

## Episode 42: Key Factors of Forecasting Success

*GTreasury*

- Intro: Nearly all organizations are keenly focused on forecasting. For well over a decade, it has been a top priority for companies. Craig Jeffery of The Treasury Update Podcast talks with Mike Zack of GTreasury on the key factors of forecasting success. With a step by step approach, they discuss how to systemize your forecast, avoid pitfalls, enhance global visibility, and maybe even reduce fraud losses. Listen in to find out how you can better position your organization for success.
- Craig Jeffery: Welcome to The Treasury Update Podcast, this is Craig Jeffery, the managing partner of Strategic Treasurer. I'm here with Mike Zack. Mike is the Pre-Sales Manager of GTreasury, he's based out of the Chicago area, he's helped well over a hundred firms with their treasury technology and treasury processes. And for those who aren't as familiar with GTreasury, they're the leading treasury management system vendor. They've been very busy the past few years, they had a large capital infusion, over forty million dollars. They acquired and integrated visual risk and they've also been expanding heavily into Europe. And with that as a company background, I wanted to welcome you to The Treasury Update Podcast, Mike.
- Mike Zack: Yeah, thank you so much for having me today, Craig.
- Craig Jeffery: Forecasting is such an important area just in terms of context. Nearly everyone is focused on forecasting and the value is also quite apparent as well. Before we get into some of your experience in terms of what others are doing with the forecast, maybe you could just go a little bit more in depth in your background so the audience knows where you're coming from.
- Mike Zack: Absolutely. Just as a way of introduction, my name is Mike Zack, I'm the Pre-Sales Manager here at GTreasury. I've been with the company for nine years, I actually started off on the implementation side of our product and then moved over to the sales side. I have a lot of knowledge around how our product is implemented and the best practices that are wrapped around that. In the transitional process of moving into pre-sales, I conduct demonstrations for hundreds of companies and I really understand more about the inefficiencies that they're working in and how our application is able to effectively solve those inefficiencies. So for today's purpose, I'm gonna be able to bring some best practices on what other organizations are doing on a forecasting side, on a data aggregation side, and how that plays a pivotal role in rolling out a forecasting plan.
- Craig Jeffery: I think it's great for everyone to know that you're in this all the time. But in addition to that, I started off saying that most companies, the vast majority of companies, are focused on forecasting, they want to improve it. It's typically number one or sometimes number two on their wishlist for improvements. But as you've talked to companies, anything you want to add or any additional color on that concept of the importance of forecasting?

Mike Zack: Absolutely. I mean, forecasting as you stated is usually number one or number two, typically it's either cash positioning or forecasting, those are the two strongest areas that people are trying to solve, amongst treasury professionals. Forecasting has been talked about from an improvement side for decades. I see a lot of the frustrations that people are having on a day-to-day basis here at GTreasury. Unfortunately, it's not as simple as one, two, three. But, with today's session hopefully we'll be able to give some insights and tools into how you can create a forecast and the key benefits that an accurate forecast actually serves.

Mike Zack: When you think about a forecast, you have to take a quick step back. Everyone always wants to think about the end result of what they get out of the forecast, which is always great to have that vision into the future, but really being able to take a step back and formulate a plan and a foundation to generate that forecast, that's typically, during the sessions that I conduct with organizations, is to take the step back and just refocus on what the ultimate goals are. And we'll go through in today's session, you know, kind of a step by step approach of how to get to the end result which is reducing your bank fees and borrowing costs with an accurate forecast, global visibility. So these are just some areas that people are trying to gain, just in regards to their organization's infrastructure and visibility, which is the most important piece of it.

Mike Zack: Everyone knows the key benefits of what forecasting delivers and being able to take that and put it into practice is the other component. Some of the key benefits as I outlined earlier with forecasting, just to accurately forecast your business finances. You have a higher chance to capitalize on investment opportunities, you have the ability to avoid bankruptcy in some cases because your cash isn't as scarce as it could be. Everyone in the company's actually on the same page and moving at the same speed. You know, one of the biggest topics that we're getting in in my world, fraudulent transactions. Accurately forecasting can actually lead to reduced fraudulent activities because you have the visibility into the organization's structure.

Mike Zack: I just wanted to really, at the highest level, cover some of the key benefits and what people are looking for when they ask me about forecasting and creating an accurate forecast. Everyone likes to see what they're going to gain before you get into the actual work that is needed to achieve that gain.

Craig Jeffery: I liked what you said, Mike, when you brought up, you know, to avoid bankruptcy. The issue of insolvency tends to make organizations that are skirting on the edges very, very effective forecasters. They know exactly when things are coming in, they schedule and manage how things go out. It's a key crisis management issue when organizations hit that level, but you were also talking, and I was gathering from what you were saying is that forecasting is really about optimizing the liquidity that you have, whether it's for fee savings as you said, reducing borrowing cost, making sure it's in the right area, whether it's very near cash or whether it's farther up in the working capital cycle.

Craig Jeffery: The one thing you said though that I don't think many people think about, has to do with the fraud issue. If you have good and accurate forecasting, you might spot fraud, you have good visibility, good forecasting. You might pick up fraud more rapidly. Anything you want to add on that part?

Mike Zack: Yeah, I mean, it is something that people have always wanted to look at. With the vast amounts of data that these systems have, it's a lot easier to track for those fraudulent transactions. Actually, I was just talking to a corporation yesterday, and they wanted to take their ACH detail AP file into our solution and have us check for duplicated transactions, reconcile those against the transactions that are clearing, so being able to just identify what is going out of your organization, what essentially is clearing at the bank systems, and then when you run that reconciliation process, you can find out any type of anomalies or discrepancies that took place, which potentially could be a fraudulent transaction.

Mike Zack: So you're catching it in more of a real-time environment, versus waiting months and months and months and maybe forgetting about it, putting it on the back burner, which leads to more fraudulent transactions because people feel like they can get away with it. So being able to catch it upfront and having all of the data in one system, and that source of truth, is extremely important in reducing the fraudulent activities that could be a potential.

Craig Jeffery: Interesting. So the detail near real-time matching obviously preventing fraud is number one. Number two is catching it quickly because if you catch it quickly you might be able to stop it in the banking system. And certainly some fraud is done by high volume activity, and some is by very large sums of transactions. So, Mike, before we explore some of the key factors of forecasting and what the overall process looks like, why don't you just do a quick run down of some of the different forecasting uses.

Mike Zack: Absolutely. So, the two most common that I see on a day-to-day basis is you break it out into a short-term forecast, and a long-term forecast. So the short-term forecast is more that treasury forecast. Being able to identify in a short-term window what your liquidity requirements are. This would encompass bank transactions, AP transaction, AR transactions, being able to normalize that data into a short-term view and then take, and then make decisions off of that is what ultimately important from a day-to-day perspective.

Mike Zack: When you start getting into the secondary view of a long-term forecast, that's when you start getting into, you know, balance sheets, income statements, and that's the three to five year strategical plan for the organization. It's very hard to mirror both of those together, so you always want to, you want to be able to separate those out, and really understand what you're trying to accomplish.

Craig Jeffery: Yeah, so Mike, just a couple questions. So the short-term treasury forecast is the near term liquidity needs, you said that's what, up to a year, is that the typical horizon that you classify for the short-term?

Mike Zack: Right, yeah. Most people will want to look at things daily that roll up into a weekly and a monthly, but typically a short-term forecast doesn't extend past a twelve month period.

Craig Jeffery: And then the time frame you mentioned for the longer term might be three to five years for some strategic planning. For capital planning, treasury would be concerned about what does our balance sheet need to look like in three years or five years to support our business growth, is that a fair way to characterize that?

Mike Zack: That is correct, yes.

Craig Jeffery: And then of course there's, I'll just jump in on the other one, 'cause I know we're not going to speak on this much, FP&A oftentimes does a forecast related to income, the income statement. That usually goes out three or five years, sometimes longer, and that's focused on what is the income going to be, not necessarily the asset side. Anyway, I cut you off a little bit on the long-term description about the strategic plan.

Mike Zack: Yeah, I mean, really just the long-term is just that strategical, long-term planning purposes for capital infusions, especially if the company's going into an IPO, we're starting to see that a lot lately. This year, you know, you want to be able to plan for the future. The linkage between those two is extremely difficult. That's what, there's a lot of confusion, people always want to, on their cash flow forecasting reports, look at their capital expenditures in relationship to their business on a long-term basis, but also tie that back to their accounts payable and receivable which is more short-term basis. So in that case, you're really comparing apples to orange, and it's hard to justify a right forecast if you don't split those two out.

Craig Jeffery: As we look at those factors for forecasting in this time horizon, for liquidity purposes, could you give us an overview of the forecasting processes you see. What are the key elements and areas that we need to focus on?

Mike Zack: Well, I'll summarize them first and then we can get into each detail. So, we have the education or knowing your data, and where it resides within the organization. Then the normalization of that data, how do you want to view it once it's all centralized in one system or one source of truth. Then we get into a concept called work flow. So, you identify kind of the process to get this data into the system, you've got to have that constant feedback loop. Updating and maintaining the forecast on a daily basis, weekly basis, monthly basis.

Mike Zack: And then the last piece would be really developing protocols, forecast methodology, once you have this information, what would you like to do with it,

or leveraging the different types of technology that is out there. The buzz word that people are really starting to speak about, like AI and machine learning, there's a step by step approach to get there, that's why it's important, and I mentioned this earlier, to build the foundation. Once you have the foundation, all of the tools make it a lot easier in the long run.

Craig Jeffery: Maybe you can give a couple examples what does this look like. Do you just pull data out of AP or AR? Are you looking at historical data running through the banking system, how should we think about that?

Mike Zack: Sure. I mean, there's a lot of different combinations and what I usually say around forecasting is it's more of an art than a science. Everyone does it differently, it's different across industries. So I kind of speak to some of the common themes that I see, at least in my job. Gathering data is one of the biggest hurdles. Just understanding how people perceive data in each of their departments is the first piece to tackle. Now, going to the accounting department, going to the AP department, the AR department, even speaking to the FP&A department, I know that they're more long-term, but there may be some short-term elements that need to be brought in to the holistic picture. So just getting the information into one system and understanding how you want to see that data, so bringing in the key stakeholders from multiple departments, is the first starting point.

Mike Zack: Then you can start leveraging technology. Once you kind of get the idea of the different divisions and how they operate, you have regional differences, that's another hurdle that you have to overcome in some cases. Once you kind of go through a value based landscape of your organization, where data sits, then take a step back and really build out the foundation which gets into the normalization of your data. You always want to be educated, not only on where you currently are, but your future state and processes and procedures that are going to be changing over the next twelve months let's say. How is that going to impact your forecasts, you always want to be able to stay consistent, and know the channels and the stakeholders that you need to go to to revamp or modify the process.

Mike Zack: The forecasting is not something you set in stone and then walk away and don't have to change it. It's constantly got to be updating and changing over time so that way you have an accurate picture. Because the last thing you want to do is have a number, ask them a number, that you thought was accurate but when you actually move money based on that number, it ended up over drafting an account. You always want to make sure you understand where data sits and the different silos, fit that data in. But knowing your data, the educational part, is very time consuming but it's an important step in developing the proper plan to create an accurate forecast.

Craig Jeffery: What are the issues there? You can pick any of those sections or all of them. What are the issues with that process of understanding and moving and normalizing data?

Mike Zack: Once you understand your data, the normalization part, I mean, the most alarming statistic that I saw when we were doing our presentation is 77% of practitioners, it says that it takes nearly half of their time in a given day just to produce a forecast. I always look at why people come to GTreasury in the first place, and it's mostly just to get visibility into their cash position, right? They're logging into all these bank portals, they're downloading bank statements, they're copying and pasting this information into Excel. And that takes, alone, could be a half a day just to know what their liquidity needs are.

Mike Zack: On top of that, you move into forecasting, it's the same type of problem. But it's harder to solve that problem because of the different departments that you have to work for, the different archaic systems that may be inside your four walls. So when we talk about knowing your data, that's the first piece. The normalization of your data's sort of the second piece of it. You know, at this point you want to be able to understand the nomenclatures that people are using internally, because those nomenclatures are gonna be different than the nomenclatures that banking systems will use or other third party platforms. You want to find the consistency and understand how you want to look at data and the naming conventions associated with that. So you know that you're comparing apples to apples, or if there is a problem with the transaction or a fraudulent transaction comes in, you know the naming convention associated with that and what department to go to.

Mike Zack: So normalizing them into, you know, from bank codes, which is something we have to deal with, internal codes, being able to put that into one central code and everyone speaks the same language within the company. That's the most important piece with regional differences, language differences, and we're talking about languages among humans, we got languages among systems, you want to be able to bring it all together and that's the biggest, one of the biggest parts of forecasting, is just normalizing into a common language.

Craig Jeffery: And so this could be a numerical language, or some kind of tracking that allows you to understand the custody of where did this forecast element come from. Is that an accurate portrayal?

Mike Zack: It is. Because that's also the second piece in normalization of your data. Not only how you look at the information, but how does it get into that central location, right? So it could come from delivery of an SFTP connection or an API connection, but the format of the data could be different as well. You have bank formats, you have internal ERP systems format, third party systems that you've integrated, or home grown systems in some cases that need to be integrated as well. So not only normalizing the naming conventions that you're using on a day

to-day-basis, 'cause that's ultimately what you're looking at on your report, but also the normalization of file format that are out there.

Mike Zack: I know banking formats, like I see twenty to twenty-two are striving to move to the same common language, but still not there yet and you have to deal with the intricacies of the banks and what they're providing you. So having one common language across the organization will give you that one step closer to an accurate forecast and being successful at it. I mean, that's the biggest thing. Creating a forecast is one, being successful and measuring that forecast is also important too.

Craig Jeffery: Yeah, a couple things from what you said. It's a process not an event, which means it's ongoing, so you can't just set it up one time and forget it and that's the issue of the quote you mentioned, 77% are spending over half of their day working on zero day forecast or the short-term forecast. The second part that really stood out was the feedback loop the forecasts make. There may be elements that change the forecast, you want to stay accurate so there's this ongoing forecast loop. With that said, I wanted to get into, you know, what's the bigger goal of managing data. I want to say this in the content of something I've heard you say when we were talking about the podcast. You said you need to leverage your data to the best of your ability. So, what, can you explain what that means, unpack that for us?

Mike Zack: Ultimately what that means is when you have the data in one source of truth, and that's a reliable source of truth, that's a big component of it. Once you have that reliable source of truth, what you're able to do is leverage the results and have confidence that the results that you are coming up with will not backfire. Meaning, you know, you have a number, you move money based on that number, and it was inaccurate and ended up over drafting your account. Or your borrowing costs go up because there's no way, you're not forecasting in the right way 'cause you're always borrowing money, then paying back money the next day. So the banks are actually going to charge you more money based on your forecasting capabilities.

Mike Zack: Identifying that foundation and leveraging the amount of effort you put into that foundation will only increase your business flows. The ultimate piece to the linkage between your cash position and your forecast, then you start to leverage discrepancy reporting, pattern detection, and we get into the quantitative aspect of forecasting as well. So just leveraging the ability to pull and have confidence of your data can make the accurate decisions which then reduces all the areas that we've been talking about today.

Craig Jeffery: So some of that could be you're missing data, data's wrong, data's duplicated, data's corrupted, those types of issues is what you're talking about, the accuracy of what you have, accuracy, completeness of the data.

Mike Zack: Correct. Yes, you always want to have a contingency plan because no matter what you're not going to be able to control internal systems or duplicated transactions. You want to be able to catch them and be notified prior to making any type of decision. So having those types of mechanisms in place is important. I mean, we also look at banking transactions which is a pivotal area of understanding what your true liquidity is at any given point in time. Historically, banks have always transmitted data to works based, treasury management systems on a, you know, daily basis, could be an hourly basis, but it's more on a flat file exchange.

Mike Zack: Where people are starting to move to and where banks are starting to move to is the API route. So now you're getting more real-time information and if you have those processes and procedures in place and that work flow identified, real-time information is only going to get you one step closer to making a competent decision on your business needs.

Craig Jeffery: Yeah, I think that's great. More information, more real-time information changes the dynamic from we used to have not enough information to now we have massive amounts of information, how do we harness that. What should we think about in terms of work flow, or what should someone who's charged with improving their forecast from a work flow perspective, let's say beyond the point of figuring out where your data is, getting into the central repository, what else should we be thinking about from a work flow perspective?

Mike Zack: Work flow is really different checkpoints that you need to establish within your environment. Checkpoints for different departments, checkpoints for different divisions, getting everyone on the same page and reading the same books.

Craig Jeffery: Is this a, I'm not sure what to call it, is this a order of magnitude, a smell test or a test to make sure it's roughly accurate?

Mike Zack: Yeah, so it's a structure that you have in place, aka work flow, to understand if something does break down, because we don't live in a perfect world, but you know based on the work flow that everyone is abiding by, if something does break down you know exactly what broke down, where it broke down and how to resolve that quickly. The last thing you want to happen is something imported or duplicated, you don't know where you need to go, and it's going to take time to fix that issue which then only delays the decision of, you know, moving money.

Craig Jeffery: Okay. So the work flow is also the process of not only making sure it's flowing into the system right but there's those checkpoints, the validation steps of missing data, duplicated data, data outside certain parameters.

Mike Zack: Right. Because we're never going to get around having multiple systems. When you start to bring in data from multiple systems you have more problems that could occur inevitably. So you always want to have a disaster recovery plan in



certain cases so those are those checkpoints, not only to get the data into the system, which typically treasury management systems can help with and bring in and normalize the data for you. It's really understanding if there is a problem, how do I solve that problem in the quickest way.

Craig Jeffery: You talked about protocols, forecasting methodologies, this is that area of analysis and forecasting. So what do you see are the goals for analysis, what's included in it? Does this include ...

Mike Zack: So, once you have that foundation which we spent some time talking about today, an extremely important aspect of forecasting, now it's leveraging the data that's in one common language with the advanced tools that are out there. You have, you know, bearings analysis which is one of the most basic, just being able to compare what actually took place versus what was forecasted on a daily, weekly, monthly basis and just understand those discrepancies and how you can take those discrepancies and modify the forecast going forward and reduce that value. You get into modeling like what if and scenario testing across your portfolios which will bring in back testing for transactions.

Mike Zack: You can start to incorporate the economical impacts and the potential impact to your forecast. You have interest rate fluctuations, FX fluctuations, so all of these models, they have an impact on your organization but you can't predict what is going to happen, you're taking a forecast that you've created and almost guessed internally, you're taking a forecast of where you think rates are going to go or interest rates are gonna go, you're bringing all of that together. So you want to be able to make sure that A, your forecast of market conditions and economic conditions are accurate, you want to make sure that your forecast internally is accurate, bring all of that together.

Mike Zack: Another area, predictive analytics. The advancement in technology is amazing and the usage of that is very minimal at the moment, and you won't be able to use that technology without the infrastructure in place. When we start getting into predictive analytics, something that a lot of systems offer, is going back and modeling different patterns that took place based on historical trends. And understanding what anomalies took place during that period of time and extrapolating that into the future and, again, constantly updating your forecast and changing your forecast to adapt to internal and external factors.

Craig Jeffery: Yeah, so what's an example of predictive analytics that you most typically see, as you're looking in the future, what's the, I guess you're talking about drawing the straight line through a bunch of varied points.

Mike Zack: I mean, one of the most basic areas for predictive analytics is going back let's say, you know, six months, and you know what actually happened six months ago, you know what you forecasted at that time six months ago. And when you find the discrepancy, maybe it could be, it could be an item where you didn't forecast it all at because you didn't actually anticipate it coming in, that is

something that the system can identify, a system can identify and notify you and say hey listen, this transaction came in, actually came in from the bank or from an internal system, but you never forecasted. Would you like to include it now in your current thorough forecast going forward. Is it something that is repetitive and will constantly come in now going forward. Do you have a new relationship with a vendor that you forgot about. I mean, I've seen that happen as well. So all of those things can be brought into a clear picture and then pointed out to then increase the efficiencies of your current forecast going forward.

Craig Jeffery: Now Mike, just to pull that together, it seemed like there were three things that you brought up, three really good points. One was if there's changing in a forecast or the forecast is not accurate, what do we do. The second one was how do we model different scenarios, you know, what if scenarios and you mentioned economic changes, changes in interest rates or FX pair pricing. And then you talked about predictive analytics. Is that last example where, you might do predictive analytics maybe using a regression analysis over time and if something varies, you also factor in this change in the forecast, is that what your example was?

Mike Zack: Yeah, or even incorporate seasonality, right? You may, as a company, not even understand certain cash flows that are taking place that they actually mimic a certain cycle. Taking that cycle and that predictive process and embedding it into the current version of your forecast as well.

Craig Jeffery: I think what you're saying there is so important because people may know the cash flows of certain lines of business or certain areas, but they can change over time, and so what you know when it's fixed in your head can vary and your forecast can get less accurate and by leveraging tools you can see and spot those much earlier.

Mike Zack: Exactly.

Craig Jeffery: Now, you mentioned what if scenarios and gave some examples of, you know, changing interest rates or different models and historical maybe periods that were more volatile in the past. So this is something else that can be leveraged with tech and data that exists that's hard to do if you're just loading this all in Excel.

Mike Zack: Yeah, I mean we have one area that we get asked about a lot for like FX exposure. Being able to identify what your FX exposure is globally and then apply different strategies to that exposure to head your rift. So, in certain cases, you know, for the Euro or the Canadian Dollar against the US Dollar, you feel like rates could go up, they could go down, you could bring in a yield curve based on market traders and where they feel rates are going to go. You could take those scenarios and apply them to your current exposure book to see what your potential risk would be.

Mike Zack: And then on top of all of that, forecasting different strategies to reduce that risk, so identifying, you know, I have to create a strip of FX boards, or a FX option, so those types of strategies will inevitably reduce the risk that you have and once you execute them, you have to still go through the process and maintain it. Because on a going basis, your business is changing. Maybe you're reducing your AR and your AP, or you're increasing your AR and your AP, how does that affect the hedging strategy that you put in place.

Mike Zack: I mean, this is a small area of FX related, we have another scenario that someone brought up the other day where they wanted to model the 2008 financial crisis against their debt. They just wanted to see, if this were to happen in the future, are we hedging ourselves in the correct way. What's the potential loss that we have, or what's the potential increase in the net interest expense that we're gonna have to pay out if the liable curve goes up where it was in 2008. So those types of scenarios can be applied across different cash types and they're not all gonna be the same, so that's going back to your question about the forecasting modeling. You have different models for different cash flow types, bringing it all together to give you that complete picture.

Craig Jeffery: Very good. Now, you had mentioned earlier that there's a constant feedback loop, you need to make your forecast accurate over time which means revising your model, changing assumptions. If someone has a model that works pretty well but it's getting, I'll just say, out of whack or it's not as accurate as it was, things have changed, do you recommend running multiple models that you can compare and then you eventually select a new forecasting method for, let's say, a particular line of business in a region or, you know, one of your divisions?

Mike Zack: Yes, I would highly encourage that. That really comes down to creating different versions or different snapshots. Typically you'll want to always have the one, true source of a forecast that you've maybe frozen for the year or for the month, and then have a rolling forecast on top of that. We have one company that we were working with where they actually mandated that all of their different divisions create a forecast and their bonuses or the management's bonuses are based on the accuracy of their forecast. When you put that level of pressure on someone, it's amazing how accurate their forecasts end up being versus the other side, where it's just give me some numbers, some rough numbers of what you think is gonna happen.

Mike Zack: Well, if all of your divisions give you rough numbers, then when that is consolidated up to corporate level, then you have a rough number that you're working on. You have to make sure that at the bottom level, people are told the processes and procedures and the way to forecast in the first part. But they're also held accountable for those forecasts as well, just like the treasurer, the CFO and above, they've all accountable for the end result of what that forecast is and the overall financial picture and the viability of the company.

Craig Jeffery: So, Mike, I had warned you ahead of time that I would ask you for a list of top forecasting pitfalls. Like I said, I called it a Mike Zack's Top Three or Top Five List of Forecasting Pitfalls. So can you give us a rundown how might we avoid those?

Mike Zack: I'll mention three. There's a lot of other ones that we can talk about, but I'll kind of break it out into three sections of the challenges at least that we see. Data aggregation is the first one. You have manual processes, it would be the second one, and then you have outdated technology would be the third one. So, let's start with data aggregation or, in general, just knowing your data. The biggest pitfall goes back to the old philosophy, garbage in, garbage out. You want to make sure that whatever you're bringing into a source system is viable data that you can essentially manipulate and use to better your forecast going forward. Treasury in some cases can wait weeks just to get a forecast and you're already behind the curve in certain cases.

Mike Zack: So that's why it's such a big component of forecasting is just understanding where that data sits and how to get it centralized in one place. And reducing, which gets into the second point, reducing all of those manual processes. Right now, a lot of organizations are filling out Excel templates or maybe they're going into an ERP system to enter in that type of data. You have extensive use of spreadsheets, you're delaying the process, there's no audit related to that, people can change forecasts within the day and every single day they're accurate because they're changing it, there's no audit trail related to it.

Craig Jeffery: You know that quote about forecasting, forecasting's really difficult, especially about the future.

Mike Zack: Yes. Exactly. So yeah, it's ultimately the negative impact on the timing and the accuracy of your forecasts collectively when you have those processes in place you don't know your data or how to aggregate it and then it really comes back to outdated technology. Now this is not just in the infrastructure of an organization, this is outdated technology with banks, this is outdated technology with other third party providers. You want to make sure that either your banks or the people that you're working with, they are going above and beyond and testing out the new functionality that's out there, so, you know, common language that we're starting to see is API. That's giving you real-time infrastructure.

Mike Zack: You want to get away from the outdated types of technology that can't actually integrate with other systems which then is a show stopper in some cases because of one system that has a lot of information on it but it's so archaic that it can't get data out and into one central data warehouse. It's almost meaningless, so you have to upgrade that system before you can actually accurately forecast your position.

Craig Jeffery: Right, excellent. So that's Mike Zack's Top Three Forecasting Pitfalls, and I know you could give us a bigger list. But just to bring things back to the start of this

episode about key factors in forecasting success, what final thoughts do you want to leave with the listeners?

Mike Zack: Take one step at a time. If you want to do this right, make sure that you understand your data above all else. Once you establish the data sources, you aggregate the data, you normalize the information, it makes everything so much easier. You'll be reaping all of the benefits once you have that foundation which is a lot of the things that we talked about today, like predictive analytics, time modeling, back testing, automated results and decision making. If you put in the work upfront, the long-term benefits will certainly outweigh the short-term frustration that you will have.

Craig Jeffery: Excellent. Mike, I want to thank you for your input and insights on forecasting. Thank you for joining The Treasury Update Podcast.