TWINTHREAD
INTELLIGENT OPERATIONS TECHNOLOGY

Optimization for All: Predictive Analytics Hits the Mainstream

Once perceived to be the exclusive domain of large manufacturers (with equally large budgets and an army of data scientists), the power of Predictive Analytic is hitting the mainstream. Designed to be cost-effective, easy to install, and easy to use, TwinThread makes predictive operations a possibility for manufacturers, fleet operations professionals, and producers of any size or level of sophistication.

If you're looking to leverage a predictive analytics platform, you're interested in learning fast and acting faster. A predictive analytics platform can drive your organization toward greater efficiency by removing the barriers that prevent your domain experts from accessing the key insights they need to make critical decisions. However, not all predictive analytics platforms are created equal. In reality, many solutions require considerable time and commitment from your organization just to get started.

The TwinThread platform, however, changes the game. This long-form post will detail how we, at TwinThread, value speed in everything we do. We don't just want your experts working with the best information. We want them actioning the key insights ASAP. Your Predictive Operations Platform of choice shouldn't serve as yet another barrier to progress and improvement. It should remove stopgaps and empower your problem-solvers to overcome challenges on a daily basis.

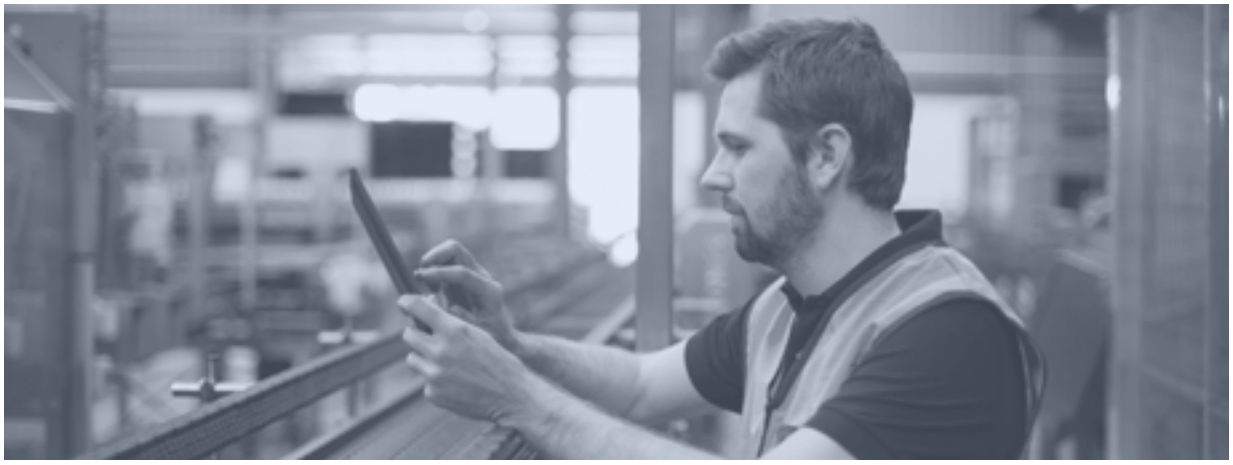
Quick Connection

Plain and simple – whatever predictive solution your organization pursues, it has to connect to your existing data sources easily and quickly. In the litmus test of assessing a prospective platform, it's ability to draw on your existing information has to be very high (if not first) on your list of prerequisites. Whether your organization uses SCADA Systems, Historians, MES Systems, CMMS, IoT devices and sensors, or any other variety of data center – your predictive solution of choice should pair with the source painlessly and show immediate promise of insight curation.

Your problem-solvers are busy innovating and optimizing all operational efforts. They don't have time to struggle with a tedious implementation process. The whole purpose of a predictive analytics solution is to empower speed to greater efficiency. If it's slow out of the gate because it's difficult to connect, this is just pushing the time to insight further out. What your subject-matter experts need is to connect to your data in minutes, gain meaningful insights in hours, and be empowered to operationalize those efficiencies in days.

You'll notice an evident theme throughout this resource that time is of the essence when you are trying to prove the value of a predictive operations center. Therefore getting started with a new solution needs to be fast.

The more capable you are in condensing the time between implementation and insight, the more evident the solution's value will be. Your solution provider should interpret the first days as a race against the clock – to ensure your organization can plainly see the quantifiable value their offering will yield.



Draw on Existing Data

Given the ubiquity of fast networks, smart devices, and virtually limitless storage, there's likely no shortage of production data circulating through your organization. In fact, there's so much to deal with that it can feel (at times) like you're immobilized by it all. Where to start?

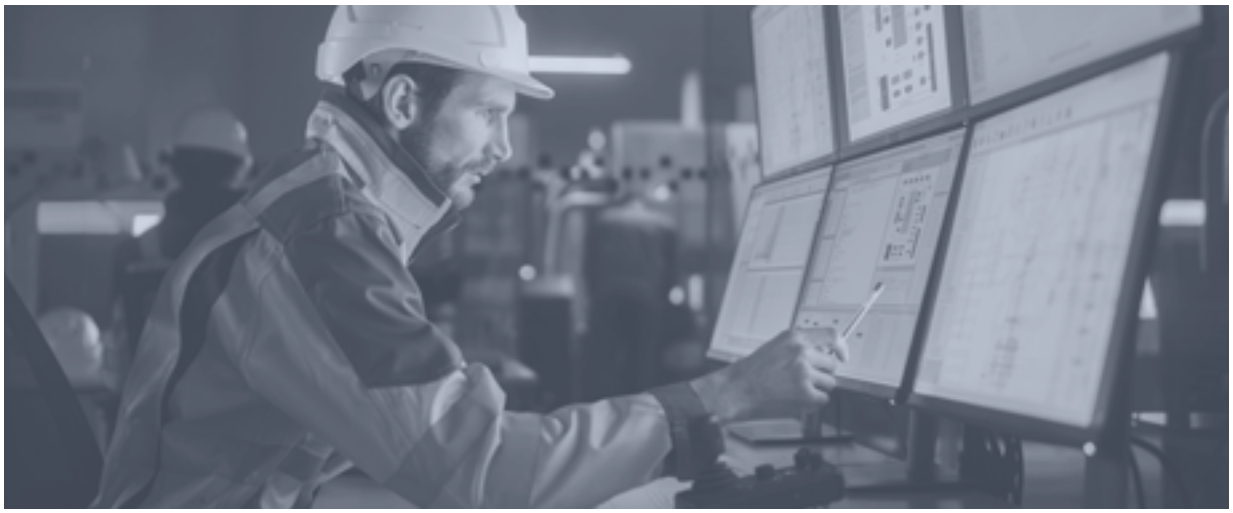
What your in-the-field experts need is a shortcut to the insights that are just waiting to be found within your clustered data. The scenic route may get you to

where you're going, but certainly not quick enough when it comes to establishing and sustaining a competitive advantage.

But let's take a step back for a second. Sure, having a large collection of data can be overwhelming and can result in informational overload. However, it's also the critical resource you need to gather insights. So, if you have a solution that can meaningfully curate the data for you, it's actually a lot better to have more, than less. A predictive solution that prioritizes speed to insight will support your experts' innovation by offering the key pieces of information fast (unencumbered by the rest of the data noise).

Allowing your domain experts to cut through the ocean of information that your organization has is just another example of how a worthy predictive platform proves its value in an abbreviated timeframe. The heavy lifting is already done – your organization collected all of the data.

Now, it's time to exploit information and convert the key insights into operational action. Not in a year's time, not in a couple of months – now. Your insights are waiting to be found – use a predictive solution that doesn't make your domain experts wait any longer.



Visualize Information

It's one thing to uncover insights quickly. It's something else entirely to be able to visualize those insights through customized graphical animations. Bringing your data to life by pairing insights with illustrated representations of the assets your experts interact with day in and day out allows for faster and more comprehensive understanding of the opportunity the suggested adaptation presents. By visualizing your information through these "digital twins", operationalizing insights happens faster and more accurately.

As stated above, a digital twin is a computer-based render or representation of a physical asset. For example, you have a fleet of pumps that you are monitoring. By applying a digital twin, you would be able to stay informed on the technical specifications and performance metrics regarding that pump, no matter where

you're located (anywhere in the world). So, instead of having to be right beside the pump itself to acquaint yourself with the in-line data, you're never removed from it.

Not only will you see the current information about the pump, but you will also gain the ability to see the history of the pump's performance. This can support your experts in determining performance trends that will result in the prevention of outside ideal conditions and increase that particular asset's life (and the life of all similar assets by scaling insights cross-operationally).

When a predictive platform visualizes your data, it's making information more tangible and providing yet another perspective from which insights can be consumed and acted upon. The more ways your data can be interpreted, the less barriers there will be to understanding it clearly. Value will be experienced faster if understanding your data can be simplified. Visualizing and contextualizing your information is just one way that a predictive operations center accomplishes that.

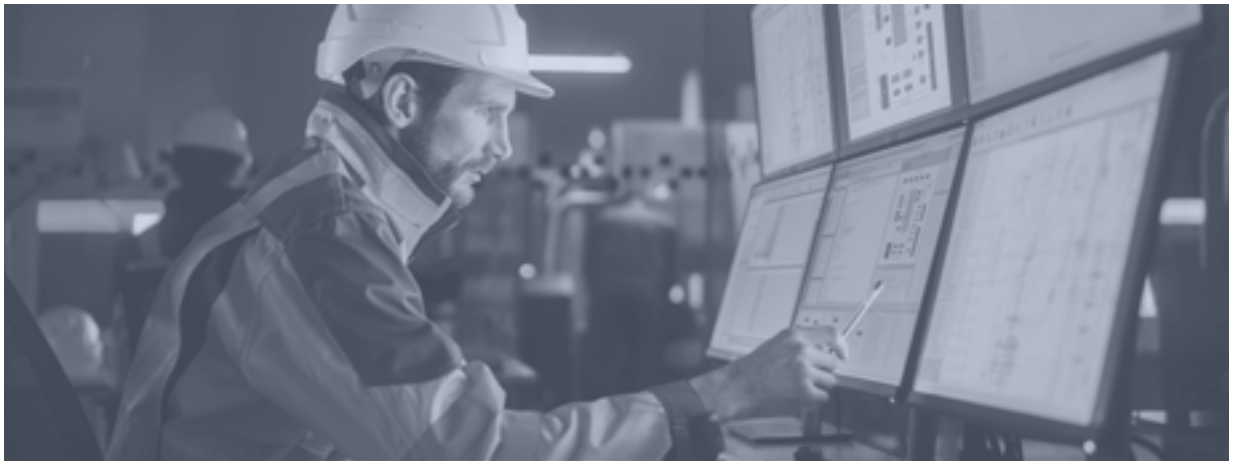
Learn & Analyze

As an innovative organization, looking for opportunities to learn and analyze is nothing new – it's how you continue to push the needle on operational improvement. However, just as there are more optimized methods for running your lines, there's also more optimized methods for uncovering key insights and interpreting what they mean for your operations (at scale).

One of the methods a predictive operations center employs to provide your engineers (and operators) with quick wins when driving efficiencies is the application of digital threads. Digital threads are no-code logical workflows that are used to automate calculations or operationalize actions. Threads are automatically running in the background and evaluating all anomaly conditions. The actions represented by a digital thread could be a trigger of something that can happen when an event occurs, such as sending an email directly to the service team or calculating actions back to the data source to create an automated setpoint change.

Deployment actions, represented by digital threads, are scalable across millions of assets and can be easily managed by domain experts on a single platform. Adding intelligence to operations in this way is very quick and effective.

In terms of proving value quickly, the speed at which digital threads allow your engineers to interpret real-time data and act upon what they are learning ensures that if there are measurable results to be realized, they will be promptly.



Make Insights Accessible

When it comes to your organization's assets and the processes applied to them, who knows them best? Your domain experts (engineers and operators), of course. So, it only makes sense that if you'd like to expedite proving the value of any enterprise solution related to your operations, that those subject-matter experts be brought into the fold.

If a platform makes the rookie mistake of ignoring your problem-solvers, not only will the proof of value process get on a lot slower, you may also come to find that there's far less value to be gained than you'd hoped. The efficiency optimizing power you seek already exists within your teams. They just need a platform that will allow them to quickly scale their know-how across the organization. A predictive system that prioritizes speed to insight and targets your experts as the most important drivers to meaningful change will bring to the surface your engineers' superpowers.

Predictive providers that have industry experience backing the decisions they make about their platform know that the most direct route to value is with the collaboration of each organization's domain experts. When you boil it down, predictive analytics is all about gaining as in-depth an understanding of your operations as is possible. It makes next to no sense to exclude those individuals who are the most knowledgeable about operations for this endeavor. Conversely, it makes all the sense in the world to lean on them heavily and offer a system that targets the insights at them.

Make sure your platform of choice is speaking the language your experts are familiar with. Value can only come through greater efficiency. The steps needed

to optimize operations can only be actioned by your in-house know-how. And, your experts can only action insights if the platform they use puts them in a strong position to understand quickly. With a platform that knows how to formulate your data in a manner that is immediately consumable by those who know how to effect real change, the value will be clear in no time at all.

Embrace Low-Code / No-Code Solutions

As production environments become increasingly complex and interconnected, solutions designed to optimize the performance of those environments are evolving as well. Object-oriented programming has long been a mainstay of workflow and application development in the industrial sector, but the emergence of “low-code” and “no-code” solutions takes application development to a whole new level.

Designed specifically to put the power of application development into the hands of non-technical team members, no-code platforms make it possible for individuals to develop and refine highly-specialized solutions with minimal effort. In the hands of an experienced IT or engineering pro, however, its power is amplified.

The ability to quickly pull together solutions without relying on already overburdened IT resources means engineers, data scientists, operations professionals, and virtually any other role within an industrial environment can become more independent. It also means that data extracted from a predictive analytics platform can be used and reused in novel ways, unlocking the creativity and ingenuity of your team.

Build for Scale

Today’s industrial processes are highly complex and resource intensive. Whether you’re manufacturing products, delivering utilities, or supporting product fleets in the field, profit margins are slim and errors can be costly. This dynamic can lead to some unique challenges for operations professionals. On one hand, constant evaluation and fine-tuning of processes can lead to improvements in yield,

quality, and efficiency. On the other, making changes to any process already in-flight is not without risk.

To mitigate exposure to downside risk, many organizations will implement changes using a “pilot program” approach. This “walk before you run” strategy is prudent because it allows businesses to test theories, introduce new technologies, and develop a comfort level with new approaches before rolling them out across the business. Once the proof-of-concept has been proven, however, organizations must be ready to implement them at scale.

This is particularly true in the arena of predictive operations. The positive impact to the business can be significant, so the more systems you’re able to assess, optimize, and automate using a predictive analytics platform, the more exponential the gains.

As you begin to assess which provider to leverage, ensure they have a proven strategy – and a solid track record – of moving clients from planning, to pilot, to full production. Further, also look for organizations that can scale with your business from a financial and support perspective as well. A bit of extra due diligence upfront will lead to significant benefits downstream.

Get started

Speed to value is everything. To remain competitive, you need to move fast. But not only that – your problem-solvers want to move quickly too. They want to be unleashed and want their reach to be expanded. The more challenges they can be empowered to act upon, the more fulfilled they’ll feel – and the more optimized your operations will be.

However, you’ll never make it to the gaining insights portion of the experience if the predictive provider can’t prove their worth fast. Ensure you draw upon a platform that checks all the above boxes. With a solution that connects to your data in a snap, makes use of your existing data lake, visualizes your information through digital twins, encourages real-time learning through digital threads, and (most importantly) puts your subject-matter experts front and center – you should have no trouble making a timely and informed decision on whether the particular platform will produce the results you’re looking for.

With TwinThread’s combined expertise in machine learning technology and industrial environments, our platform embodies the ideals of Industry 4.0. What’s more, we know that optimal performance is performance at speed. To learn more about how we prove the value of our predictive operations platform quickly, see a demo.

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