

# *PrintFlow 4D*<sup>®</sup>

Dynamic scheduling and resource optimization  
for the packaging industry

# INTELLIGENT, DYNAMIC, RULES-BASED SCHEDULING

PrintFlow 4D® offers savings by optimizing the interaction of all plant activities with real-time calculations, unique “what-if” capabilities, and an enterprise-wide scope. It facilitates an integrated, automated system to increase throughput, minimize costs, and boost profitability.

## Beat the competition

PrintFlow 4D is a truly dynamic scheduling system that automatically identifies the optimal path for each job by:

- Optimizing equipment use
- Minimizing make-ready time
- Increasing capacity, throughput, and on-time delivery
- Making proactive scheduling decisions
- Responding more quickly to customer needs
- Reducing waste and increasing profitability

## PrintFlow 4D also considers the following criteria on every job:



Employee Availability



Tooling Availability



Scheduling Constraints



Job Requirements



Machine Capabilities



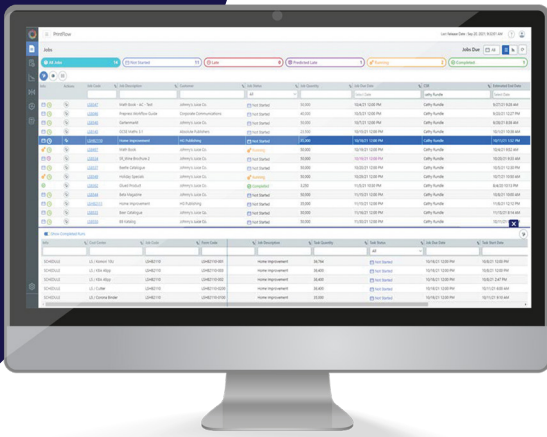
Material Availability

PrintFlow 4D has real-time status at a glance, more power to play “what if,” get fast answers - and so much more.

- Schedules the entire plant based on the Theory of Global Optimization (TGO)
- Optimizes to reduce switchover time and waste
- Uses what-if scenarios to evaluate changes
- Dynamically evaluates links and dependencies between cost centers
- Predicts and analyzes events as they occur
- Presents dynamic graphical schedule views
- Color-codes overtime, idle time and downtime, or any criteria you choose
- Allows manual overrides, freezing, and grouping
- Automatically calculates production-stage due dates
- Offers drag-and-drop editing and customizable reports
- Integrates with eProductivity Software and third-party MIS/ERP systems

## Remote Management

While PrintFlow 4D’s mobile-friendly and cloud-native architecture communicates a dynamic schedule, it can also push that schedule electronically by an HTML5 interface onto whatever preferred device your employee uses. It further allows for remote updates allowing your staff to facilitate changes at a push of a button. PrintFlow 4D can also be deployed remotely by eProductivity Software Professional Services and be fully integrated into various Suites.



## Tooling

Competing due dates and material availability are the most common factors taken into account during production scheduling and satisfying on-time deliveries. However, tooling readiness is another factor that may be overlooked during the scheduling process. PrintFlow 4D treats tools, such as dies, like machinery and ensures production processes are optimized and scheduled according to material, machinery, and tool availability.

## Optimize

### Find your weakest link and eliminate it

PrintFlow 4D allows you to manage bottlenecks and control jobs. Identify weak links and see how much of an impact they actually have on your schedule.

Create a what-if scenario by adding a shift to the bottlenecked cost center.

The what-if scenario generator provides the information you need to make better decisions. For example, is it worth changing work patterns over the next few days to ship 20 more jobs on time?

### What-if comparisons

Compare what-if scenarios to see which jobs and customers are affected. Evaluate which jobs become late because of a rush job and which jobs ship on time with overtime at a certain the work center.

## Scale when ready

PrintFlow 4D enables your business to grow as fast as it needs. Whether you're gearing up for Industry 4.0 or looking to integrate a heterogeneous mix of systems and equipment across your organization, PrintFlow 4D will ensure you're ready to take the next step.

## Synchronize

### Capacity at a glance

PrintFlow 4D includes a powerful, user-customizable Capacity Utilization tool that allows you to look at utilization at the cost center, department, plant and company levels, and across time periods. Views include idle time, run time, overtime, and more.

### Smart, unlimited manual scheduling by job

PrintFlow 4D gives you the tools and flexibility to operate totally automatically, totally manually – or anywhere in between. Using the PERT (Program Evaluation Review Technique) diagram, you can view, manage, and schedule individual jobs. You can even break up long runs into multiple parts to run across multiple pieces of equipment.

## Improve your entire workflow

Advanced integration with your MIS/ERP software helps develop your entire workflow. Share job specifications and job status and attack the inefficiencies that undermine your investment in people and equipment. PrintFlow 4D's automated, integrated approach eliminates the need for rekeying and delivers more accurate data in real time. When combined with Auto-Count 4D® for real-time shop floor data collection, you will benefit from unmatched accuracy and efficiency throughout your production operations.



# Theory of Global Optimization: A revolutionary scheduling strategy

PrintFlow 4D's strategic advantage is the application of TGO, which applies key manufacturing principles to printing and converting. TGO builds profitability by increasing throughput across the entire operation making integration a reality.

- **A manufacturing operation is a chain of interdependent links. Only a few constraints control the throughput, on-time delivery, and cost of the entire operation. Remove the constraints, increase production, and boost the bottom line.**
- **The wider perspective of the plant takes precedence over the narrower focus of single jobs or cost centers.**
- **Increasing throughput is far more important than cost accounting.**
- **Profitability is created by the sum of all jobs, not the theoretical profitability of individual jobs.**
- **Higher efficiency or productivity in a single cost center does not lead to higher profits.**
- **On-time delivery is not determined by the most efficient cost center but by the weakest link.**



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dynamic scheduling  
with PrintFlow 4D



**eProductivity Software** is a leading global provider of industry specific business and production software technology for the packaging and print industries. The company's integrated and automated software offerings and point solutions are designed to enable revenue growth and drive operating and production efficiencies. eProductivity Software is headquartered in Pittsburgh, Pennsylvania with offices worldwide. With over thirty years dedicated to delivering best-in-class technology to the packaging and printing industries, it is the company's deep held philosophy that eProductivity Software succeeds when its customers thrive. For more information reach us at [contact@eproductivitysoftware.com](mailto:contact@eproductivitysoftware.com).

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