Ritchie BI

7 Reasons You Can't Trust OTIF (And How to Fix It)

On-Time-In-Full (OTIF) is essential for managing supply chain reliability, but operations leaders often struggle to trust it.

This practical guide outlines seven reasons why, and how to fix each one.

PRACTICAL GUIDE | 10 MIN READ

1 Using OTIF to Requested Date

What you might hear:

- "The supplier says they delivered on time to their standard lead time"
- "Design didn't confirm what they needed on time"
- "The requested date was unrealistic"

What's going wrong?

On-Time-In-Full (OTIF) can either be measured against the requested date or against the date confirmed by the supplier. If OTIF is measured against the requested date, it tells us *if* parts arrive when we need them, but it says little about *why* parts are late or *where* to improve. The cause could sit with design, procurement, the supplier, the warehouse, or all four at once.

We believe metrics should only exist if they support decision making, isolated to an owner who can influence the result. For this reason, we advise against using 'OTIF to Requested Date' as the sole measure of supplier performance, as it fails this test.

Our advice

Separate OTIF into metrics that isolate the performance of the different owners as far as reasonably possible. The following table is an example of how you might do this:

Metric	Unit	What This Measures	Owner
On-Time Purchase Requisition	%	Are purchase requisitions being raised on time, based on planned delivery time[1] and request date?	Design[2]
Procurement Process Time	Days	Are purchase requisitions being converted into purchase orders fast enough?	Procurement
OTIF to Supplier Confirmation	%	Are purchase order items being delivered to the date and quantity confirmed by the supplier?	Supplier

The above table is an example to show how you can isolate metrics to their owner. The metrics that you choose should be precisely defined and agreed in a way that makes sense to your stakeholders.

1 Planned delivery time is the number of days your ERP system expects a delivery to take once a purchase order is raised.

2 The owner should be whoever raises the purchase requisition. In some organisations this is the Technical or Planning team.

2 Supplier Confirmation Keeps Changing

In the previous section, we advised using 'OTIF to Supplier Confirmation', instead of 'OTIF to Requested Date'. This prompts some common pushbacks:

What you might hear:

- "We can't use 'OTIF to Supplier Confirmation' because the confirmed date keeps getting updated"
- "We updated the requested date three times, is the confirmation date valid anymore?"

What's going wrong?

Manufacturers who use 'OTIF to Supplier Confirmation' typically use the first or last confirmation date that was given by a supplier. The table below states the pros and cons of each approach:

Metric	Pros	Cons
OTIF to First Provided Supplier Confirmation	Measures reliability of the original promise	- If you request a later delivery date and the supplier meets it, it reflects unfairly on them - Assumes suppliers give a genuine, considered first confirmation
OTIF to Last Provided Supplier Confirmation	Measures execution once a date is agreed	Can be gamed by repeated updates

Our advice

Either option is better than nothing. Of the two, we advise using 'OTIF to First Provided Supplier Confirmation', as it measures reliability against the original promise and resists the gaming that repeated updates allow under the 'Last Provided Supplier Confirmation' approach.

To avoid unfairly penalising suppliers when you push out a requested date, measure against the first confirmation the supplier gives you after your most recent change request.

Some ERP configurations don't retain the history of changes to requested date and supplier confirmation. If this applies, start capturing it going forward.

3 Poor Data Quality

Poor data quality is one of the most common objections that we hear. If the data in your ERP system doesn't always align with reality, you may feel worried about drawing the wrong conclusions or feel that the metric is disingenuous to use.

Data quality issues you might see:

- Confirmed delivery date from the supplier is missing
- Planned delivery time is missing
- Unit-of-measure mismatch between purchase order and the receipt

What's going wrong?

If you don't use OTIF because of data quality concerns, you miss one of the most important metrics for improving supply chain performance.

Our advice

Improving data quality takes time but you don't need to wait until it's perfect to start making operational improvements:

1. Use the data you have to measure OTIF, make directional decisions despite the uncertainty
2. Fix data quality issues in parallel
    a. Address the root causes, prioritising by importance of the data field
    b. Publish data quality metrics that your team can use to track improvement. For example:
        - 'Percentage of Supplier Confirmation'[1], owned by Expediting[2]
        - 'Percentage of Order Items with a Planned Delivery Time', owned by Procurement

Case study

An F1 team had a serious supply chain bottleneck hitting their production schedules. They could see individual requisitions, orders and goods receipts in ERP, but not the bigger picture of how their supply chain was performing, and had no effective way to manage suppliers. Data quality was a concern making them hesitant to use OTIF.

We built a supply chain visibility reporting suite with 'OTIF to Supplier Confirmation' as a key metric. Even with data gaps, they could immediately spot supplier patterns that needed managing. By tracking data quality metrics and surfacing issues to the right owners, 'Percentage of Supplier Confirmation' rose 30% within two months. With the visibility to manage suppliers, 'OTIF to Supplier Confirmation' increased from 55% to over 90%.

1 This should be filtered to purchase order lines that were raised before a given grace period i.e. anything that was ordered at least two weeks ago. If this filter is not applied, percentage of supplier confirmation unfairly drops every time an order is raised.

2 In some organisations, the role of expediting may sit within Procurement, rather than as a separate function.

4 Difficult to Define Exact Delivery Date

Delivery date can be surprisingly hard to define.

What you might hear:

- "We need to allow for two days at goods-in"
- "It's technically here, but it isn't in the system yet"
- "There's a backlog at goods-in as we're having issues booking some deliveries in"

What's going wrong?

If purchase order lines and quantities were instantly visible upon arrival, and what arrived always matched with what was scheduled, everything could get booked into the system at the point of delivery. If only!

In reality:

- Delivery note quality can vary enormously across suppliers; some quote your purchase order item number, others only their own references
- Items and quantities received may not align with schedule lines, causing booking issues

As a result, it takes time to book parts in, and it's not uncommon for parts to live in goods-in for a few days (or more). *But is it accurate to define a part as late if it was booked in two days late but arrived on time?* In this situation, teams tracking OTIF often debate applying a fixed offset for goods-in process time. This not only adds noise to the metric, but masks the issue of the slow goods-in process.

Our advice

Audit goods-in process time, the time between physical arrival and booking, over several days. Booking should be consistently same-day[1]. If not, ask these four questions:

1. Do we have a clearly defined, low-friction goods-in process?
2. Are booking issues isolated to one person or area, while the rest of parts flow quickly?
3. Have we worked with suppliers to standardise and improve delivery note quality as far as possible?
4. Do we have enough capacity at goods-in?

For critical path parts in a sequential build, the impact of goods-in time on lead time can compound at every stage[2], quietly costing weeks of programme schedule. This is why, as well as ensuring accurate measurement of OTIF, reducing goods-in process time deserves attention.

Fortunately, since goods-in is within your control, you can often see results within weeks.

1 This excludes legitimate holds such as quality inspection or quarantine.

2 Assuming Just In Time (JIT) delivery with no stock.

5 Binary Scoring That Ignores Severity

At the purchase order line level, a part is either delivered 'on time' and 'in full' or it isn't. If it arrives one day late, or one unit short, it scores zero for that line.

What you might hear:

- "One day late scores the same zero as three weeks late"
- "Why can't 'in full' be graded? A 50%, 75%, 90% scale would tell me far more than a single zero"
- "I have no measure of how late things are"

What's going wrong?

As OTIF ignores severity, people may stop believing the number reflects real performance. It cannot judge on a case-by-case basis whether a given line is acceptable; a line is either fully compliant or it isn't. When some orders arrive three weeks late, our minds anchor on that as the worst case, so one day late starts to feel acceptable. But what if the three-week-late parts didn't hold up production while the one-day-late parts did?

We need confidence that parts will arrive on time; whether a part is one day late or three weeks late, it is still an issue to address. It can be tempting to fixate on individual cases that feel subjectively unfair. The strength of OTIF is that it ignores them and stays objective.

Our advice

Deliveries are distributed around the agreed date, with some early, some on time, and some late. Over a short window this makes the figure noisy, and even a reliable supplier may have a poor OTIF at the day level. Avoid fixating on the case at the line level; focus on OTIF and its trend over weeks and months. As genuine performance improves, the share of slightly-late orders shrinks and OTIF rises with it.

If you want to capture severity, add a supporting metric such as 'Median Days Late', rather than trying to grade OTIF itself. Just be careful to avoid the trap of too many metrics; start simple and stay focused.

6 Only Viewing the Headline Number

As a headline number, OTIF can be useful to see how your overall supply chain is performing over time, but it can hide the details and trends that matter.

For example:

- Overall OTIF trends upwards while a key supplier's OTIF trends downwards
- OTIF sits at 95%, but the missing 5% are line-stopping components
- A supplier is consistently struggling to deliver a certain category of material

Our advice

Build a dashboard that breaks the headline OTIF number down by category so that you can:

- Drill to the root cause: from total OTIF down to a supplier, material group or individual part, and from year down to quarter, month or week
- See the highest priority issues: rank the worst suppliers and material groups at the top
- Focus on what stops the line: filter to critical parts[1] or key suppliers so a healthy overall number can't hide a line-stopping one

1 This assumes the critical parts field is maintained well enough to slice reliably. If not, a manual list of key suppliers is a pragmatic start.

7 Multiple Schedule Lines per Purchase Order Item

This section only applies if you schedule a single purchase order item to arrive on multiple dates e.g. 1,500 pieces split into six monthly batches of 250, all under one order line.

What you might hear:

- "OTIF doesn't work when items have phased delivery throughout the year"
- "OTIF doesn't work when we have scheduling agreements set up"

What's going wrong?

When a delivery arrives against a purchase order item with multiple schedule dates, there's no hard link between the delivery and the specific line it was meant to satisfy. The usual workaround is to pair each goods receipt with the earliest open schedule line, one receipt per line, regardless of quantity. This assumption breaks when a supplier delivers out of sequence, causing on-time deliveries to be marked as late.

Example:
Six monthly batches of 250 are due from January to June. To save freight, the supplier ships the first two together in January, then delivers the rest on time. Nothing ever runs short. But the report matches each delivery to the earliest open line, so every delivery after January counts one month late, the June line shows nothing received at all, and OTIF reads 17% even though the supplier delivered early.

Our advice

Raise one purchase order item per delivery, wherever possible. This gives you a clear due date and quantity to measure each delivery against, making on-time performance easy to track and act on.

Where scheduling agreements are necessary[1], compare the cumulative quantity due against the cumulative quantity received at each due date. This measures real availability; it answers "has enough arrived by each due date to cover everything promised so far?" If this approach is applied to the example above, since enough has arrived by every due date, it reports 100% instead of 17%.

1 Scheduling agreements suit high-volume, repetitive items where the admin of individual PO lines outweighs the benefit of per-delivery tracking.

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We help manufacturers who use SAP improve profitability and cash flow by increasing throughput, reducing inventory, and reducing costs.

Found this useful?
If any of these seven problems sound familiar, we're happy to talk them through and share what we've seen work elsewhere.

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