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inventory QUALITY

the Good,

the Bad,

& the Ugly

WHITE PAPER SERIES

Sydney NSW
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Inventory Quality

The Good, the Bad, and the Ugly

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His experience spans the length of the supply chain; from demand to supply, from warehousing and freight to logistics.

This experience has been gained across industries including fast moving consumer food and beverages to pharmaceutical, primary packaging and retail supply chain management

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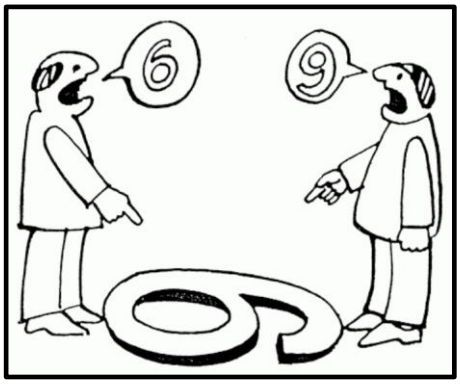
Part I: Introduction: "*Mind the Gap*"

Sometimes two people, seeing the same thing end up with different impressions.



A gap opens up.

This gap this applies to how inventory is seen.

Senior Management view inventory in **aggregation**. They see it in value terms – often, as cash tied up that could be better used elsewhere.

Meanwhile, you work with it in **disaggregation**. It's something you and your team pick up and put down, load on a truck or slot in the warehouse.

You know it has value, but you deal with it in volume terms. It's pallets on hand and stock cover needed to meet volatile demand.

There needs to be a common way of talking about the same thing regardless of where you're looking from. The different views and measures of the same inventory is a gap that you need to close.

So, how do you close this gap?

How can you look upon inventory in monetary terms ***AND*** work on optimising inventory in volume terms at the same time?

How can you reconcile Senior Management's aggregated view ***AND*** at the same time deal with your disaggregated reality. How do you separate the good from the bad and the ugly in your inventory?

Through the *Inventory Quality Ratio (IQR).*

What is the IQR?

The Inventory Quality Ratio is the ratio of active inventory dollars to total inventory dollars.

…it's an operational measure that goes beyond the traditional Inventory Turns measure by breaking your inventory down to *show the good, the bad and the ugly* of that inventory.

IQR is an operational measure. It has a direct, useful application for you in managing that inventory at the SKU-level.

What does the IQR show me?

The IQR process filters your SKU-level inventory to split your inventory into 3 parts.

It shows you where to focus your efforts to cut inventory, which is always at the SKU level.

The big benefit of IQR is that it takes your current inventory and lets you see it at SKU-level reality.

1 active inventory

- the GOOD

2 inactive inventory

- the BAD

3 slow moving & dead inventory

- the UGLY

How?

By looking backwards at consumption and forwards at demand for the SKU's. And best of all, being at SKU-level, it's actionable.

How can I apply it?

When you can see the quality of you inventory *(...the good, the bad and the ugly*...) you know where to zero in and act.

You can act knowing that you're respecting your existing inventory rules. The rules you've set to show what the real level of inventory should be.

And if you need to, you can play '*What-If*' to see how they'd have to change to achieve a total inventory dollar outcome.

Your Finance colleagues will point to the Inventory Turns measure. They'll tell you that inventory is too high. You knew that. The Inventory Turns measure isn't something you can readily work with.

> *The problem with Inventory Turns is that it only gives you a helicopter view of where aggregate inventory has been.*

That's great, but you're on the ground looking ahead at the demand coming your way, not behind.

You look upon that inventory to cover demand at the SKU-level.

…re-shaping your inventory (increasing inventory turns) requires you to identify SKU-level opportunities…

IQR does this.

Part II: Determining the Inventory Quality Ratio

What information's required?

Three pieces of SKU-level data in monthly buckets and a $ unit of measure;

CONSUMPTION

…the last 12 months of sales for finished goods and usage for materials

DEMAND

…the next 12 months of forecast sales for finished goods and MRP demand for materials

CURRENT INVENTORY

…for all these SKU's (finished goods and materials)

“Dollars? …but I work with volume, not value!

The call for you to deliver **"inventory cuts"** is the call for you to free up cash for the business.

You'll have to address a reduction in physical terms, but you can convert it back later.

Determining your IQR position means opportunities to cut that inventory are mapped out.

You'll also be able to show progress. You'll be able to show how you can make further cuts by changing key parameters or inventory rules (see the model).

Once you've sourced that data, you’re ready to go!

How does it use the data to determine the IQR?

…it takes the consumption and demand data to break down your inventory into;

1. SKU's in inventory ***with*** demand;
2. SKU's in inventory ***without*** demand, but recent usage,
3. SKU's in inventory ***with neither.***

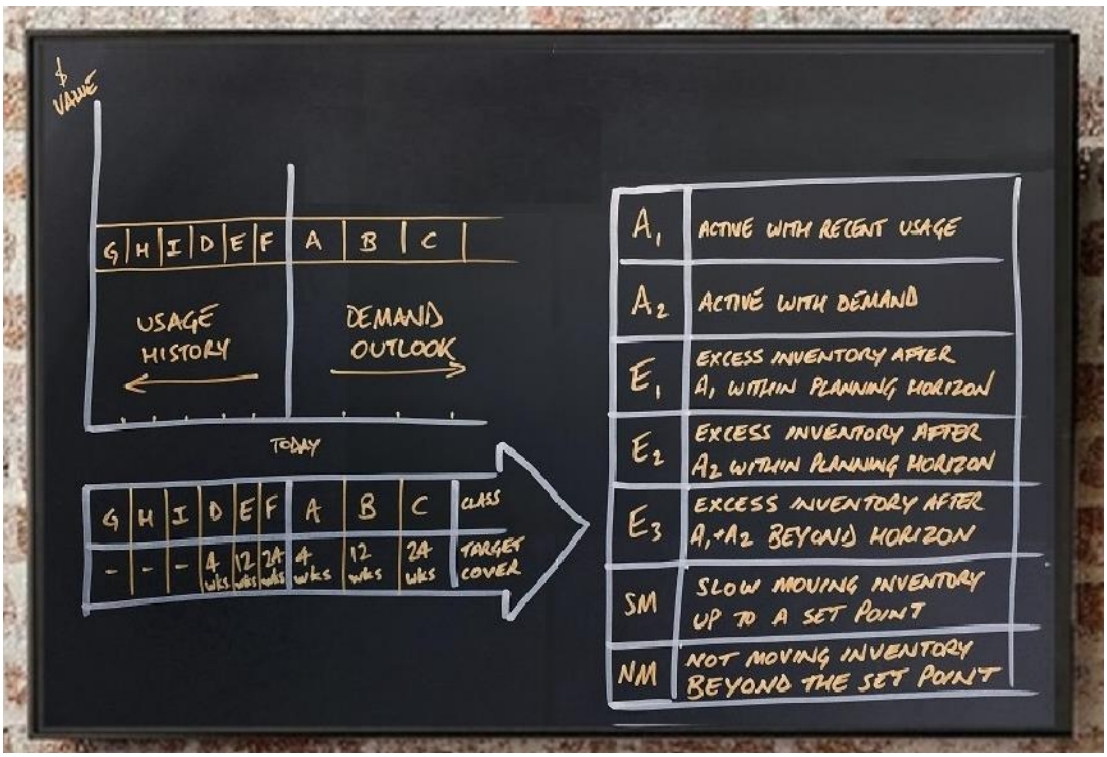
These SKU's in these three groups are then broken down again according to an ABC classification approach based on;

1. future dollar demand (ABC);
2. recent dollar usage (DEF); or,
3. their current dollar balances (GHI).

Your target inventory levels are then allocated to SKU-level alphabetised classifications. This sorts each SKU's dollar value of inventory into inventory quality categories;

1. **Active** (A1 or A2) – the GOOD.
2. **Excess** (E1, E2 or E3) - the BAD.
3. **Slow Moving & Not Moving** (SM & NM) - the UGLY.

Once set up, you can break it down by supplier, product family or inventory location.



The IQR is then ;

IQR = the Good / the Good + the Bad + the Ugly

or IQR = active inventory dollars / total inventory dollars
or IQR = (A1+A2) / (A1+A2+E1+E2+E3+SM+NM)

Q: What's the difference between A1, A2, E1, E2, E3, SM & NM?		
A1	**Active Part of Inventory (A1) ...the GOOD** *Q: What is it?* *A: Inventory without demand, but has been in use recently.* Where inventory of a SKU shows recent consumption over a period you specify eg; last 13 weeks (1 quarter), but no dependant (MRP) or independant (forecast) demand. *Q: What's its $ value?* *A: The $ value of the SKU's Average Weekly Consumption* multiplied by *your stock policy in weeks-cover for the SKU*	
A2	**Active Part of Inventory (A2) ...the GOOD** *Q: What is it?* *A: Inventory for which there is demand - a plan to consume.* The opposite to A1 where a SKU's inventory has demand (independent or dependent). Q: *What's its $ value?* A: *The $ value of the SKU's Average Weekly Consumption multiplied by your stock policy in weeks-cover for the SKU*	
E1	**E1 Excess ...the BAD** The value of inventory *within the planning horizon* after deducting the **Active Part (A1)** value	
E2	**E2 Excess ...the BAD** The value of inventory *within the planning horizon* after deducting the **Active Part (A2)** value. This is where most of the **INVENTORY REDUCTION** can be made	
E3	**E3 Excess ...the BAD** The value of inventory that exceeds the demand or consumption *beyond the planning horizon* you specify *eg;* 52 weeks.	
SM	**Slow Moving ...the UGLY** The value of inventory for a SKU where there's been no consumption up to the end of a period you specify *eg;* up to last 3 months	
NM	**Not Moving ...the UGLY** The value of inventory for a SKU where there's been no consumption beyond the period you specify *eg;* beyond the last 3 months	

How do I do it for my inventory?

The easiest way is to use your ERP system …if it offers it.

Otherwise, if you can extract the data listed above all you need do is drop the data into the model.

Ok, I've got the numbers working in the model. Now what?

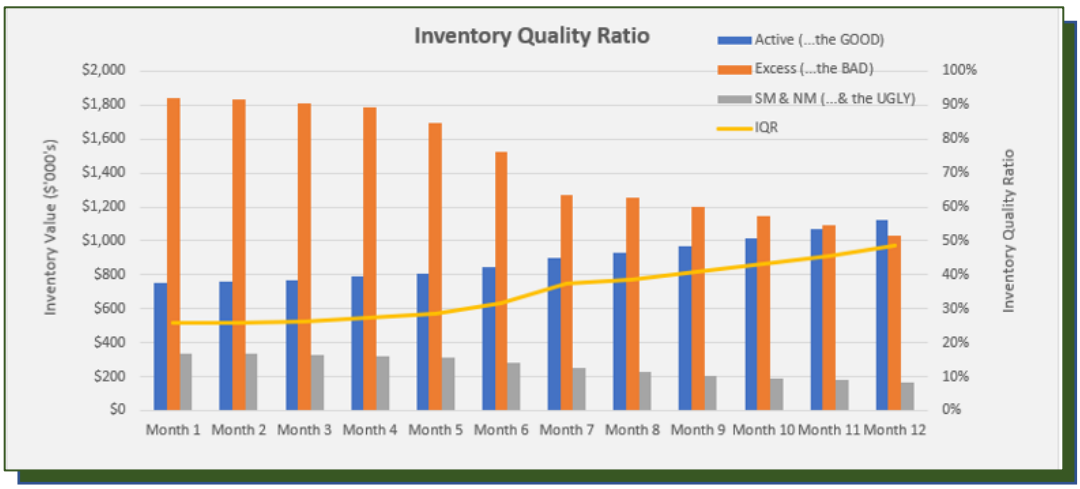
Zero in on the biggest opportunity to reduce inventory. The E2 category - excess inventory with known demand.

Generally, it's the biggest and most beneficial to action.

Benefits include;

- Quick wins via de-expediting open purchase orders &/or reducing purchase order quantities,
- Decreasing inventory value AND decreasing purchasing spend – a cash flow win/win!
- Potential to divert an open purchase order to other sites in the network to use it faster,
- No expensive inventory write-offs necessary,
- It lowers the potential for E2 inventory to become ugly inventory in the future.

Concerted effort over time will transform your inventory picture.



You will deliver a better IQR when you reduce the share of E2 even if there's an increase in A1 and A2. How's that possible? Because your inventory value will have a greater share of ACTIVE inventory.

When and how often do I do this?

The timing is up to you. Options are;

1. day one, of week one of the month,
2. once MRP has run over the monthly forecast update
3. the day of the monthly S&OP or IBP Management Review Meeting.

Run the numbers at the same time each month to track progress.

What's next?

An inventory gap exists.

A gap between the aggregated view of inventory and your disaggregated view.

Senior Management deliver targets in from their *'helicopter' view* of inventory.

You have to deliver against those inventory targets from your *'boots-on-the-ground' view*.

✔ The IQR closes the gap.

✔ The IQR unites the two views in monetary terms.

✔ The IQR talks to the top line numbers while giving you the SKU level detail that you need to act.

With a common view of the good the bad and the ugly of your inventory, the two viewpoints of inventory become one. Both views can see the good, the bad and the ugly.

Now's the time to take a fresh approach to your inventory.

It's time to close the gap.