voice of customer strategy or in technology.

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And the benchmarking tool is an online format that is easy to use with a variety of questions.

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And it also helps to use the digital navigation and asq.org login that you already have as part of your membership.

2:40
So as we use the tool throughout the year, it collects a global data set that we then use to publish our Insights on Excellence research, which you'll see more about today.

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Now, while the benchmarking season is actually now closed for 2023, we will be sending more information in the coming months about participating in 2024.

3:00
But if you have any questions about the benchmarking tool or as your leading benefit with your organizational membership, you can contact us at orgmembership@asq.org or send us a note in the team chat and we'll follow up with you.

3:14
So let's get started on today's topic and we're going to talk more about the why that we've decided to feature a technology-based topic in today's webinar.

3:24
So we know that there's been ongoing challenges with using technology to ensure quality.

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And these are key metrics that are featured within section five of our published 2022 IoE Executive Brief.

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And again, this picks up data from the benchmarking tool to show where organizations are at across the globe in their performance metrics and how that they're driving their teams to ensure quality, but using technology to ensure quality actually remains in the top five of ongoing quality issues for the last two years.

3:55
So in this sample that we've brought forward in this graph, Figure 4.1, we asked organizations the question, “What are the challenges faced by your organization in adapting quality programs to meet the needs of your entire workforce?”

4:09
And as you can see in this graph, we had both quality professionals answer and executives and both actually rated this pretty high up on the list, more so even for quality professionals, especially as we transition from the challenges that 2021 posed into 2022.

4:25
So while in addition, like, while the actual number has actually gone down, which is a good sign that maybe people are adapting or people are getting used to the new environment of using technology, there still remains a challenge that they might not have the skills related to it.

4:40
They might not have thought through all the processes or operational challenges that this might pose.

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So this is where we wanted to explore more on this topic.

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And we couldn't think of a better subject matter than Nicole to help bring these things forward as she works in this space on a daily basis.

4:55
But it's also important to know that not all industries were impacted the same.

4:59
So while we can say there's a blanket statement that we know that technology had posed challenges across the world, which is true, some industries actually adapted to that the switch to a digital environment much faster than other industries.

5:14
This could be based on the amount of manual labor that an industry used versus digital environments that they were used to.

5:20
Or it could have actually been if an industry is a progressive industry and using technology or if it's laggard or if it's falling behind based on other processes that might have been used more often.

5:31
So what we can see in this chart here, and again, this is from the 2022 IoE Executive Brief, we asked

organizations the question, to what extent do you agree or disagree with the statement that investing in technology has actually significantly improved performance against quality project objectives?

5:49
And we see there's actually a pretty wide variance for a lot of these different industries, especially if we look at even the technology sector itself.

5:57
So I just wanted to make sure that this is at the forefront of your mind is that while we have a very wide range of industries represented today in in the audience, which is fantastic.

6:06
Some of you might be farther down the road than others.

6:09
But in all aspects, there's probably a challenge or two that you're still working through based on the amount of change and disruption we all experience within the last couple of years.

6:18
So This is why we wanted to bring this topic forward today.

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And as we think about the takeaways that we want to focus on, there is a lot of information in the executive brief that we can point you to that might help you have discussions within your organizations to move forward.

6:33
And then Nicole is going to expand on all of these.

6:36
But something to keep in mind, and this is again in the executive brief, we really want to bring forward the key point to understand that digital technology adoption creates unique industry outcomes.

6:46
And again, this goes back to was your industry progressive in this area or was it lagging behind?

6:52
So when we look at digital technology investments, we really want to consider that ROI or that return on investment in the context of your industry specific factors.

7:00
It does require, in many cases, some unique solutions, even though the platform might be more ubiquitous as a tool that can be used across multiple industries.

7:09
But this interconnected world that we're all living in now demands that digital tool investment outcomes cannot really be viewed in a vacuum.

7:15
It really requires an entire organizational strategy to understand how the workforce is impacted and really how effective the tool allows them to do their jobs.

7:26
So to maximize that ROI, we really want to make sure that there's appropriate investments when it comes

to solutions for the industry, but also looking at what the qualified talent and upscaling is needed to make sure the workforce is trending along with the organization to get to these goals and actually have success come out of them.

7:44
But really, it's not only for the best of times, but this is really for the future scenario too.

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The last couple of years really proved a lot for many of us in various roles, organizations and various industries.

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But now we also know how planning for the worst of the times can often times be our best defense or our best offense to make sure that we're ready to meet rapid change going forward.

8:05
So with that, I'm very pleased to introduce you all to today's subject matter expert and presenter, Nicole Radziwill.

8:11
I've had the pleasure of working with her now for several years and every time she presents, I always learn something new.

8:17
And she's an international recognized leader in digital transformation and next generation quality.

8:22
And she's also served on executive teams in software services and companies and national labs.

8:27
She's an ASQ fellow and she's also an IAQ Academician.

8:32
She's a Co-founder of QZUKO and she's available to advise high-tech companies as fractional CXO and specializes in the intersection of data analytics, technology, operations, and emerging tech, including AI.

8:46
She's currently the SVP with alternates and chief data officer, and she's also a former tenured associate professor of data science and production or production systems.

8:56
As I mentioned, she's also very active within the society.

8:59
She's a great author and we'll put in more information about her work in today's chat so that you can follow along with her and make sure that you can engage.

9:07
For background, she has a PhD in quality systems and she's also been the author of data science and statistics textbooks that are used in 30 plus universities.

9:16
So I think we absolutely are in for a treat today because she's going to share a lot of information with you all.

9:22
So with that, Nicole, the floor is yours.

9:25
Absolutely.

9:26
Thank you so much, Erin.

9:27
Let me switch to my screen here.

9:31
Let me know when you can see the next slide.

9:36
Yep, you're all good.

9:37
Thank you.

9:37
Excellent, excellent.

9:39
So like Erin mentioned, you know, all of us are at different stages of, of our quality maturity and our technology adoption.

9:47
And as we're trying to figure out how to identify the appropriate outcomes for digital initiatives in our industries, it's kind of hard to do because we're all at these different stages.

9:58
But what I'm hoping is that what we'll share with you today that you'll get at least one little nugget that'll help you figure out that next step, what your unique solutions might be.

10:10
So that's the, that's the intent of the next moments that we'll spend together.

10:16
So we're, we're going to cover these 5 topics and then we'll summarize at the end.

10:22
But first and foremost, and, and this is the first theme that I want to address, is that transformation, any transformation is a learning process.

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So it, in the executive brief that Erin discussed earlier, we saw a survey of quality professionals and that came from the Insights application.

10:43
So it highlighted 2 top concerns.

10:47
The first one was that quality is a culturally sensitive issue.

10:51
And then the second one was properly using technology to ensure quality.

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So we're going to talk about both of these in the next 40 or so minutes and you'll see how these two concerns are related to each other and maybe what you can do about it.

11:04
So where I want to start is that explaining why quality is a culturally sensitive issue?

11:11
At least here's here's why I think it is.

11:13
It it when we think about quality, it quickly gets to the core of how we evaluate our own selves, how we evaluate our performance, our personal value.

11:23
Of course we value quality.

11:25
This is whether you're part of the profession or not.

11:27
Of course we as individuals, we have standards.

11:29
We always aim to achieve them right, But it turns out that a single person's standards for quality usually don't matter because your standards might be incomplete.

11:39
They might not account for what decision makers you work with value.

11:43
They might not account for the trade-offs that you need to make in a particular scenario or situation.

11:48
And, and most significantly, I think this is what I'm, I see most in practice, they might not align with other people's standards for quality.

11:56
So one of the first things that we have to do before we we even go down the road of transformation is to to learn and agree upon a shared understanding of our quality standards.

12:07
And this agreement is necessary because there can be a difference between what your words say you value and what your actions indicate you really value.

12:17
Usually we can see this with our managers or executives.

12:20
Here's here's an example for for a time, I worked with an executive who was struggling with lots and lots of low performing teams in in in board meetings, every single board meeting.

12:31
He made a great case for why their company was committed to investing in in project chartering processes, things that would result in better scope review, better validation of problems before expensive teams launched onto unproductive tangents.

12:46
And he he delivered this message for three years, but in the intervening time, what he didn't do were things like get people who knew how to accomplish this well to lead the process.

12:58
He didn't incentivize or reinforce the desired behavior.

13:02
He didn't remove lower nonperformers or or people who were actively obstructing.

13:07
And over the course of those three years, where did he end up?

13:11
Well, the workforce was fantastic at cutting corners.

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They were great at making it look like they were achieving his goal.

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And I could put a great smokescreen up.

13:19
But the original problem of low performing teams persisted.

13:23
So you can say you value one thing, but when you look at actions, you can you can really reveal what's truly valued underneath the surface.

13:33
You you've got to collectively know your standards.

13:36
You have to collaboratively together apply them and generate the evidence that confirms you have a shared understanding with people around you about those standards.

13:43
Without this, you're going to end up with individual people who use their personal standards to confirm, to assure you that they're doing just fine and they don't need any other standards and they don't need you to tell them that they're not quality minded.

13:57
So so I just wanted to open up by saying I think This is why quality can be a culturally sensitive issue.

14:04
So how do we transform?

14:06
First and foremost, we build habits and practices, and those habits and practices reflect our shifting shared values.

14:14
So in an agile transformation, we focus the workforce on habits and practices that sensitize them to incremental value, that enable them to collaborate closely with the people who have the needs, whatever they're developing, that sensitize people to pivoting when and and only when those pivots are needed.

14:35
I've seen, and you probably have two plenty of organizations where calendars are, are crowded with scrum ceremonies.

14:42
But when you go and ask individual members of a team to explain the incremental value of any of the work they're doing, you find out that you get different stories.

14:51
No one really knows.

14:52
No one's working with customers or stakeholders directly.

14:54
And there's a lot of pivoting going on that, you know, being agile means being reckless and haphazard.

15:00
And of course, you know that that indicates that, you know, if you see those outcomes, that you haven't built the habits and practices that actually do genuinely focus your workforce on incremental value in a lean transformation, we focus everyone in our workforce on value adding activities and removing waste.

15:19
And the reason that we do this is because even though we can identify what that incremental value is with Agile, we need to ensure that that value is continuously flowing to those customers and stakeholders without interference.

15:33
And in a digital transformation, the habits and practices that we are installing, we're trying to focus the workforce on using technology usually to do one or more of these three things to connect people and systems and data together, to add intelligence and to automate it.

15:55
There's, there's one extra secret to digital transformation and I'll get to that soon.

15:59
But what you can see here is that any transformation initiative, all transformation initiatives are about building new habits around a specific set of capabilities.

16:09
So when we direct digital transformation efforts towards improving quality and performance, that's how we're beginning to build them through Quality 4.0, which I'm I'm sure you've heard of.

16:19
Now, are we building new habits and practices that stick?

16:24
That's that's the big question.

16:25
And another reflection question that we can ask ourselves is do those new habits and practices stick even as people enter and exit your workforce?

16:35
That's how you know if you succeeded.

16:38
It's not about the individuals, It's about the collective behavior.

16:41
It's about the collective expectations.

16:45
And you know, transformation is hard.

16:48
It, it requires a lot of systems thinking, a lot of iteration.

16:51
And the whole process can be long and exhausting because, you know, people are involved and it's hard to deal with people because they're, they're different.

16:59
Everyone, all of them are different.

17:00
They're different than you.

17:02
Most significantly, there's never going to be a one-size-fits-all solution, especially when you're talking about tools and technologies and emerging technologies.

17:12
Even though sometimes we work with executives or maybe we are the executives who just really want to find the right dial, approve the funds, get the system procured and get some instant gratification.

17:24
And, you know, and some rare examples that can work, but it's not something that we should rely on because those dials don't work.

17:34
In fact, they don't even exist until we focus on the learning that drives continuous improvement.

17:41
So this diagram right here is from one of my favorite papers ever.

17:45
It was written by Jamie Kovac of the University of Houston and Larry Fredendall, and it was published in Quality Management Journal in 2013.

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What they did in this paper was take lots of previous research, develop a theoretical model of how continuous improvement was supposed to work, and then test that empirically examine it against observed experiences across many companies.

18:11
And So what they found was that, you know, their, their theoretical model was partially empirically supported.

18:19
The the surprising outcome was that it's the collaborative learning, not the improvement practices themselves, not the individual training that happens when people solve problems together.

18:31
So it's that that active process of learning and building capabilities together that leads to organizational improvement.

18:39
Not the practices, not specifically the Kaizen's, but the collaborative collective learning that happens when people solve problems together.

18:48
And why this is important is that when people are transformed, they, they begin to see the world in new ways.

18:59
They react to the world in different ways.

19:02
They make different decisions.

19:04
And when this happens on the scale of the organization across many people, what ends up happening is that the organization as a whole interacts with the world in new ways.

19:13
I I really enjoy this quote here.

19:16
This is from a educational specialist who who has been studying learning for her entire career and in in one of her most well renowned papers.

19:28
She says learning is perceived through changing relationships among the learner, the other human participants and the tools available in a given context.

19:38
Learning involves not only acquiring new knowledge and skills but, and this is the most important part, taking on a new identity and a social position.

19:46
So you know, we might learn through upskilling.

19:50
Upskilling is great, but just the act of upskilling, usually we don't attend to the most important part, which is confirming the acquisition of skills, deepening them by demonstrating capabilities that then help people take on new identities and social positions that that help people collaborative to collaboratively use each other's skills and trust each other's abilities.

20:13
And most importantly, know when to reach out and draw other people in to be part of a solution.

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So it's really that social aspect of learning and upskilling that needs to be, that needs to be.

20:26
Set into the process, demonstrated by application and evidence to make this take.

20:36
So as we're thinking about transformation as a learning process, some of the things that we know is that all transformations involve new habits and practices.

20:46
Those new habits and practices forge new connections and relationships because they're socially recognized.

20:54
Second thing is, is that when we engage in digital transformation, the type of habits and practices that we're developing are around increasing connectedness and intelligence and automation throughout our work systems.

21:08
Sometimes it's just one of those, sometimes it's two of them, sometimes it's all three of them.

21:12
It depends on what is most appropriate for your industry or your quality maturity and for your degree of technology adoption and and familiarity already.

21:24
It is the learning, the collective learning where we take individual skills and we apply them together, that dives organizational improvement.

21:32
And because there is a social aspect of transforming through learning, it doesn't mean we can rely on upskilling.

21:40
We need to create the time and the space.

21:43
We need to reinforce the new skills socially, helping people build connections and relationships around verified competencies.

21:51
This is what it's it's going to take.

21:53
Upskilling is necessary but not sufficient.

21:56
Without the added dimension, you're just sending people to training.

22:08
So now that we've talked a little bit about what transformation is and, and specifically what new habits and practices are associated with digital transformation, the, you know, next logical question is what makes digital transformation successful?

22:21
And this is a really important question to ask because I know you've seen statistics like this before.

22:28
No matter what survey you look at over the past few years, no matter what study, between 70 and 80% digital transformations fail.

22:37
In fact, one study that I saw I think in December of of this past year, and I think it was Boston Consulting Group, although I'm not certain, they reported an 87% failure rate across the examples that they studied.

22:50
And the thing that's funny to me about not not humorous funny, but curious is that those numbers are pretty much consistent across time in, in any study on any kind of transformation, whether it's agile transformation, lean transformation, or, or even when you look back to the studies on adopting enterprise software in the 80s and 90s, you see these same sorts of statistics, which means there's the, you know, there's some common, common element going on.

23:21
So for those of you who've, who've been in my sessions before, you know that I spent a few years trying to figure out an answer to this problem, at least 1 viable answer, you know, trying to figure out what can we do, what action can we take to make our, our, our own initiative supporting digital transformation more successful and wrote about it in this book that you might have read.

23:44
And that is that when you look across examples, I, I, I think I had looked at 600 or 700 different examples in my, in, in the, the body of work that I looked at.

23:59
The secret sauce is that successful digital transformations are intentionally designed to satisfy specific quality and performance goals.

24:09
It might seem like this is obvious.

24:10
Doesn't everybody do it?

24:11
But the answer is no.

24:13
The successful initiatives don't focus on turning up a software system or introducing a new tool or upskilling or introducing an AI.

24:22
They they focus on things like making sure that every technology investment is tied to business outcomes and outcomes that you want the value and impact that you actually want to see come to fruition.

24:37
They focus on things like making sure technology is selected to support and enable a proven process rather than to redefine it.

24:47
You'd be surprised how many times people say, hey, let's turn on this software and completely change the way we do things without saying how does the software do things and is that appropriate for us?

24:57
They focus on things like making sure that technology isn't implemented in search of purpose.

25:04
Here's an example of that.

25:05
I have a a friend who's a PhD statistician.

25:08
He works as a data scientist.

25:11
And a couple years ago he got a new job as the chief data scientist at a bank.

25:17
So he gets to his job, meets with his leaders, his managers, and is like, so you know, what problems do you want me to work on?

25:26
What, what sorts of what sorts of insights do you need?

25:29
And they said, Oh, well, we just want you to, to introduce AI to our organization.

25:36
And he said, well, do you mean like, should I show people how to do some things?

25:40
And they're like, well, we, we don't know.

25:41
We just, we just want to say that that we have AI.

25:45
And sad to say, that's the extent of the guidance that he got.

25:49
So, you know, no connecting him with business problems, no connecting him with, you know, really tough questions that people might want to see if there's answers for.

25:59
They were trying to introduce technology in search of purpose.

26:04
Hey, it's AI, it's got to be good for us.

26:06
What did they end up doing?

26:08
They ended up getting rid of their entire data science staff after two years.

26:12
So that was a waste of time and energy.

26:15
So you've got to know why you're introducing digital technologies, what you expect to get from those investments in the near term, That's those quality and performance goals.

26:24
And that's so you can measure and and track it.

26:26
And also you need to to reflect on what you expect your efforts now we'll set you up to get later.

26:36
Digital transformation is well served by adopting a Quality 4.0 strategy by transforming the interactions between people and process and technology and data through enhancing connectedness and intelligence and automation as long as you have specific quality and performance goals in mind.

26:53
You'll notice that I added the word data and it doesn't appear on the slide.

26:58
Since my book came out, which is now three years ago, I've been I've been spending a lot of time with chief data officers trying to apply these principles to their digital transformations and we keep getting the same message Quality 4.0 is all about the data that drives business processes.

27:17
That's you know that if there's only one place that you can start, start with the quality of your data and information and how it flows through your business processes.

27:26
In addition to being fundamentally sound, data's got to be fit for each of your stakeholders purposes and that's a gap in most organizations today.

27:35
Reason why is that everybody experiences data through a different lens.

27:39
Everybody has different expectations.

27:41
So how do you evaluate data quality when everyone has different expectations?

27:46
It's, it's hard to capture another thing, another commonality that we've we've found is that in most if not all cases, 80% of the business value is going to come from 20% of the data or 20% of the process flows that have data flowing through them.

28:04
And you'll recognize that the 8020 is the Pareto principle.

28:08
How do you find out where the 20% of the data is that generates 80% of your business value?

28:14
Take the process perspective.

28:16
Same thing that we've done with other business processes.

28:21
You can apply the same techniques to understanding data and data flows and the, you know, the most important thing to remember is that data quality is ultimately not a technical problem, but a process problem.

28:34
One of the analogies that I use a lot is it's, you know, imagine that you're running an industrial kitchen.

28:40
And so, you know, you see all the plates come off the line and they get delivered to tables.

28:46
But there's going to be some invisible things going on in that kitchen.

28:50
Like, for example, say you have people who chopped vegetables on the same surface, they chopped chicken and they don't apply good hygiene.

28:57
They don't clean the surfaces the way that they're supposed to.

29:00
You can't exactly see that on the surface.

29:03
But you know, that's going to end up causing some problems with your data if in fact, in in the situation of an industrial kitchen, you end up making people sick or killing them.

29:14
Unfortunately, data quality issues aren't going to well.

29:18
I mean, it's fortunate they aren't going to end up killing or injuring people, at least not immediately.

29:25
And I think that's one of the reasons that that organizations tend not really to to look at with the same level of rigor the data flows in their organization, same way that you might look at the flow of food through the kitchen.

29:41
Another key to successful digital transformation, and this is one that may apply to many of you in this room right now, is avoiding the temptation to boil the ocean.

29:51
We can do this by asking ourselves two questions #1 how should you transform that?

29:57
You know, just prioritize your ideas.

30:00
And then how much should you transform?

30:02
So you may have to think about both of these questions at the same time.

30:07
And the reason why is that there are, and this is the most important point of this, this diagram here, there are different degrees of connectedness and intelligence and automation.

30:17
So let's look at the automation access.

30:19
That's the diagonal 1.

30:21
You know, imagine this is like a three-dimensional cube.

30:24
Seriously enough, the different degrees of automation were recognized by researchers all the way back to the 1970s.

30:32
This particular breakdown here from 1:00 to 10:00 is from a 1978 paper about manufacturing automation.

30:41
When you think of automation today, you probably lean towards the top right, dealing with autonomous machines, full autonomy machines, doing everything on behalf of a human.

30:51
But if you look down to the bottom left of that diagonal, you'll see that the spectrum of automation starts with something pretty simple.

31:00
And that is a human defines instructions and a machine carries them out.

31:05
And that's the same dynamic as in the early 70s when facilities started using PLCS, programmable logic controllers.

31:11
So when you're considering whether to automate a process, just remember there's many, many different ways to automate.

31:18
There's different degrees of how to do it.

31:20
And the advice that tends to to be associated with the greatest success is to choose the simplest one that gives you the value you're looking for.

31:30
Don't go all the way to the end and try to make a manual process autonomous.

31:34
See what's your next logical step.

31:37
And and this applies to increasing connectedness and increasing intelligence as well.

31:42
Same process.

31:45
Another thing that I wanted to point out is that the, the purpose of quality systems, you know, which our, which our work process is to guide us towards the outcomes that we desire.

31:55
And the purpose of AI and ML is exactly the same, to do something better the next time around.

32:02
I mean, that's what machine learning is.

32:04
We take examples, we learn from patterns, we continually improve on a a granular algorithmic level.

32:11
The thing that we see happening and, and when we're training are AIS.

32:16
It's the same thing that quality professionals have always done, except, you know, when quality professionals have done this over years, it's been a little more qualitative, a little more manual of a process, but the, the, the approach, the outcomes are very much the same.

32:34
That's one of the reasons why I think that applying AI and ML to quality is probably one of the most fruitful areas of of progress and development that we're going to see over the next 10 to 20 years.

32:48
And as we look to the next 10 to 20 years, it's important to look at the evolution of quality over the past like 100 or 150 years.

32:56
So we started by applying inspection to throw out the products that didn't meet our quality standards, you know, make a lot of stuff, throw out the bad ones.

33:06
Next, we recognize that if we designed a process to meet quality standards, we'd have a lot less stuff that we'd have to throw out.

33:16
And you know, that would improve the, the whole cost of, of the process by the 1980s and 1990s.

33:22
That's when we started collectively realize that engaging everyone in the continuous improvement process would help us get to results and and implement change more effectively.

33:33
But now we're on the cusp of another paradigm shift.

33:36
And it's it's driven in large part, perhaps fully by digital technologies.

33:41
So this is, this is the essence of, of Quality 4.0, whereas before we'd focus on a single solution like, you know, design a good process, improve it.

33:53
Now we can shift our workflow.

33:55
We can work on discovering what quality is, discovering what good looks like rather than just defining it in advance.

34:04
Let me give you an example of how this has already started to happen at the end of March.

34:09
Undoubtedly you saw news, news articles, announcements about generative AI image generators like mid journey and you know the the most exciting ChatGPT where you can ask natural language questions and get really good sounding answers.

34:30
Notice I said good sounding and not good.

34:34
Immediately a couple of industries were disrupted.

34:39
For example, architecture.

34:42
It used to cost a lot to do concepts drawings.

34:46
It used to cost a lot to get a shared understanding between the architect and the customer about what the vision would be for a particular building project.

34:56
Instead of investing.

34:58
Instead of investing in those, you know, maybe just like 3 concepts and then choosing between them.

35:04
Now what they're able to do is generate hundreds of concepts, generate batches of concepts, use each batch to discover a little bit more about what the customer's desires are.

35:18
It's, it's reducing the cost of the process tremendously and it's also speeding up the time to do it.

35:26
So what we're seeing is a huge tightening of feedback loops as the shared understanding between the architects and the customers can, can naturally emerge from looking at hundreds of options and generating hundreds of options together.

35:42
That's made possible by generative AI also ad firms or, or product organizations, right?

35:49
Like, you know, think about the task of generating product personas, right?

35:54
How did we used to do it before?

35:55
We used to task a group of people to come up with, you know, 5-10 personas.

36:00
They would laboriously go through the process of interviewing people and trying to figure out what what all of these factors might be.

36:08
Now it turns out that, you know, much like simulation, you could just throw a bunch of questions at ChatGPT.

36:13
And although you can't rely on the accuracy of those answers, certainly humans can go in and evaluate the accuracy of of all of the items that come back from the simulation.

36:24
Long story short is the outcome is still the same.

36:27
We're drastically reducing the time it takes to come to shared understanding.

36:33
And that is where, you know, a huge economy of scale.

36:37
It has already started to happen.

36:39
So what I think is going to happen over the next 10 years is we'll be able to shift our workflows in different areas or we can discover quality together and we don't have to rely on just being limited to one or two good answers.

36:50
It's pretty exciting.

36:53
So what did we cover here?

36:56
That successful digital transformation initiatives always focus on quality and performance, that as we are trying to form those, if we want to be successful, we focus on improving connectedness, intelligence and automation.

37:12
The most important thing to recognize is that along each of those 3 dimensions, you don't have to go all the way.

37:18
There's going to be a step that's appropriate for you between no connectedness and full connectedness and similarly intelligence and automation.

37:26
And again, it's the focus on learning that brings the, the nature of quality systems and the nature of, of AI and ML together.

37:35
This is what's going to, you know, together the experience and quality and the new capabilities that are being unveiled so that we can to discover what good looks like together that's going to open us up to new work flows.

37:53
So how do we apply this to coming up with an appropriate strategy for us?

38:00
So the question here is how we'll be able to develop a new sense for what's possible.

38:11
So in order in order to answer that question, let's think for a moment in terms of cost of quality.

38:16
So cost of quality is, you know, where you, where you split the cost of a process into, into four areas, the activities that you, that you use to prevent problems from happening, the appraisal activities that you engage in to make sure that things are going well or to see if you need to, to tweak or change them.

38:35
And then finally, internal failures that happen when your own internal customers are negatively impacted.

38:41
That's bad, but not as bad as much more costly external failures that happen when people outside your organization experience those failures.

38:50
There's, there's in fact, you know, a, a, a geometric increase in the damages that are done when, when the problems happen at these different scales.

38:58
So when we first start looking at quality and improvement in a, a siloed organization or a struggling organization, we notice something similar between them immediately.

39:10
There's a lot of failures, lots of failures.

39:13
Usually you know, the the cost of quality is dominated by those external failures.

39:19
Maybe there's some appraisals or audits going on.

39:22
But what you'll see is that there there are little to no preventive maintenance or preventive activities.

39:30
Ultimately where we want to get to as our quality consciousness improves is to get to a point where we're seeing no errors.

39:37
We're putting in some work on prevention, but you know, ultimately where audits become less necessary because our system is self-monitoring, our system is designed to prevent errors and defects.

39:49
And so to accomplish this, we have to redistribute our investments.

39:53
So, you know, on the on the far left, we're not focusing our investments on those prevention activities at all.

40:00
But as, as we start thinking, I want some better outcomes here, we start investing in prevention.

40:05
We may need to even increase the amount of appraisal that we do.

40:10
The first thing that you'll notice is that external failures start being reduced.

40:15
And then, as you learn which prevention activities are the most effective, you find out that you don't have to do quite as much appraisal.

40:24
Because the prevention is taking care of it, right?

40:26
There's, there's more information there.

40:29
You also notice that the external failures and the internal failures are starting to go down as the learning takes root.

40:35
Now for decades, a picture on the far right, and by decades I mean like probably at least three, the picture on the far right has been a really big aspiration.

40:46
But you know, I, I don't know of anybody in past years has really thought about that as, as too realistic or achievable.

40:52
I mean, it's, it's fantastic to think, OK, cool.

40:54
We can, we can do a little bit of prevention.

40:56
And because the system is designed so well, we don't have to do any appraisal, no auditing and the failures just go away.

41:02
But you know, great aspiration.

41:06
But I do think that through digital technologies, the value vision that was established back then is now becoming possible.

41:15
Now that state of perfection can be where we aim for.

41:21
Because if you think about what makes failures decrease, it's two things.

41:26
Recognizing them and fixing them instantaneously, or maybe designing or continually improving to get processes where failures don't happen.

41:34
And to do this, we need to shorten the time it takes for information about failures or potential failures to pop up, to be validated, to be be routed to the person or system that needs that information, and then to engage in a response.

41:50
So you can imagine at this point a world full of intelligent agents where these things happen with really, really low latency.

42:00
All of these intelligent agents automatically gathering the data that helps us learn and improve.

42:06
And you know, here, here's the most important part here, by shortening the feedback loops through enhancing connectedness and adding intelligence and judiciously deciding how much automation to engage in when we're making it possible to achieve that vision for value that was recognized years ago.

42:28
And I, I, I really think we're on the verge of the quality profession achieving all of these things that, that we thought were possible and making huge, huge impact on the world.

42:39
Why?

42:41
As we introduce more connectedness and intelligence and automation, we're also going to be able to see opportunities that were invisible before.

42:49
And that's going to give us a chance to discover ways to, you know, for example, increase profits and returns beyond where we thought was possible.

42:59
So where can we shorten these feedback loops?

43:02
You know, there's lots of work systems, lots of feedback loops.

43:05
We got to make a choice.

43:06
We can't boil the ocean.

43:09
When you look at digital transformation initiatives from the past 10 or so years, you'll see four areas pop up over and over.

43:19
And deciding where to focus is going to depend on how much innovation do you want to, well, you know, what's your innovation appetite that's that horizontal access.

43:29
And then also the extent to which you're willing to or need to shift your business model.

43:34
So the four areas that we see being addressed are things like let's optimize our internal and external processes, external meaning meaning as they connect to your customers.

43:46
Second area is improving the interface, improving the information transfer between customers and your organization.

43:56
The third is in creating new ecosystems, new information based ecosystems where you can drive new forms of value.

44:03
And then finally there's some organizations have some some really interesting examples of, of that using learning how to enhance connectedness, intelligence and automation to create entirely new business models to solve problems that they may have been experiencing in terms of connecting with their customers.

44:21
Now there's another area that's starting to appear and that is new work modes.

44:28
As I mentioned earlier that the new technologies, particularly the generative AIS are going to help us shift our workflow from honing in on one feasible answer to generating multitudes of possible solutions and then figuring out which ones meet our quality standards.

44:46
We're, we're starting to see those capabilities become enabled and, and organizations to try those.

44:56
So just, you know, want to make sure that's on your radar, that's, that's emerging.

45:02
I mentioned earlier that I've spent the past few years working with executives on planning and evaluating intentional digital transformation initiatives that do focus on quality and performance goals.

45:14
And now I'd like to share an overview of some of the themes that are beginning to appear.

45:27
The, the part that let's see, we mentioned that as you figure out where to focus and, and those four items on the top, the four items on the top reflect the four circles that were organized on the the diagonal.

45:50
When you decide based on your innovation appetite and the degree to which you want to expand on or or shift your your business model, the next step is to figure out which quality and performance goals align with that neighbourhood that you wanted to focus on.

46:12
Here's just some examples.

46:13
Like I mentioned in the very, very beginning, you're going to be in different stages of quality maturity.

46:18
You're going to be in different stages of technology adoption and the things that are important to you are going to be different.

46:24
What you can see here though, is that if you can home in on Group 1, Group 2, Group 3, or Group 4, you should be able to explore some of the quality of performance goals that other organizations have explored if that was their interest.

46:39
So this is just to to stimulate your ability to explore what your quality and performance goals might be for your particular context.

46:50
So what do we learn here?

46:52
First and foremost, these new and emerging technologies, what, what do they do?

46:56
They help us shorten the feedback loops and by shortening those feedback loops, we can achieve that value vision for Quality 4.0.

47:04
In order to do that though, we need to.

47:06
We don't want to boil the ocean.

47:07
We have to figure out where we want to shorten those feedback loops.

47:11
Do we want to optimize processes or work with our customer interfaces?

47:14
Do we want to create new value networks?

47:16
Do we want to make our products and services smarter to expand into new markets or maybe to make old markets a little easier to satisfy?

47:24
Or do we want to explore those new modes of work?

47:27
Regardless of which direction you choose to go, starting with those quality and performance goals is always the most important piece because if you don't, you lose the intentionality of the technology initiatives that you're aiming for.

47:43
Context is so important, you know, thinking in terms of, of the system and the industry that you're you're working within.

47:52
And we're going to see this show up as a core competency too.

47:57
Let me just tell you a little story before we get into lessons for execution.

48:02
A few years ago, I worked with an organization that it was a technology project.

48:06
They wanted to migrate and test about 200 reports and, you know, the automations that produce them.

48:13
And in doing so, they were shifting from a legacy business intelligence system to one that was more flexible and maintainable.

48:20
So they hoped that by doing this, hoped that they'd have more control over data quality and that would be cheaper.

48:26
But you know, they, they were just like, hey, let's, let's migrate these reports.

48:30
But rather than just leaping into migration, we did something in advance.

48:35
We made the data flows more bit more visible.

48:37
We traced backwards from the business questions that real people were asking to the parts of the system that supported those business questions getting answered in valid ways.

48:47
And it was really curious because taking that approach showed that only about 15 reports and maybe a a small subset of the data sources that were supporting them were actually essential.

49:00
And so by stepping back and really understanding the context, this particular team was able to save nearly like 80% of the time and money that were allocated to this activity in the beginning.

49:12
And, you know, they ended up with a much more maintainable system.

49:15
So moral of the story is that context has always been important.

49:20
It's becoming more important and especially as we emerge into trying to figure out how to execute effectively.

49:33
So I mentioned earlier that some of the things we'll be talking about today were new results based on interacting with executives for the past few years.

49:46
And although I won't go into detail on all of these, I just wanted to highlight what those are on the surface.

49:53
So as, as you, let's say, you know what your quality and performance goals are, you know what area you're going to focus on now, you want to plan and execute initiative here.

50:03
Here's some of the things you have to keep front and center in your mind #1 is that the process has to come before the technology.

50:14
Like I mentioned before, all too often I've seen executives invest in a technology just because they've been told that technology is good.

50:24
But especially if there's already a business process being supported, I can assure you that turning up new software to overtake a process that people aren't prepared for is not going to end up in your favor.

50:38
So a tenant that I like to to make sure is front and center and my execution decision is the technology has to follow the process.

50:48
The process has to be in place before the technology or at least be envisioned or designed and you know, conceptually worked out.

50:55
Second thing is focus on your data quality first.

50:58
Even if you don't do anything beyond just improve your data quality, if you know which data is critical to a particular process and you work on the quality there, you will end up with improved quality and performance around that data flow.

51:13
I've mentioned this in a couple of the examples.

51:16
I think it's, it's a good idea to Pareto everything in any initiative that's related to turning up technology for connectedness or intelligence or automation, step back and say, how much of this do I actually have to do?

51:30
Where's, where's the value going to come from?

51:33
And then focus on that value.

51:35
Number four and five are, are, are also kind of important and you might say, well, Gee, why are visibility and transparency separate items?

51:45
Visibility means I can see into what's I, I can see the outcome of what's going on.

51:51
Transparency says I can see through it and see why that outcome is happening.

51:57
These are the, these are the two primary gaps that I see when engineering teams and business teams aren't communicating.

52:07
They've got to be able to have their interests and their results visible to each other, but also to expose enough detail so that those outcomes are understandable.

52:19
Otherwise, you're going to end up with higher risk outcomes because there's because the you're opening up to potential discrepancies in how those two groups see results.

52:36
Expect cognitive reality.

52:38
So this goes back to a 1983 paper by someone named Lynn Marcus.

52:44
Change is always difficult.

52:45
Even if your organization is introducing the best tool for all the right reasons, adopting a new tool still requires the investment of cognitive energy.

52:55
It's still going to be difficult even if the tool is something that people unanimously agree is going to help them.

53:02
So we, we've got a, we've got a plan for that #7 check your incentives.

53:08
You know, I mentioned way in the beginning that when you're trying to, when you're trying to stimulate change, you need to make sure that people have the right reasons to do it.

53:19
That you're not particularly as an executive, that you're not accidentally supporting people in the in the less efficient, less effective behaviors that you're expensive technology is supposed to account for.

53:39
And then finally this one, this one is a lesson that I learned from my friend Greg Satell.

53:44
He's, he's written several books on this subject and, and what he, what he addresses is, you know, we think that the way to, we think that the way to cause positive change in our organizations is to convince people to make them understand why a change is needed to get them engaged in the process.

54:09
But Greg, Greg studied political movements and he's also applied that to working with companies on change initiatives.

54:16
And what he found out is that you just need a tipping point.

54:19
You just need a small group of committed people who can engage in demonstrating that a change is possible, who can tie those changes to the quality and performance goals that you want to support.

54:33
And by building those little cabals of people who are already committed, What he noticed is that you eventually reach a tipping point after you get to to between 22 and 25%, and then the whole organization follows.

54:45
And so in every case, he's noticed that that approach is much better and much better than if you try and convince people.

54:56
So this chart here comes from my book.

54:58
It explains how all the pieces fit together.

55:01
And the message here is just to, you know, recognize that as you're constructing your industry specific desires and outcomes to think about all of these pieces.

55:13
And it, if you, if you kind of think about this as a sandwich, the technology choices and investments, that's just that middle layer there.

55:20
That's just one of the ingredients that the cold cuts or the, the eggplant or giant mushroom if you're a, a vegetarian.

55:27
When we examine the degree to which it would be appropriate for us to enhance connectedness or intelligence or automation, that's like deciding how tall to make the sandwich or how much extra flavor you need to add.

55:38
You know, adding too much flavor can make the sandwich unpleasant.

55:41
It's the same with technology investments that you got to choose the right level of seasoning and without a good plate for that sandwich to be delivered to somebody on that look at the bottom of the screen there,

that's the the data integrity and the functional work systems that enable the the transformation sandwich to be made.

55:59
You know it's just going to fall apart in your lap.

56:01
So by exploring the relationships between these elements, you can begin to understand how digital technology creates unique industry outcomes for your industry and for your immediate and future needs.

56:15
Because you know, ultimately, it's all about the business.

56:18
It's not about the technology.

56:19
I can't tell you the number of times I've had business people on my teams literally shaking with fear, saying things like, I'm not technical or I can't possibly understand what's going on.

56:28
You need people like this on your technology implementation teams because if your engineers can't explain why they're implementing something or who it will serve or to what end, the initiative is not likely to succeed.

56:40
The business piece has got to make sense because digital transformation is not solely about the tech, it's about the business value and the impact.

56:51
One piece of guidance that has been rather helpful is do less, more intentionally, you know, pick some incremental ways to specifically address your quality and performance goals.

57:04
I'm going to cover this section pretty briefly here.

57:07
It's, you know, it's more about the people than technology.

57:09
You've probably gotten that message already, and just going to touch on a couple of very important assets that you should keep in mind #1 is that skills are not the same as competencies.

57:24
Skills are held by an individual.

57:26
Competencies reflect the ability to practically apply those skills within a social context, within a problem context.

57:32
And most resumes are full of skills, but they don't address competencies at all.

57:38
Lots of learning and development programs help people build the skills, but they neglect that more important part, the socializing and reinforcing those skills through application.

57:48
And as a result, we pay for it as organizations.

57:51
The example that I shared earlier about report migration where we ended up migrating only 15 reports and instead of 200 and doing it in a month rather than over a year.

58:01
You know, the team was was well skilled, they could turn the crank, they could do the migration, but they couldn't evaluate which reports were important to migrate.

58:10
They couldn't look at the system's context to determine what was worth migrating.

58:14
And you know, this, this plays out over and over again in all organizations.

58:18
Getting to that context, getting to the why is going to make you a lot of benefit.

58:27
And these competencies are demonstrated by evidence.

58:31
This is the evidence that we used to to prove to ourselves that we're all evaluating quality in similar enough ways to be successful together.

58:39
Because without tangible and objective and shared evidence of what good looks like, people are going to create different visions in their heads.

58:46
They're going to work for their own vision.

58:48
And without records of the evidence of what good looks like, people beyond your immediate team that did it won't be able to learn from those efforts, that the value is going to erode and eventually be lost as people leave the organization.

59:00
So valuing evidence around competence, he's giving teams the time to produce it, to refine it, to share it, to socialize.

59:07
It can protect your organization from people flowing in and out, which is to be expected.

59:15
And the this reflects the need to look at feedback loops on a, a higher level, you know, establish those cyclical links between the experiences that your workers have every day and the way they capture the results of their learning and shareable and, and reusable assets.

59:30
And then the way your organization uses those assets as a benchmark to establish what high performance means and to help others achieve it.

59:39
So moral of the story is use your experiences to build assets, use your assets to benchmark performance and reflect on performance using the benchmarks to improve future work experiences.

59:56
So despite the variety of lots and lots of good workforce practices to choose from, you know, a lot of attempts, a lot of attempts.

1:00:05
Oh, I just went backwards.

1:00:09
Oh yeah.

1:00:10
So the one of the ways to remember the elements of a workforce capability engine is through the acronym EAR.

1:00:17
And that's kind of cool because EAR, are you listening for what your workforce needs to learn?

1:00:23
Are you converting lessons learned to competency based assets?

1:00:26
Are you reflecting on how well people and teams are practicing and extending those competencies?

1:00:32
When you think about preparing your workforce within this context, you're going to naturally be able to reduce risk.

1:00:43
You're going to be able to intentionally create a more inclusive and collaborative work culture, and that's going to lead to people building higher quality assets.

1:00:51
And then you'll also be able to make more objective reflections on performance.

1:00:54
So the entire system is a renewable, sustainable cycle.

1:00:58
Fortunately, this is the intention.

1:01:00
I think that was underlying Aldridge criteria in Section 5, so you can get more details about it there.

1:01:07
So the reason that a lot of workforce practices fail is that they're implemented piece meal.

1:01:16
The way that you can help make yours succeed is by by adopting this by by building a workforce capability engine that acknowledges those feedback loops are at the center.

1:01:31
That way you can hedge against upskilling without social socializing and reinforcing the applied competencies that are really needed to solve problems.

1:01:47
So we are now at the end, and I think through all of the different examples and paths that we've gone down, there's a couple of themes and these relate to what Erin had mentioned at the very, very beginning.

1:02:01
The first thing is that digital technology creates unique industry outcomes by tightening feedback loops.

1:02:08
And we explored many, many ways to establish where those feedback loops might be found, which ones might be important, which ones might tie to specific quality and performance goals.

1:02:18
And ultimately by using that as the lens through which you view your processes that are unique to your industry, you can work towards the value vision for Quality 4.0 where everything is prevention and audits and appraisals are instantaneous and you have a internal failure and external failure proof system to engage the workforce.

1:02:41
Take an adaptive approach.

1:02:42
Consider the feedback loops in a work workforce capability engine so that people can translate those skills to competencies.

1:02:49
And then finally, take a process perspective, look at data quality and Pareto everything and that will help you focus your investment on things that are most likely to generate returns.

1:03:03
So Erin, I'm going to hand it back to you.

1:03:07
Awesome.

1:03:07
Well, thank you so much.

1:03:09
I think this was really incredible because ultimately what we all know is that technology doesn't replace people.

1:03:18
It the like you said, the skills and the competencies are still needed, but the way that we know machines can complement what humans are doing, I think there's a lot of fear that that happens right now with people try, you know, change is, is scary, right?

1:03:33
But there's a lot of ways in which I really love the way that you boiled down how to look at this issue being more about the organization, taking into account the talent, the skills, what what are they trying to achieve?

1:03:44
That's what helps this journey out.

1:03:46
So as always, Nicole, you are amazing, a fountain of knowledge.

1:03:49
We really appreciate it.

1:03:51
I know we're at a little bit over time.

1:03:53
So if anybody wants to hang on, we are still gonna have some slides here to cover.

1:03:57
So otherwise this recording is available to all of you.

1:04:00
You will get information about this after we wrap up today.

1:04:04
But there is a question, Nicole, I do have as a curiosity for you is that when you in the work that you've done in the operations across across the industries that have really weathered immense disruption these last several years and technology, we know it's one of those main drivers that people had to shift to whether or not they were prepared or not.

1:04:22
Is there any one disruptor that you think stood out most during the last three years in your work with clients that people really or that that comes to mind that you want people to really focus on to fix?

1:04:33
Yeah.

1:04:34
So I'm, I'm really intrigued by the whole prospect of generative AI and its ability to help us shift to those, you know, the the orientation of, of quality as discovery.

1:04:43
You know, those of us who have used simulation to solve problems in the past, we know that you can, you know, generate a multitude of outcomes, sift through them and get, you know, what's usually a a better answer that way.

1:04:53
We've, we've never had that kind of capability open to us in any other industry.

1:04:59
The, the reason why I think this is exciting, why I'm seeing, I mean, people are, people are freaking out about they, they recognize that this is going to change the way that they do work.

1:05:07
I was just working with a software testing team and you know, the way that tests are usually stood up is that, you know, you look at your application, you look at your AP is, and then you establish which tests will get the desired outcomes, what they're exploring right now.

1:05:21
And it's, it's way more successful on the surface than I had thought it was going to be.

1:05:27
I'm, I'm really intrigued by it is they're just generating thousands of tests and then creating an intelligent agent to sift through them and recommend the tests that generate the most useful, most valid and actionable information.

1:05:38
And so, you know, think about it, we do things like that in quality programs often and it takes so much time, but if we can create intelligent agents to go through that process for us, then we can start shifting our work flows by thinking of quality as a discovery process rather than a definition process.

1:05:55
Slowly.

1:05:56
Yeah, no.

1:05:57
And I think that's an important point because we're even seeing this in the IoE data where we're seeing year over year shifts where AI had been important as a workforce skill set last year in the data.

1:06:07
But now we're looking forward to this year, in the last year that we've collected data, data qualities over overtook that it, it, it, it popped up.

1:06:15
So it replaced AI where I think people were like super excited about a new technology.

1:06:19
But then all of a sudden, like you said, the reality hit where what is the actual quality of the information that's coming in through this?

1:06:25
Because AI, like anything is just another tool, right?

1:06:28
It's it's, it's, it's another way to generate yeah, to generate information and, and had what do you do with it once you have that information?

1:06:35
Is it reliable?

1:06:37
Is there is there expert data in here?

1:06:39
What's the quality of it?

1:06:40
So yeah.

1:06:41
And you know, some of us have been working with that for 25-30 years already.

1:06:44
And, and we know, you know, the tools are just tools.

1:06:46
Anybody can be trained to turn the crank, but really understanding the context is, is the key that's going to be that's going to be the the killer killer skill to get everybody aligned on.

1:06:57
Well, excellent.

1:06:58
Well, and, and I know we're at times.

1:06:59
So for all of you that might have had a question that Nicole might have spurred in your mind as you were looking through the content that she covered, please either send that in the chat through the zoom tool and we'll get that to her and we can circle back with you.

1:07:14
Otherwise, we do have a ton of resources that are available to you.

1:07:17
This information is going to also be placed in the chat.

1:07:19
You also do have access to this through the various emails that you've gotten in preparation for this event.

1:07:25
So as an attendee, you we have a link to our events portal.

1:07:29
Nicole's book is included in that resource guide, which I highly recommend.

1:07:34
And we're going to be definitely keeping this as a topic as we go forward with the Ascend series.

1:07:40
This is important.

1:07:41
Clearly, it's affecting everybody and we want to make sure that we are looking at this and how it can best impact you all.

1:07:48
Just a few final items here as we wrap up.

1:07:51
So Engage and Ascend is the next event next week that will continue this conversation.

1:07:56
That is on Thursday, June 22nd.

1:07:59
You should have also had the registration link in your e-mail to register for this event, but if you didn't receive it, we'll be sending out a reminder for you all that is on June 22nd from 1:00 to 2:00 Central Standard Time.

1:08:10
Nicole has been gracious enough to join us again for that and we're going to be covering off on two key of the key key topics that she covered on today.

1:08:19
And we're going to also be looking at that from what does this mean also from a leadership standpoint, right?

1:08:23
So a lot of the things that Nicole talked about really is about driving teams to succeed.

1:08:27
Leaders play a big role in this.

1:08:29
And many leaders might be intimidated by the concepts of technology or the threat that technology kind of poses because they might not be fully skilled to that.

1:08:37
But we want to make sure we're boiling it down in a way that's manageable and attainable.

1:08:41
So we'll be talking about it in that scope.

1:08:45
As far as also participating for today, you will receive your RU credits.

1:08:50
You'll also get them again for engage in a sense.

1:08:52
We really want to see you come back and this is a facilitated breakout discussion to network with your fellow quality professionals and really dig deep on a few of these key takeaways to make it more actionable for you all.

1:09:04
One quick announcement that we do have from ASQE, we're really excited to announce that we do have an opening chair-elect position, which is going to be eligible for nominations in our next cycle here for our Board of Directors.

1:09:18
So if you are interested or not, someone that would make a great fit for the ASQE Board of Directors, please, please, please nominate yourself or them.

1:09:26
You can do that by emailing ASQE Nominations Committee at asq.org and you can also get information from that too.

1:09:33
So just a few quick highlights of the benefits of serving on our board.

1:09:36
Obviously, this helps guide the future for our association, but it also is a great resume building experience for the person, the candidate that gets chosen.

1:09:45
You clearly network with other quality leaders and professionals because this is what we do at the heart of our mission.

1:09:51
And then obviously, I do earn our use for the time invested.

1:09:55
So just for a quick plug in, that information is also in the chat.

1:09:59
And to wrap up again, Nicole, thank you so much again for your time and your energy and also the insights that you shared.

1:10:06
And as as you sign off today, there is a quick survey link that also is eligible for you to help us improve.

1:10:13
Obviously, in the spirit of continuous improvement, we're always looking for that.

1:10:16
But really thank you again so much for everyone's time today.

1:10:19
And we'll see you again at the next Ascend Webinar, which will be coming up in August.

1:10:24
So take care everybody, and have a good rest of your day.

1:10:27
Thank you.