



## Decision Mining

How to maximize the value creation of supply chain planners and advanced planning systems

February 2021

# So you have an advanced planning system. What's next? Decision mining!

Advanced planning systems (APS), platforms implemented above the company's enterprise resource planning (ERP) system, have revolutionized supply chain planning. The APS makes automated recommendations based on supply chain management best practices for the vast majority of the company's products while planners focus their attention where it really matters. Or at least that is the idea.

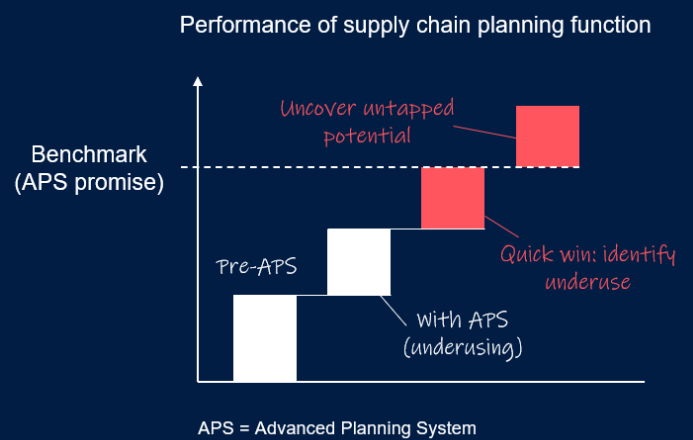
APS platforms come with an impressive array of features but sometimes fail to deliver the value promised. Barring errors in implementation (e.g. due to improper pre-implementation business analysis and subsequent incorrect mapping of business constraints in APS), a major cause of under-delivery of APS is simply underuse of APS – too many manual overrides because planners don't trust APS recommendations. Even when APS does deliver on its promises, the question remains, can we do better still? In other words, is there an undetected suboptimality in the way decisions are made?

Fundamentally, there is nothing wrong with the APS (let's assume proper pre-implementation business analysis and software selection). The source of underperformance is not in its algorithms but rather in the decision-making process. Was the manual override detrimental? Is there a significant correlation between great decisions and particular process steps, timing or attributes? The key to finding these out is already in the APS as digital breadcrumbs. What we are aiming at is nothing less than determining the value-add of every single supply chain decision and deriving courses of action to improve the overall quality of supply chain decision making. The result: happier customers and planners while improving the company's economic performance. We named our methodology *Decision Mining*.

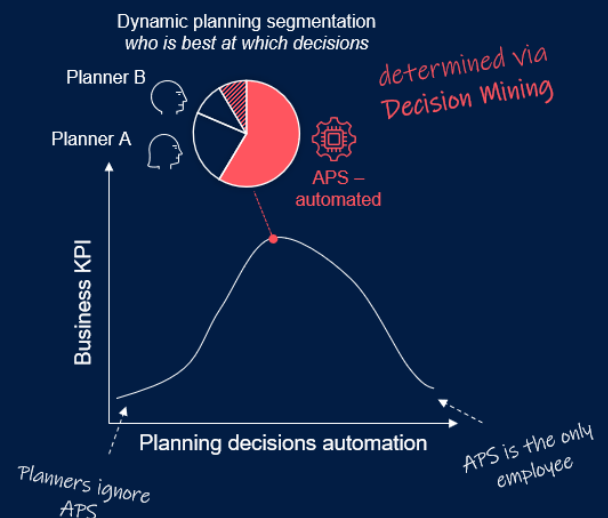
*Decision Mining* is the systematic capture and analysis of supply chain decisions. The data capture of decisions is done within the context of the planning process (Sales & Operations Planning, Integrated Business Planning), i.e. data can be organized according to its process step, timestamp and sequence, and compared to the so-

Quick win potential: is my planning organization underusing the planning system?

Next level performance: how can I extract more value from my planning system?



Decision Mining aims at determining the value-add of every single supply chain decision and deriving systematic improvements to decision making



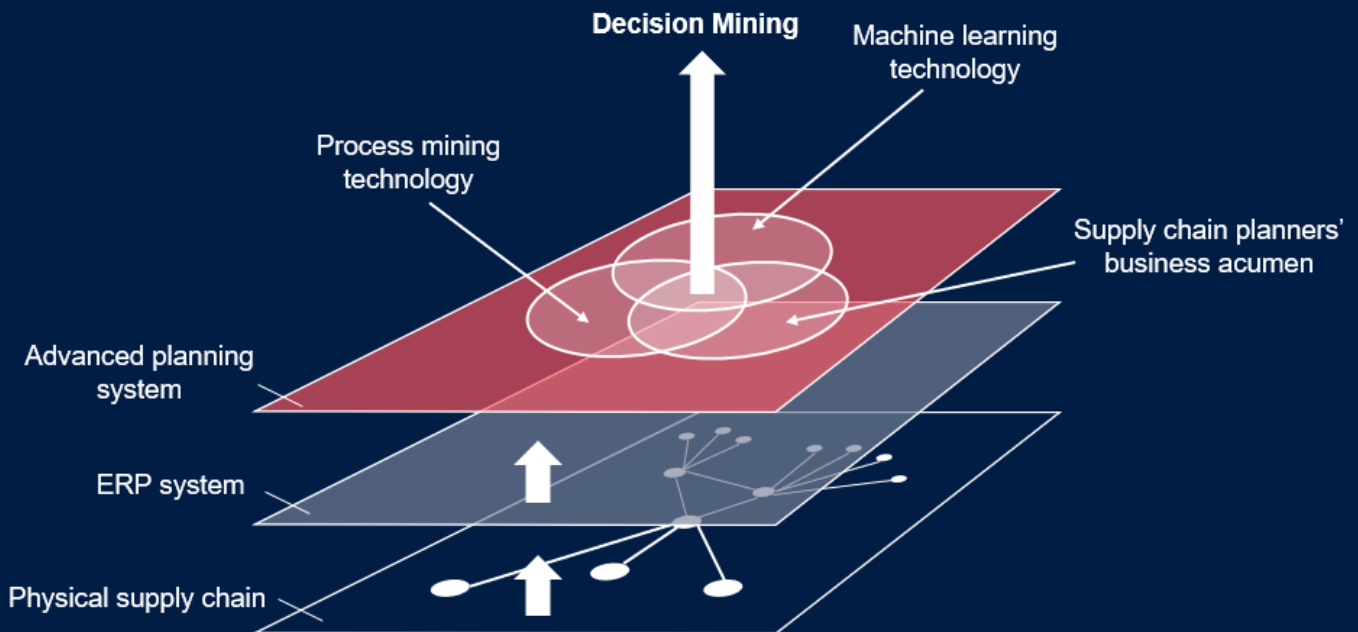
called happy path. Then, planning process data is matched and analysed against the actual performance (APS projected 98% OTIF, but actually we are at 96%) and a wealth of attributes (product groups, vendors, geographies, presence/absence of process steps, planner, segment, etc.). Finally, recommendations are produced 1) planning segmentation: which planner should plan which part-site item during which season, 2) tailored training program: which planning practices are most value-adding and who should learn about them, 3) improvement initiatives: which segment/vendor/geography/etc. is generating a disproportionate cost. This is how *Decision Mining* identifies underuse of APS features (let the planner and the system work on what each is best at) and previously undetected suboptimality (planning segmentation and recommended improvements).

The *Decision Mining* methodology relies on the use of two new technologies in the business environment: process mining and machine

learning. Process mining is necessary to understand decisions and actions in the context of business processes. Machine learning is necessary to recognize the patterns that result in value-adding or value-destroying decisions. From the two, process mining is a relative newcomer. In short, process mining lets companies understand how their processes are actually running, showing all the process variants, the most common paths, deviations from the standard, etc., all based on granular processing of e.g. the ERP system data.

Business operations are continuously evolving as new technology becomes available. First came ERP. Then APS automated routine planning decisions and made planners' lives easier with its user interface. The next step is to scientifically improve decision making via *Decision Mining*. If your supply chain has been using APS for a while, perhaps it's time to make sure you are using it correctly, or even better, find ways to get more value out of it. That can be achieved through *Decision Mining*.

Decision Mining capabilities are enabled by process mining and machine learning technologies applied to the decisions made by planners in the advanced planning system



In January 2021, the leader in process mining technology, **Celonis**, hosted the **Digital Execution Week** series of webinars. Speakers from Barkawi Management Consultants – a Genpact Company – presented the *Decision Mining* concept and a **demo in the Webinar titled “Process mining: The bedrock of building hyperconnected supply chains”**. A recording can be found in <https://www.celonis.com/digital-execution-week/supply-chain>



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## About Genpact

Genpact (NYSE: G) is a global professional services firm that makes business transformation real. We drive digital-led innovation and digitally enabled intelligent operations for our clients, guided by our experience running thousands of processes primarily for Global Fortune 500 companies. We think with design, dream in digital, and solve problems with data and analytics. Combining our expertise in end-to-end operations and our AI-based platform, Genpact Cora, we focus on the details – all 87,000+ of us. From New York to New Delhi and more than 25 countries in between, we connect every dot, reimagine every process, and reinvent companies' ways of working. We know that reimagining each step from start to finish creates better business outcomes. Whatever it is, we'll be there with you – accelerating digital transformation to create bold, lasting results – because transformation happens here.

## About Barkawi Management Consultants, a Genpact company and the author

The author works for Barkawi Management Consultants, a Genpact company. The firm is a leading supply chain management consultancy with experience in many industries and, now as part of the larger Genpact organization, has the capability to deliver management consulting, managed services and digital transformation at a global scale.