Strategnos

CDP GUIDE

Key Takeways

1. Siloed planning:
Operations, maintenance, procurement, and finance departments plan independently, resulting in misaligned forecasts.

2. Lack of shared language & terminology:
Confusion over terms such as budgets, forecasts, and demand plans undermines consistency.

3. Poor decision traceability:
Little record of why decisions were made, leading to repeated mistakes and blame-shifting.

4. Over-reliance on systems:
Forecasting tools are not challenged or governed effectively, producing misleading results.

5. Outdated inputs:
Forecasts rely on static budgets and historical data, failing to reflect dynamic operational conditions.

6. No backward integration:
Changes in operations are not systematically fed back into the plan, leaving blind spots.

The Collaborative Solution

A Collaborative Demand Planning Model transforms forecasting into a dynamic, accurate, and accountable process:

1. Cross-functional cadence:
Regular, structured planning sessions across functions ensure alignment on inputs, forecasts, and adjustments.

2. Digital integration:
Unified dashboards link data from multiple systems to create a single version of the truth.

3. Aligned planning horizons:
Clear role definitions and timelines across departments prevent overlaps and gaps.

4. Decision records:
Documenting key decisions builds accountability, reduces conflict, and improves future planning.

Introduction

Why Material Forecasts Fail in Mining, and How Collaboration Fixes It

Material forecasting in the mining industry is notorious for being unreliable, and the impact is not just on paper. Missed forecasts lead to supply shortages, inflated inventories, and costly unplanned shutdowns. But why do forecasts fail so consistently in this space? And more importantly, how can organisations fix it?

Let us explore the real reasons behind inaccurate forecasts in mining, and how a collaborative, cross-functional approach to demand planning can transform the outcomes.

The Realities of Forecasting in Mining

01

Siloed Planning Across Functions

In most mining operations, forecasting happens in isolation. Maintenance, procurement, finance, and operations often plan using their own data sets, assumptions, and timelines. The result? Misaligned forecasts that don not reflect what is really happening on the ground.

For example, the Supply Chain teams rely on forecasts to procure materials and parts. But without clear input from Production or Maintenance, they often overstock what is not needed, or worse, understock what is, resulting in delays and inflated costs. Maintenance teams aim to preserve asset reliability, yet being disconnected from production goals or procurement timelines, they may struggle with scheduling conflicts or unavailable parts, leading to reactive fixes and increased downtime. Production focuses on hitting output targets, but without awareness of maintenance windows or supply constraints, they risk overextending equipment or triggering bottlenecks, undermining both performance and safety.

02

No Common Language and Understanding

A lack of common language and understanding of demand planning can lead to confusion and misalignment within the organisation. For example, it may not be clear what the differences between a budget, forecast, and a demand plan are within the business. This ambiguity can result in inconsistent planning and decision-making processes, as different departments may interpret and use these terms differently.

By establishing a clear and shared understanding of these concepts and their unique meaning in the business, organisations can ensure that everyone is on the same page and working towards the same goals. This clarity drives better communication, coordination, and ultimately, more accurate and effective demand planning.

03

Poor Traceability of Decision Making

One of the most persistent challenges in demand planning is the lack of visibility into how and why decisions were made. In mining operations, where plans frequently shift due to operational realities, this gap becomes even more pronounced.

Key decisions, like adjusting production targets, deferring maintenance, or expediting materials, are often made in isolation, with little conversation and no formal documentation. Over time, the rationale behind these decisions fades, especially as team members change roles or leave the organisation.

What is left is a fragmented understanding of the past. Teams struggle to explain discrepancies between forecasts and actuals, repeat prior mistakes, and spend unnecessary time trying to reconstruct context that was never properly captured. Without a clear thread of decision-making, trust in the planning process erodes across departments, fueling interdepartmental blame and further reinforcing siloed planning.

04

Over Reliance and Poor Governance of Systems

Over-reliance on systems that employ algorithmic, mechanical, or statistical forecasting techniques can lead to significant inaccuracies. While these systems are a key component of effective demand planning, they fail to consider the actual underlying plan and nuances of real-world scenarios. This results in forecasts that are disconnected from the practical realities of mining operations.

When teams rely too heavily on such systems without questioning or challenging their outcomes, this can cause misaligned expectations, resource misallocation, and ultimately, project delays and cost to overrun.

To mitigate these risks, it is crucial to implement appropriate controls and governance over these systems. This includes regular audits, validation of forecasting models, and ensuring that there is transparency and accountability in the decision-making process. By having robust controls and governance, organisations can ensure that their forecasting systems are reliable and aligned with their operational goals.

05

No Real-Time Visibility Into the Mine Plan and Budget

A material forecast is only as good as the data that informs it. In mining, this typically means linking the forecast to the mine plan and associated budget. Unfortunately, these foundational inputs are often static, updated quarterly or annually, and rarely reflect the latest operational realities.

What is worse, most forecasts rely heavily on historical consumption data. While past trends are useful, they are insufficient in dynamic mining environments where future events, like planned shutdowns, ramp-ups, or known equipment risks, can radically alter material needs. Forecasts that ignore these future variables become stagnant and misleading.

For instance, if a major shovel refurbishment is scheduled in the upcoming quarter but has not yet been reflected in the system, the forecast will significantly understate the demand for parts, labour, and external services. Similarly, known supply constraints or funding delays are often not incorporated until they become urgent problems.

To move beyond reactive planning, mining operations need to link forecasts not just to historical data but to forward-looking operational and strategic drivers. Only then can planners anticipate and prepare for material demand shifts before they disrupt production.

06

Lack of Backward Integration

Even when departmental realities change, like rescheduling a drill program or revising haul truck utilisation, there is no systematic way to update the mine plan, and by extension, the material forecast.

This creates a blind spot in the planning cycle. The forecast becomes stale the moment operational conditions change, and no one is notified downstream. It is like driving a haul truck through a dust storm with no GPS: you are technically moving, but you do not know if you are on the right track. The good news is that there is a fix, and it starts with collaboration.

Collaboration: The Antidote

To address the challenges of material forecasting in mining, it is essential to adopt a comprehensive framework that ensures alignment in roles and enforces disciplined execution, all brought together through collaboration.

This framework should integrate cross-functional teams, including operations, maintenance, procurement, and finance, to work together seamlessly. By fostering collaboration, organisations can create a unified approach to demand planning, where each department's inputs are considered and integrated into a dynamic forecast.

This alignment not only enhances the accuracy of forecasts but also drives accountability and ownership, ensuring that everyone is working towards the same goals. Ultimately, collaboration is the key to transforming material forecasting from a fragmented process to a cohesive integrated and effective strategy.

Cross-Functional Demand Planning Cadence

Establishing a regular planning rhythm where operations, maintenance, procurement, and finance all come together is critical. These sessions should align around a single source of truth. As depicted on the previous page, the Collaborative Demand Planning Model is broken up into 4 main phases. Namely, the planning inputs, the departmental forecasts, demand planning, and the feedback loops.

Planning Inputs

The information required to build out an effective demand plan should originate from the establishment of the master and departmental budgets, as well as the mine plan that is to be followed, in order to meet agreed targets. Therefore, the first step involves the alignment and development of these budgets and mine plan. This stage is normally well managed in most businesses.

Departmental Forecasts

Once budgets and the mine plan are established, a series of collaborative engagements should follow to develop and agree on each department's forecasted requirements, which then form the basis of the overall demand plan. At this stage, budgets must be translated into item-level forecasts that are directly linked to demand drivers such as production and maintenance plans.

Demand Planning

To build a demand plan that supports the forecasts, a second series of engagements should take place to agree on the supply strategy for the requirements. A demand plan is an integrated plan that aligns the forecast with the supply chain perspective, incorporating actual orders, supplier lead times, and inventory levels. It provides a comprehensive view of material and resource requirements, ensuring that supply strategies can meet forecasted demand while accounting for operational realities and constraints. Although dynamic and never perfect, the demand plan represents the most reliable view of present conditions available to the organisation.

Feedback Loop

At this point, it is necessary to acknowledge that plans rarely unfold as intended. This is where the collaborative approach really starts to add value. The key lies in the fast feedback loops, which are governed by an established framework of collaborative engagements. Through this approach, the demand planning activity evolves from a linear process to an iterative one that is based on making agreed changes to plans using the most up to date information available. The emphasis here is on information rather than raw data, information that is shared between individuals and enables demand planning teams to realign their focus in line with operational realities.

By defining the key agenda points for each collaborative engagement, teams are clear on the specific information to be shared and discussed. The aim is to continuously follow the meeting cadence outlined by the framework ensuring that departmental plans are updated in unison and that the forecasts and demand plans are updated to support these departmental plans. This further ensures that demand planning meetings do not become expediting sessions or crisis meetings.

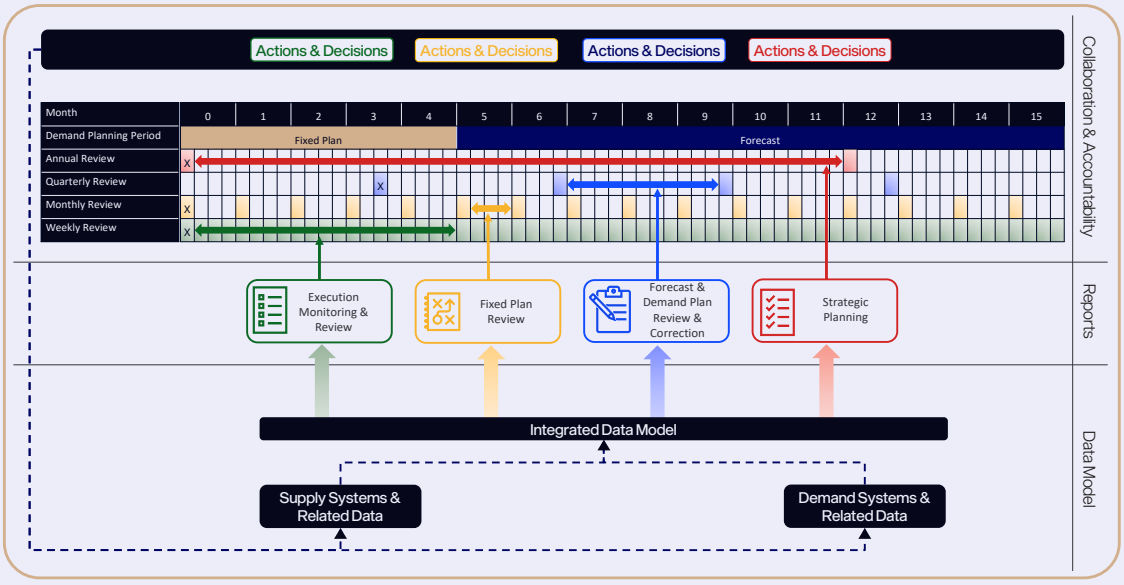
Instead, teams are able to maintain a forward-looking focus, proactively addressing issues before they arise.

Strategnos helps to develop a clear agreed-upon framework, outlining objectives, attendees, frequency, and data inputs. As an objective party, we are also able to facilitate the initial sessions to help guide teams to establish constructive habitual engagements. This cadence allows teams to align on budget changes, operational shifts, and supplier constraints before they become expensive surprises.

Digital Integration of Data, Plans and Performance

Once a collaborative cadence of meetings has been established and the key agenda items agreed upon, the relevant information and data necessary to facilitate these engagements should be easily available. In many cases, this information exists on separate spreadsheets or digital systems that have departmental segregation.

The development of an integrated data dashboard that links the departmental activity plan to work orders, purchase requisitions, inventory levels, supplier lead times, and financial budgets can create a dynamic demand plan that can be adapted as conditions change.



While this sounds good in theory, achieving it requires a well-orchestrated, collaborative effort in order to define:

- Data inputs
- Relationships between data inputs
- Agreed calculations
- Business rules
- Visual and tabular outputs
- Governance structures

For our clients, we bridge the gap between modern Information Systems (Computerised Maintenance Management Systems, Enterprise Resource Planning, Warehouse Management Systems, Forecasting, Operational Systems) and Siloed Planning by establishing a single, agreed version of the truth. We achieve this with a multi-skilled team of data engineers, data scientists, and subject matter experts working closely with your teams.

Role Clarity Across Planning Horisons

Demand planning is a process (not a single activity) that requires inputs from multiple individuals and teams. This leaves the process vulnerable to gaps in activity execution or overlaps that lead to conflicting outputs.

It is important to recognise that each department operates with its own planning horison, which often varies depending on the nature of their responsibilities. For instance, a maintenance team may plan their activities on a weekly basis, while the supply chain team, due to longer material lead times, may need to plan further in advance. Without alignment between these horisons, siloed planning can lead to inefficiencies and disruptions.

The goal is to align these planning horisons across the departments, clarifying each individual role related to the process over the timeline, including the level of granularity of the planning view i.e. the level of detail of a particular planning view.

This results in one cross-functional planning timeline where everyone understands the inputs and outputs, their specific roles related to each, and exactly where these fit into the planning horison. Relating this back to the maintenance example, if it is agreed that the release of a work order is the input required by supply chain to action the procurement activity, which in itself becomes an input to the execution of maintenance activity, it is clear to see that the alignment of the planning timelines is critical to establish in order to ensure that inputs and outputs occur at the right time to support the departmental plans.

When each department understands how their inputs influence the overall forecast and, ultimately, the mine's performance, ownership of the demand plan - and, by extension, supply chain performance, increases.

Records of Decisions are The Foundation to Accountability

In real-world operations, decisions are being made daily; however, the impact of those decisions is often only experienced much later in the planning timeline. By the time the impact is felt, the decisions that caused it are often forgotten.

For example, a decision could be made to hold a specific quantity of inventory for a certain material, based on the available information at that point in time. However, we may run into a situation where the environment changes, and the original information on which the decision was made has changed materially. In such cases, we find ourselves without the required material when we need it. This can often lead to the 'blame game,' where each team member's recollection of the decision is misaligned.

Accountability, by definition, is not possible without records of decisions. Decisions made within each engagement of the Collaborative Demand Planning Framework must captured against specific data points, the responsible person, due date, and reasoning, providing visibility of the historical timeline of decisions. This context is critical in future decision making. Referring back to the previous example, if a decision is made to change the inventory holding of a material, it should be recorded against that material code along with the decision maker, date, and reason. This creates a shared record of the decision, ensuring alignment in team recollection. In line with the Collaborative Demand Planning concept, this turns the 'blame game' into a productive problem-solving exercise.

Through a variety of tools and facilitated sessions, Strategnos sets the foundation for ongoing record keeping of your Collaborative Demand Planning framework.

This level of visibility and accountability is only possible when collaboration is intentional, not incidental.

Final Thoughts

Mining supply chains are complex and unforgiving, often in remote areas with long lead times. Forecasting will always involve a degree of uncertainty, but it doesn't have to be a shot in the dark.

By breaking down silos, integrating plans, and fostering true cross-functional collaboration, mining organisations can create demand plans that are accurate, adaptable, and actionable, delivering real business results and operational resilience.

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