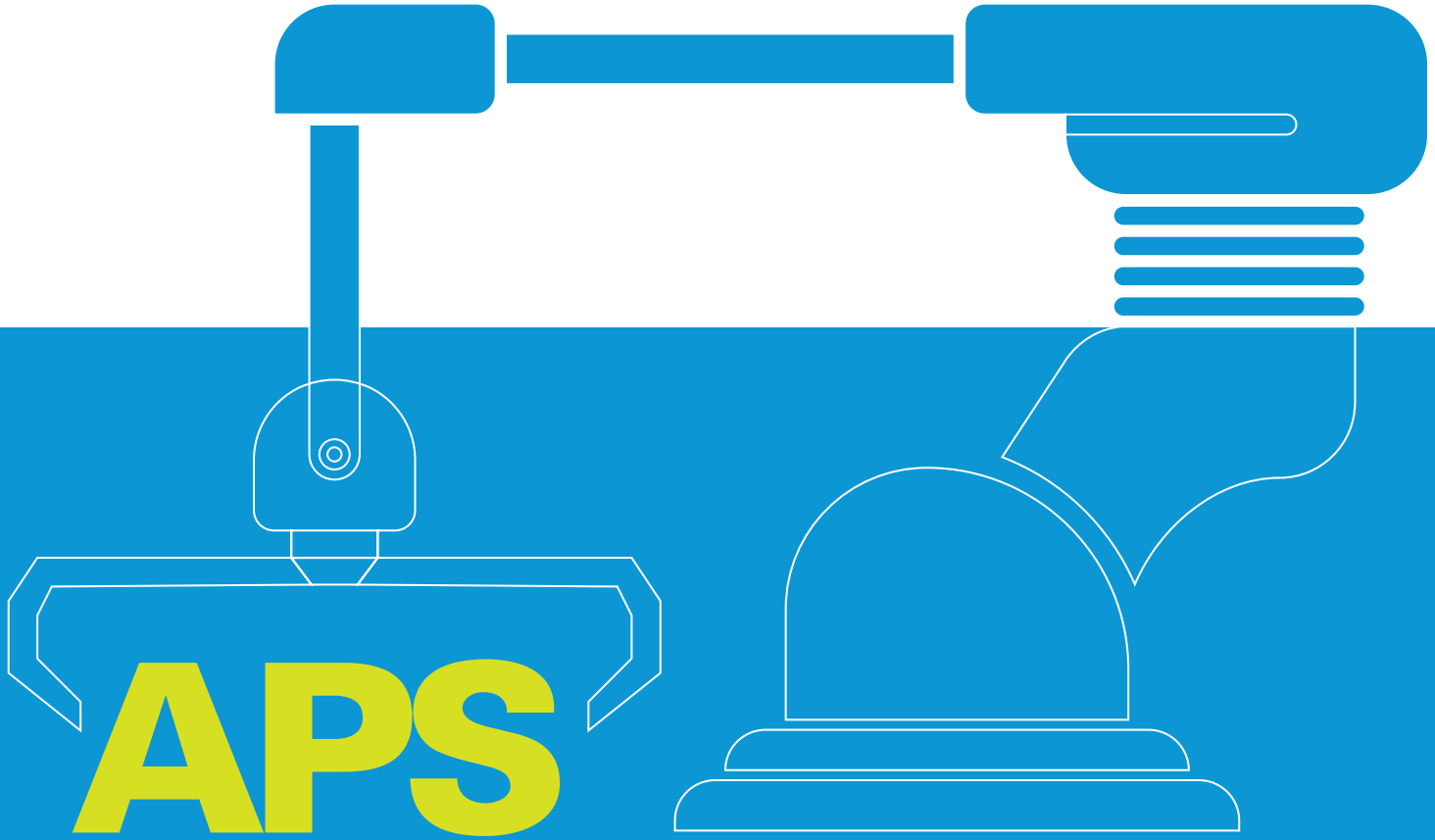

APS implementation: Just the facts

A guide to the scope and timeline of researching and deploying an advanced planning and scheduling system

planet together

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Implementing APS is challenging – plan accordingly

Imagine the grimace on your face when a salesperson calls you and says he can optimize everything in your plant with software, which he also happens to sell. This isn't a sales pitch, so we'll spare you that.

The truth is, implementing an APS system in manufacturing and distribution is a tall order. **If everything goes perfectly, you're looking at a 2-3 month project.**

At PlanetTogether, we know this—we've seen the process hundreds of times at plants all over the world. We're not here to tell you what you need in terms of software because you can schedule a demo anytime you'd like and see for yourself. The purpose of this guide is to show you the full scope of an APS implementation and rollout, offer advice on how to make the software research and vetting process as hassle-free as possible, and avoid pitfalls.

Let's get started.

What APS should do for you

"Let our advance worrying become advance thinking and planning."

– Winston Churchill

Generally speaking, APS software needs to be a significant improvement from spreadsheets to be worth the time of implementation. No matter which software system you choose, it must (at a minimum!) carry out the following:

ON-TIME DELIVERY AND EFFICIENCY – Manage production capacity and constraints to deliver on-time and run efficiently.

AUTOMATE PLANNING – Schedule and re-schedule around your constraints in seconds, automatically, with a single click. An APS system massively cuts down on robotic tasks for planners and schedulers.

STREAMLINE COMMUNICATION – No need to email files back and forth—when a change is made, the appropriate parties are notified via the appropriate channels.

IMPROVE VISIBILITY – Know which processes and materials are holding up production and have more realistic estimates on ship dates.

ENHANCE ERP UTILITY – APS integrates with your ERP data to generate better schedules to support: sales, operations, purchasing and strategic capacity investment.

ENABLE 'WHAT IF?' SCENARIOS – Play in a sandbox environment and see what effects proposed actions could have on schedules, orders, customers, resources, costs, cash flow and other key metrics.

How does APS software integrate with my ERP system?

The Data You'll Need

APS systems are data-hungry by definition—you have to feed them quality data to get the most value. Typically, you'll need access to the following data, often already stored in your ERP:

COMMON

Plants & Warehouses / Production Resources / Sales Orders / Production / Planned Orders / Purchase Orders / Inventories / BOMs / Recipes / Routings / Item Attributes

OPTIONAL

Setup Metrices / Forecasts / Safety Stock & Batching Rules / Alternate Routings / Transfer Orders / Labor Resources

How APS Integrates

Integration to your ERP should be bi-directional. Plans optimized in the APS system will flow back to the ERP in order to be visible to ERP users such as customer service and purchasing. Transactional ERP data can be pulled into your APS on-demand by planners or on an automated basis for faster re-planning.

How do APS and ERP systems connect?

FROM ERP TO APS – Most of the data flows in this direction. The use of SQL queries to extract data is common, but web services can also be used for programmatic real-time integration. Some older systems also use text file extracts.

FROM APS TO ERP – The flow of data back to the ERP usually includes schedule dates and resources. Order status changes may also flow in this direction. Common approaches to perform the updates include: stored procedures to ERP tables or use of ERP APIs and Web Services.

Note: As with all software, you can make any data set work with custom development, but you can save time and money if your APS already has an integration ready to go for your ERP. PlanetTogether has pre-built integrations for the following ERPs:

SAP · Microsoft Dynamics · ORACLE · APTEAN

Which is better for APS – On-Premise vs. Cloud?

The on-prem vs. cloud debate has become a standard topic in IT and software, and APS systems are no different. Here are the benefits of each deployment as we see them.

or

On–Premise

In our experience, the majority of companies deploying APS systems choose an on-prem model. Most plants already have server capacity (physical or virtual) or space for hardware they use for various other systems, and people to maintain it, so it makes sense to them. Additional benefits of on-prem APS deployment are:

- Easier to connect your existing systems (on the same network)
- Not totally reliant on Internet connectivity
- More control over security standards
- Lower overall cost long term, especially with high performance servers
- Generally considered a better solution for larger systems and bigger companies

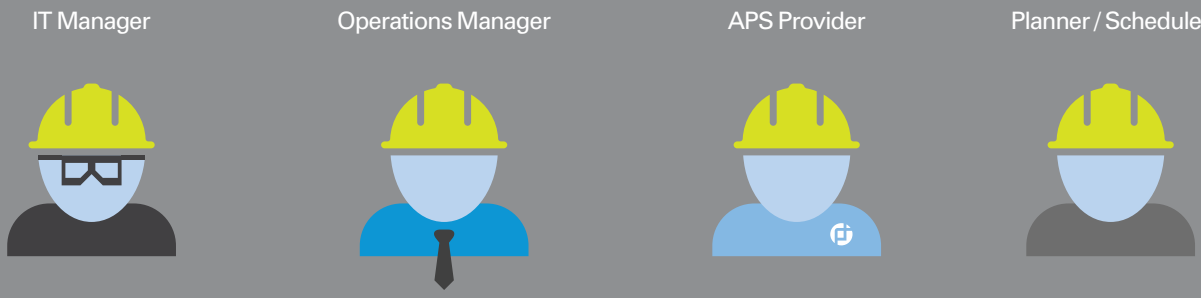
Cloud

Cloud servers continue to grow in popularity among virtually every industry, including manufacturing and distribution. Here are a few benefits for cloud deployment of an APS system:

- Increased resiliency and redundancy
- No need to buy, store, maintain hardware, or engage your IT department
- If you're using cloud servers for everything else, like an ERP system there's a possibility the integration will be smoother

The right answer to on-prem vs. cloud is largely dependent on your unique situation and existing systems, but the important thing to remember is that every reputable APS software provider should be willing and able to provide both to meet your needs now and in the future.

APS testing and rollout – Who's responsible for what?



Good news—APS implementation is a team effort and you don't have to go it alone. In fact, in our experience, different employees have clearly defined roles within research, data integration, user training, and day-to-day use.

Step 1: Find the right APS system

There are several to choose from, and they will need to be thoroughly vetted with the needs of your company with requirements documentation, demos, discussions -- and hands-on experience.

RESPONSIBLE PARTY: IT Manager and Operations manager

Step 2: Install the software

Next you'll need to get the software onto your server and running. This process is fairly short and simple.

RESPONSIBLE PARTY: IT Manager, APS Provider

Step 3: Configure the data integration

Your APS team will work closely with your IT team to design and test the integration. Typically the APS team knows the data required and will need the help of the IT team and ERP users to identify where the requisite data is stored in your ERP system. Pre-built integrations can save significant time and cost but still need to be customized to adapt to your company-specific and plant-specific ERP usage.

RESPONSIBLE PARTY: IT Manager, APS provider

Step 4: Execute a proof-of-concept

Once the integration is built, you need to model the system to reflect the reality of your plant operations and ensure it will work for you. The operations and planning teams will need to gather things like setup/cleanup times and preferences for sequences. Additionally, your APS provider will need to provide training (usually via group webinar) to your users. We recommend creating the smallest environment possible that can validate that the APS system does exactly what you need.

RESPONSIBLE PARTY: Operations manager, Planner/ Scheduler, APS provider

Step 5: Roll out system to company/plant

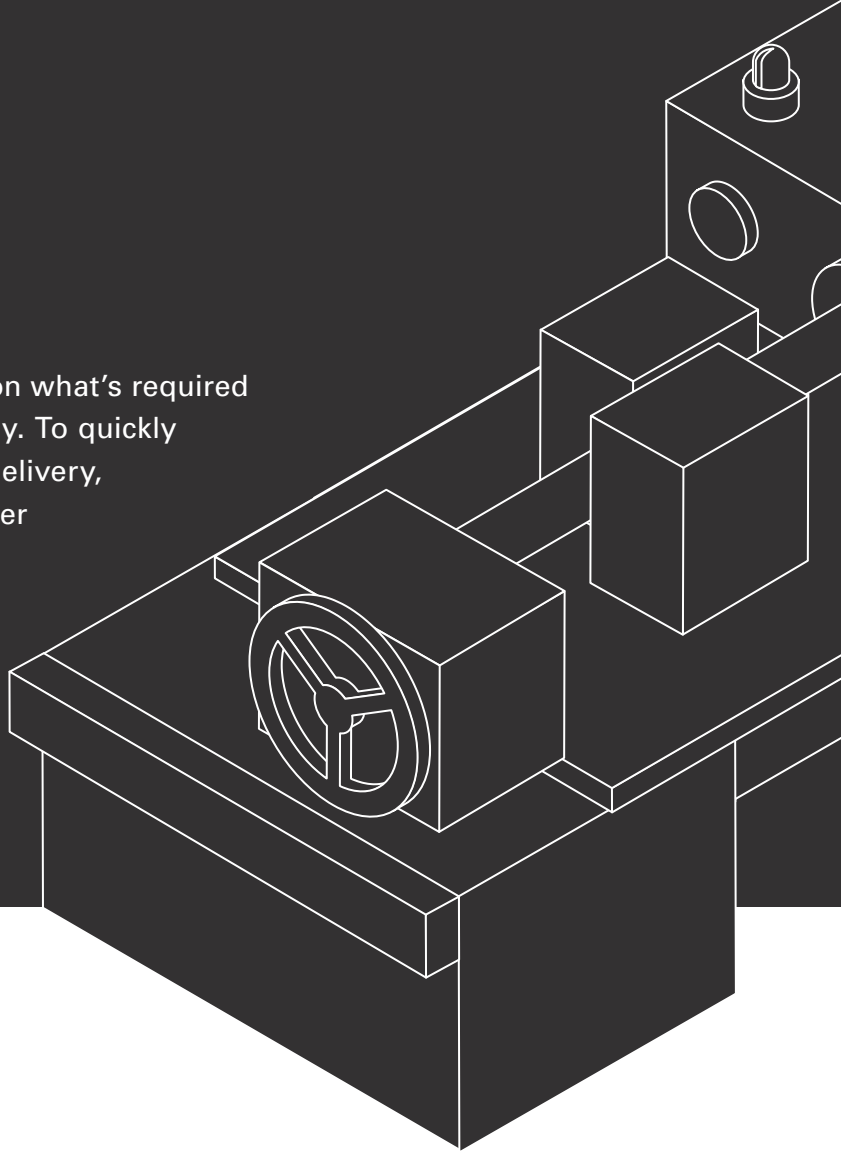
Now it's time to roll out the APS system to your entire plant, or to multiple plants. The planners/ schedulers will need 1-on-1 process training to guide them through their day-to-day use of the system by the APS provider. Generally, an operations manager will also oversee this process.

Once you launch the system, the fun begins. This is where you will find hidden efficiencies in your new, automated process as you fine tune the system. Your planners will save time and be able to better predict when orders get done by having the ability spot materials and capacity bottlenecks. Capacity visibility will bring a new level of understanding and streamlined decision making to people across your company. Most importantly, your customers and investors will see the impact as you improve delivery times, cash flow, and profit margins.

RESPONSIBLE PARTY: Operations manager, Planner/ Scheduler, APS provider

What's next?

At this point you should have a pretty good grip on what's required to get your APS implementation project underway. To quickly recap the benefits, APS leads to: higher on-time delivery, more throughput, lower operating costs, greater predictability and a host of other improvements that manufacturers want, so we believe you'll find it's worth the effort you're going to put in.



Interested in diving deeper into the differences between ERP and APS?

We didn't have time to cover it in this guide, but **ERP and APS serve vastly different purposes**, especially in terms of making strategic capacity management decisions. If you're looking for more material on that, please check out **5 Problems that PlanetTogether Solves And ERP Systems Don't.**

Download the guide (complete with video)

GRAB THE GUIDE!