

## 20%+ REDUCTION IN YOUR MRO INVENTORY WITH NO RISK INCREASES!

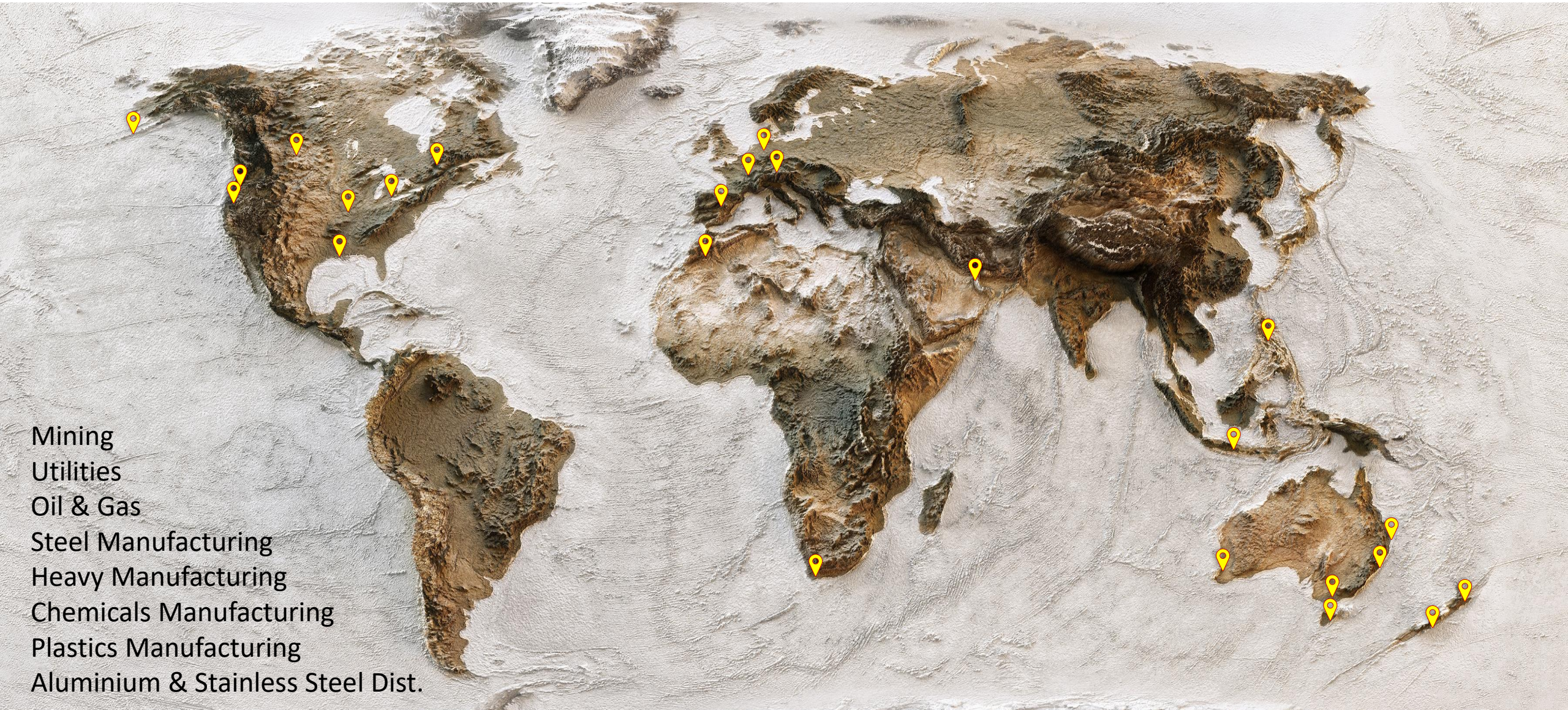
Tim McLain

COO & Global Director - MRO Materials Management

Missing Link Supply Services



# My journey...



Mining  
Utilities  
Oil & Gas  
Steel Manufacturing  
Heavy Manufacturing  
Chemicals Manufacturing  
Plastics Manufacturing  
Aluminium & Stainless Steel Dist.



Small improvements everyday  
drive BIG changes over time!

---

Discussion  
Topics:

---

Birds eye view of MRO

---

Demand Signal Quality

---

Material Criticality

---

Lead Time

---

Inventory Optimisation

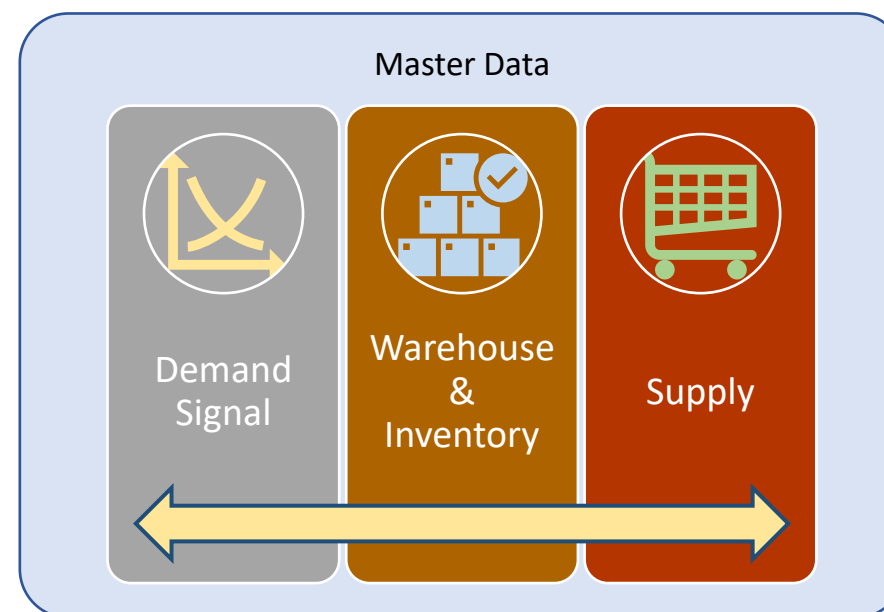
---



Let's first look at  
the Supply Chain  
from waaay up  
high...

## Purpose of MRO:

*To reduce **RISK** at the  
lowest possible **COST**.*



# The Multi Million \$\$ balance!



## Risk

- Plant availability
- Criticality
- Frequency of failure
- Impact of a failure
- Lead Time
- Planned vs Unplanned

### MRO

is a  
BALANCE  
of  
holding on  
AND  
letting go

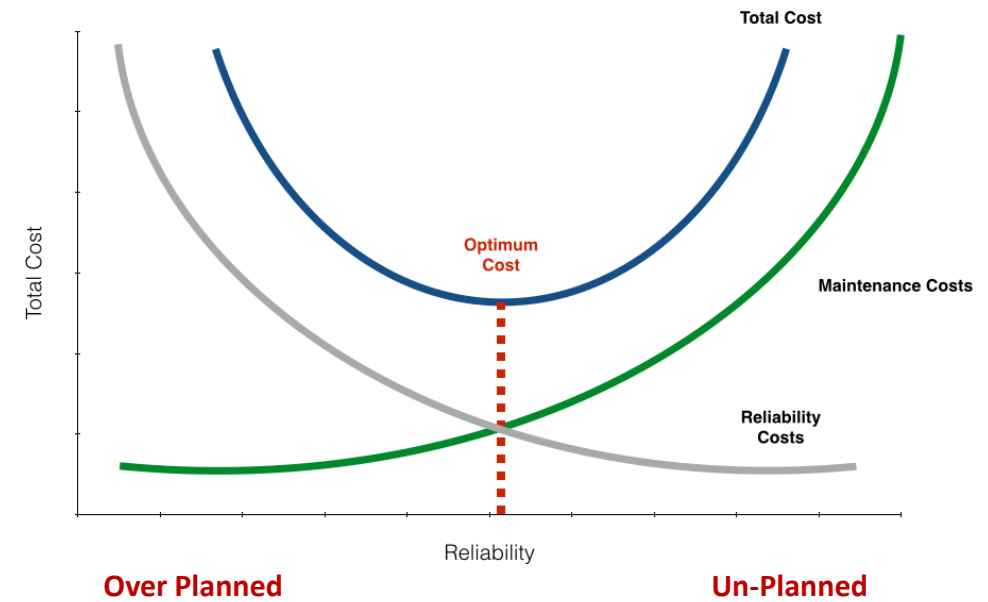
-rumi

## Cost

- Working Capital cost
- Storage cost
- Preservation activities
- Stock-take costs
- Obsolescence costs
- Labour to perform non-value adding tasks

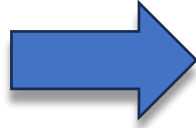
# Planned vs. Unplanned Demand

- The Demand Signal triggers the entire indirect material supply chain.
- A higher level of unplanned demand will result in an increase in inventory.
- Target the critical equipment – focus your efforts.



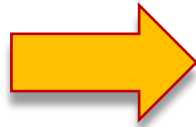
# Demand Signal Quality

Planned  
Work



- Enables the Supply chain team to reduce stock on hand and purchase in new materials when required
- Materials can be kitted well before they are required providing efficiencies for the Warehouse Team

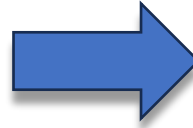
Unplanned  
Work



- Stock must be held on the shelf at all times,
- Transportation costs can significantly increase due to the more urgent need for the materials
- Generally, contains a higher percentage of Free Text materials
- All costs are increased when a business operates in an unplanned environment

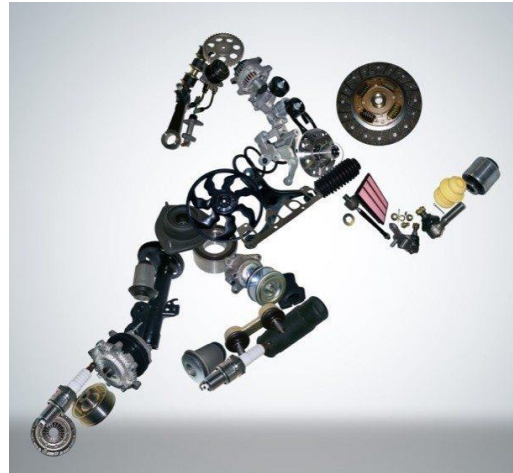
# Question: Do you measure or monitor the Demand Signal Quality?

Unplanned  
Work



Planned  
Work

What can you do  
to move away  
from here..



...to here?

*The MRO Supply Chain does nothing until the Demand Signal is given.*

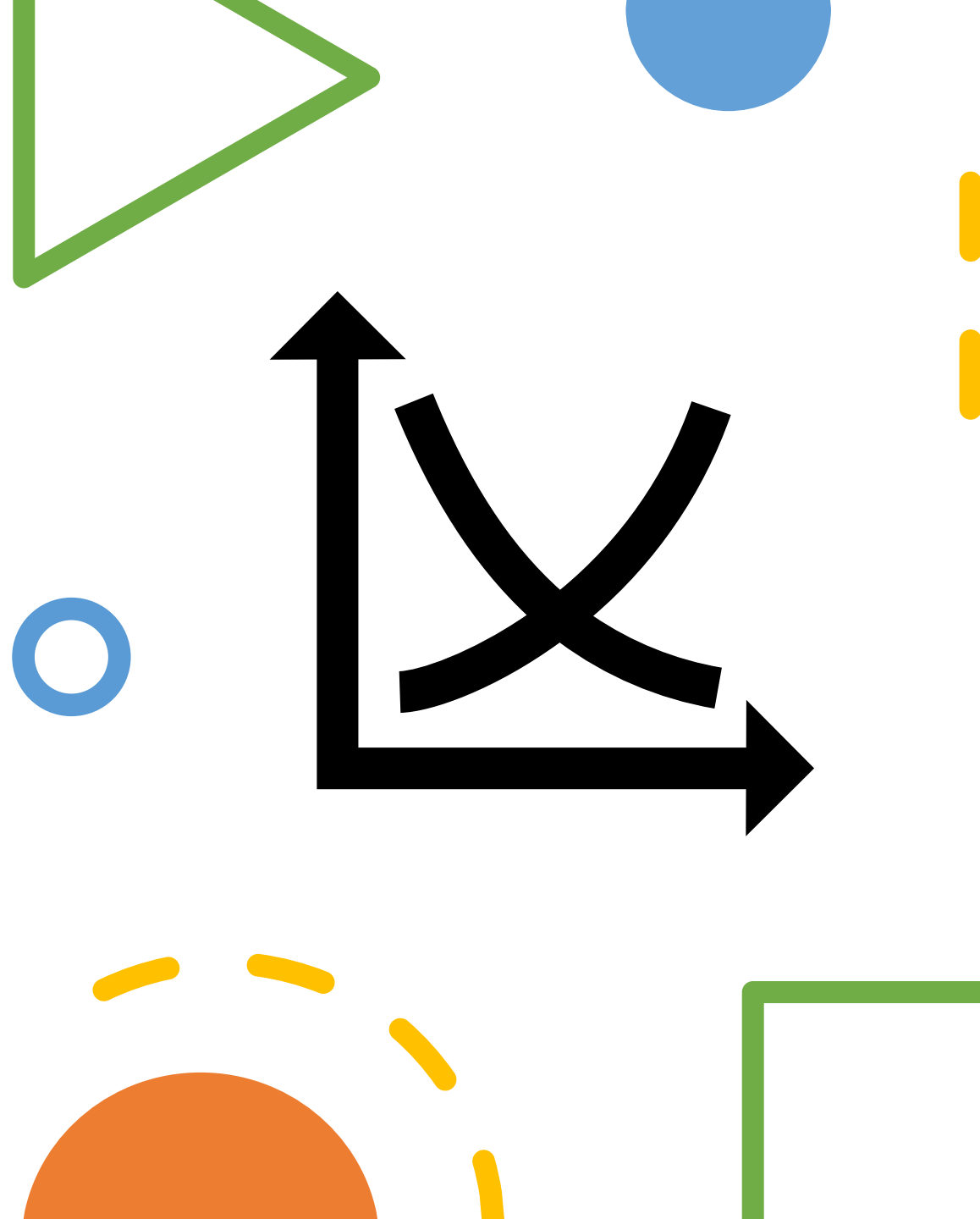


# Quick Summary:

## Demand Signal

### Measure to Understand to Improve

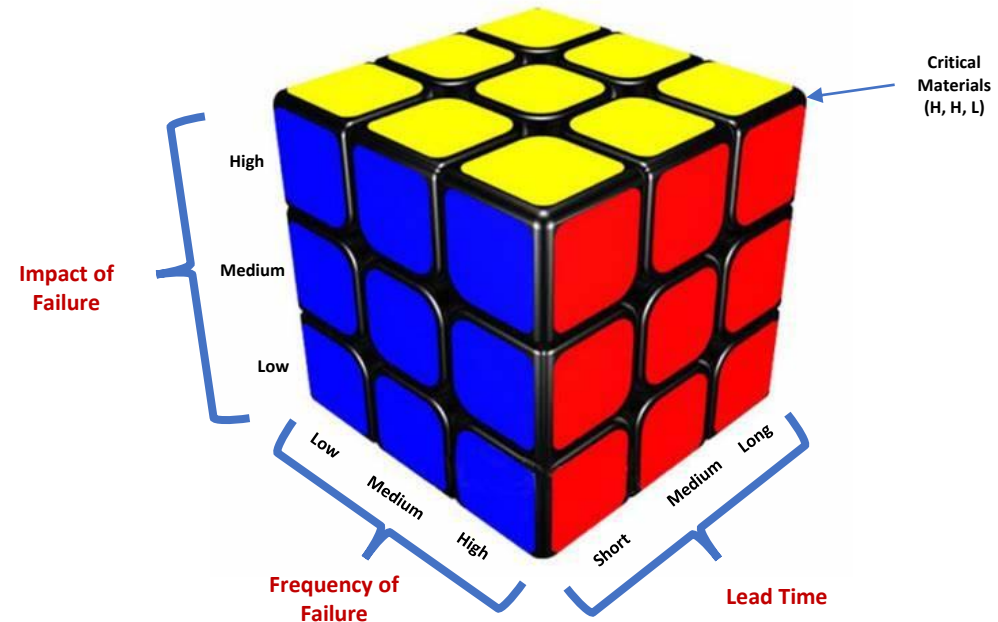
- You need to understand the amount of UNPLANNED demand flowing into the Supply Chain.
- NOT a finger pointing exercise! A reality that everyone needs to be clear on.



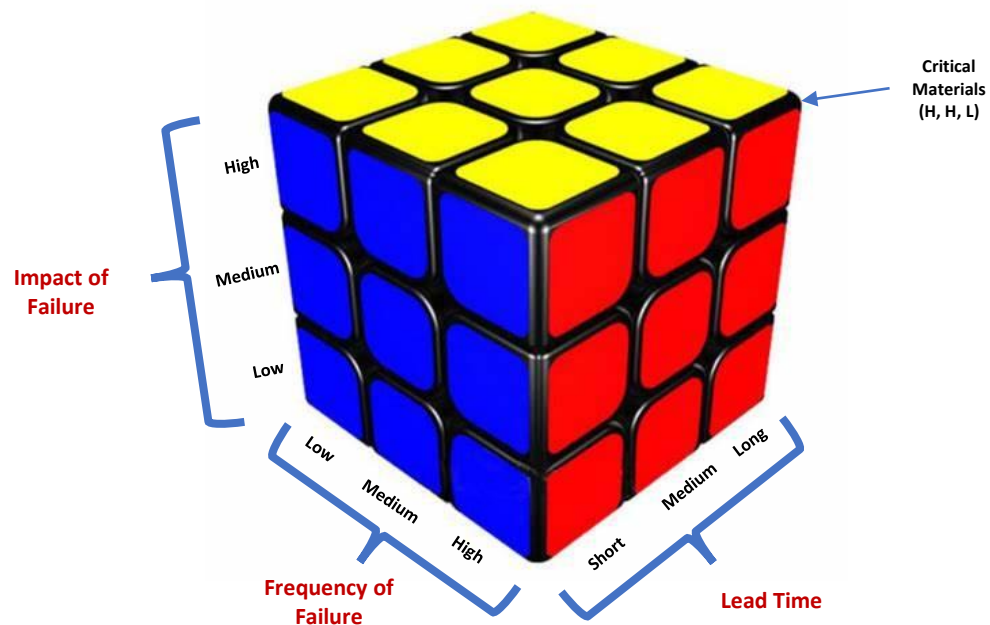
# Criticality Calculation

What determines if a material is critical to your operations:

- **Impact** of failure (cost impacts to the business)
  - High
  - Medium
  - Low
- **Frequency** of failure (past and future)
  - High
  - Medium
  - Low
- **Lead Time**
  - Long
  - Medium
  - Short



# Criticality Calculation – now what?



## Critical Materials

1. Must be stocked.
2. Must have a preservation plan.
3. Must be on an Outline Agreement.
4. Must be counted (stocktake) monthly.
5. Must be reviewed with the Reliability or Engineering Team to establish if the material is still critical.



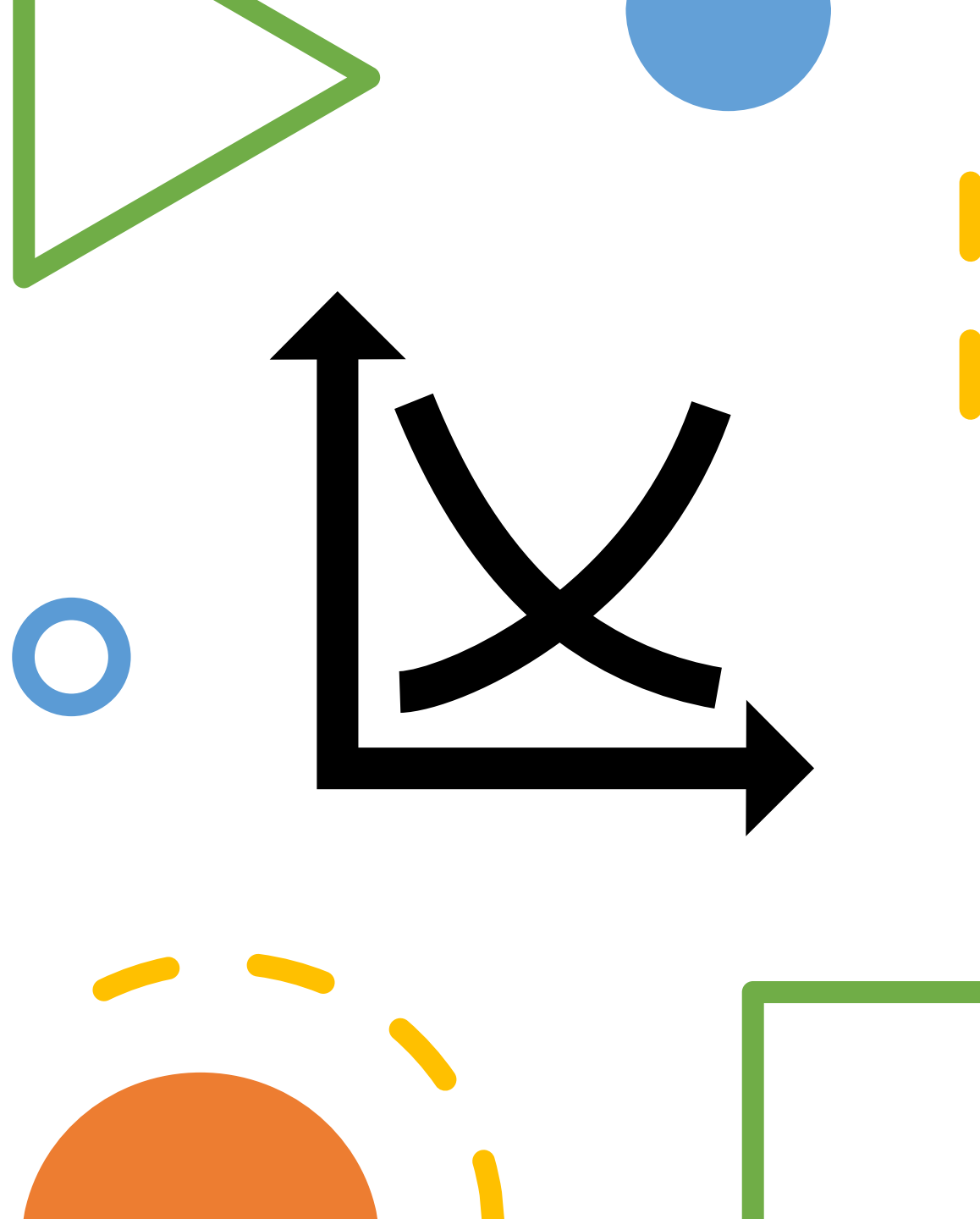
# Quick Summary Part 2:

## Demand Signal

- Measure to Understand to Improve

## Material Criticality

- Clearly identify which materials are critical to your operations
- Collectively and without Emotion!



# Lead Time Monitoring and Management

When maintaining a PIR or Info Record, what are the three most important pieces of information?

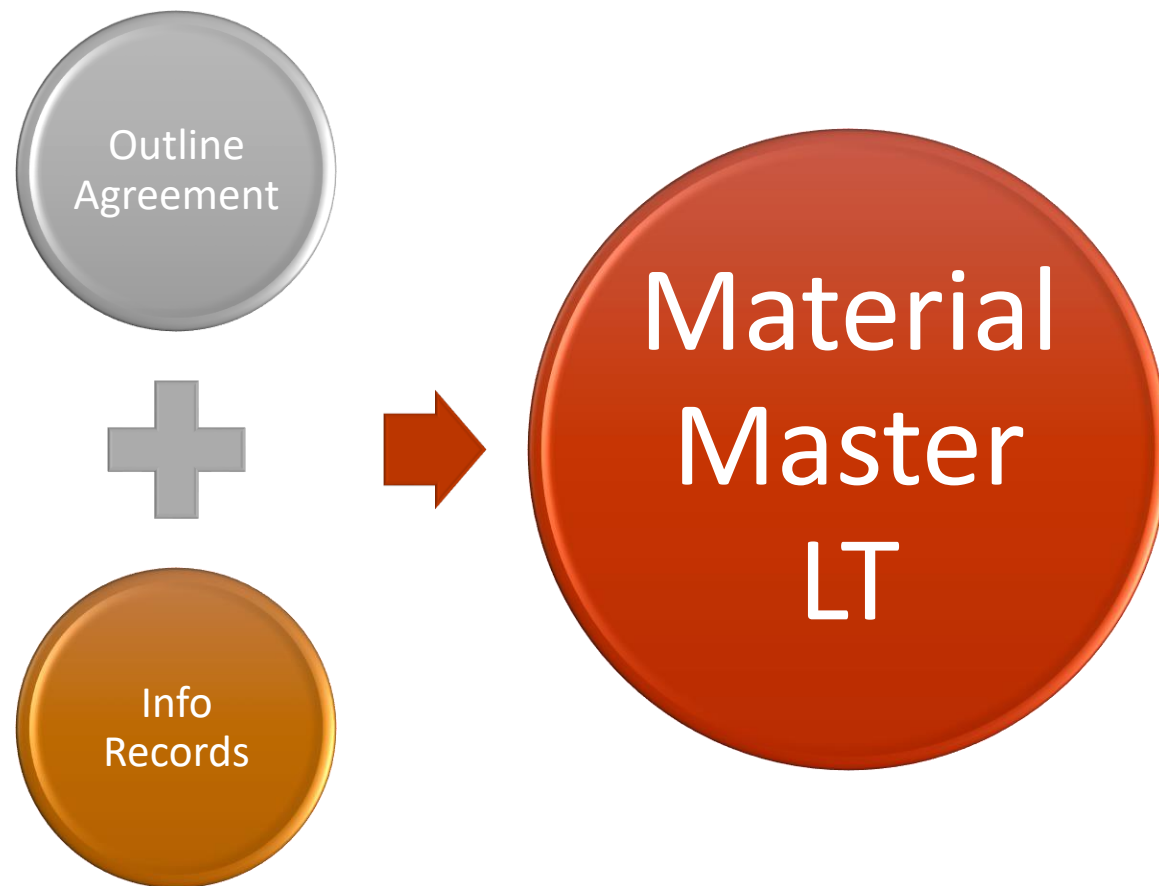
1. Supplier/Vendor Part Number
2. Price
- 3. Lead Time**

## Questions:

- Who uses and/or maintains Info Records?
  - *If you do, what data are you maintaining?*
- Do you enter in a Supplier Part Number when creating a PO?
  - PO's or RFQ do not update the Info Records if data already exists.
  - Every PO line item should contain an SPN!
- Do you update the LT in your Info Records?
- Do you negotiate LT's in your Outline Agreements?
- Info Record Lead Time = specific to the Supplier
  - *Standard SAP does not update this field from PO's or Maintained Quotes, this field must be manually maintained. Uggggh!*
- Material Master Data (MRP2) Lead Time = Average of all Suppliers.



# Lead Time Monitoring and Management



## Thoughts:

- When a material is on an active OA, all three LT's should match!
- Once you have catalogued a material, you no longer need to manually generate PO's, SAP can do this for you...easily!
- Run MRP more often than just daily!
- Manage your LT's. It's worth it!
  - WPDTC or get a tool to help you!



# Lead Time Discussion

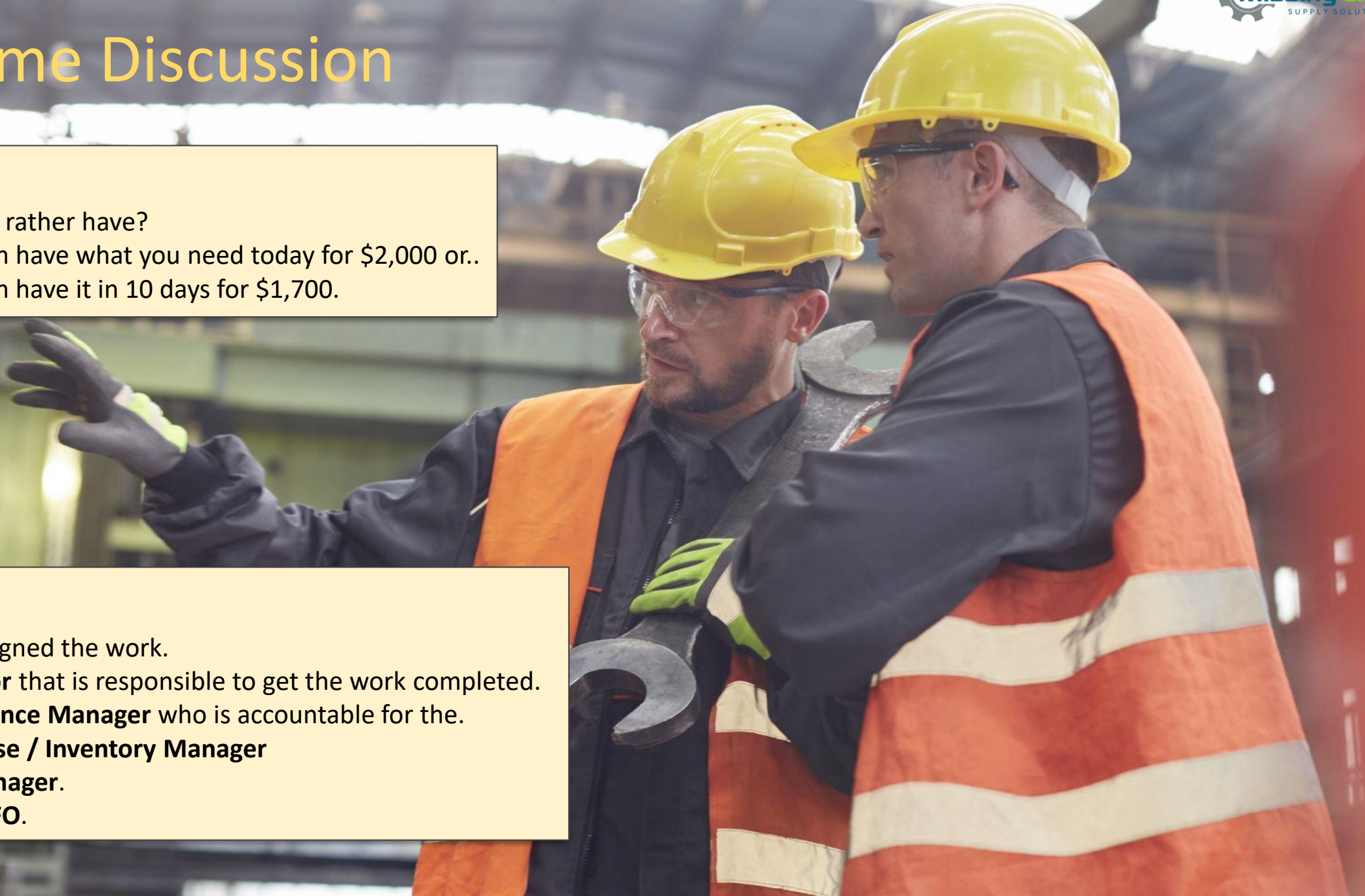
## Question:

What would you rather have?

1. You can have what you need today for \$2,000 or..
2. You can have it in 10 days for \$1,700.

## Your Role:

1. The **Fitter** assigned the work.
2. The **Supervisor** that is responsible to get the work completed.
3. The **Maintenance Manager** who is accountable for the.
4. The **Warehouse / Inventory Manager**
5. The **Plant Manager**.
6. You are the **CFO**.



# Quick Summary Part 3:

## Demand Signal

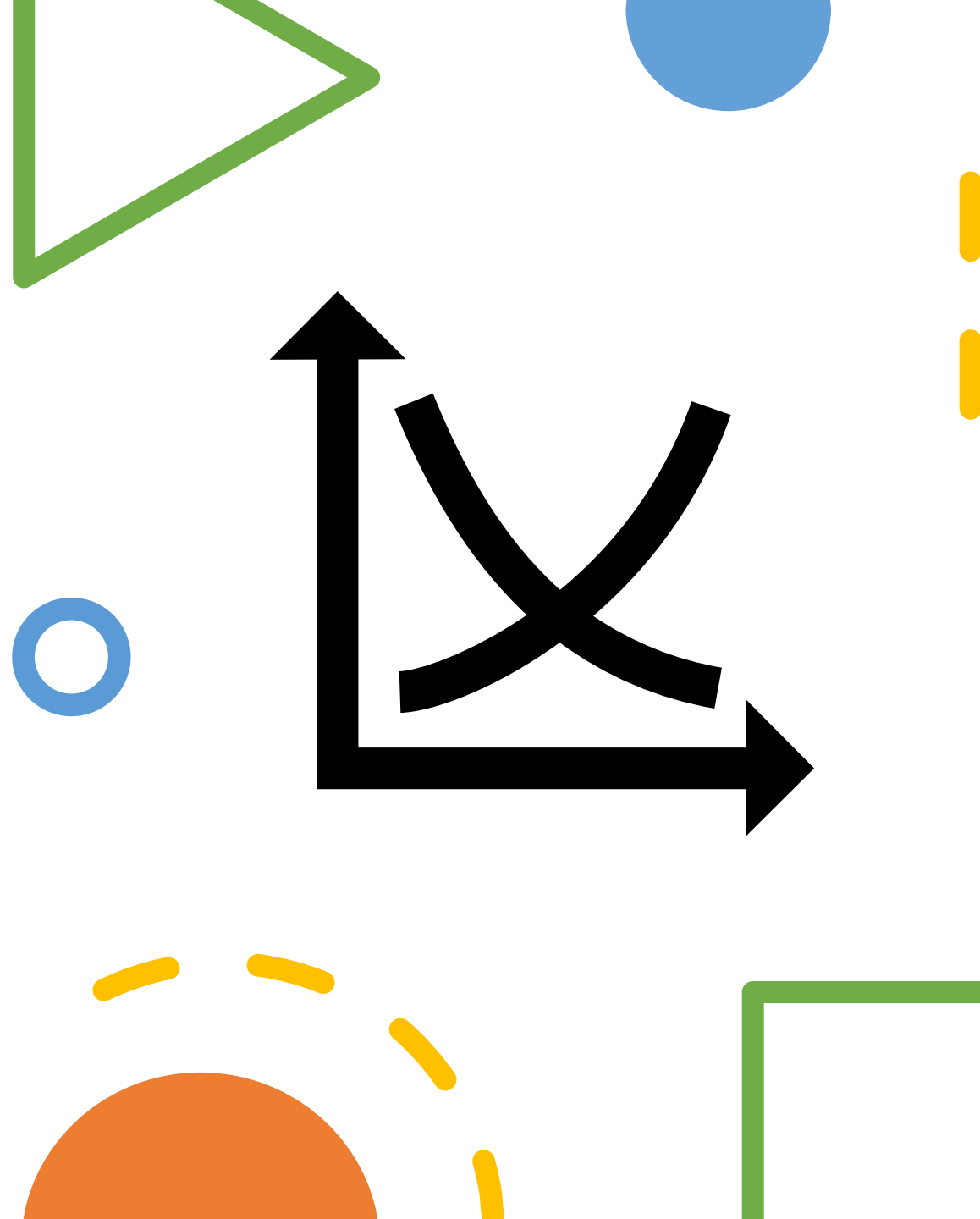
- Measure to Understand to Improve

## Material Criticality

- Clearly identify which materials are critical to your operations
- Collectively and without Emotion!

## Lead Time

- They MUST be updated regularly!
- Your Reorder Points depend on it!





# How do you Calculate your ROP? Ask Chat GPT!

To calculate the reorder point for indirect materials, you need to consider the following factors:

- **Lead time**
- **Demand**
- **Safety stock**

The formula for calculating the reorder point is as follows:

- **Reorder Point** = (Average Daily Usage x Lead Time) + Safety Stock

Here, the average daily usage is the average amount of materials consumed per day. The lead time is the time it takes for the supplier to deliver the materials after placing an order. The safety stock is the amount of inventory held in reserve to mitigate the risk of stockouts.

For example, let's say that the average daily usage of a particular indirect material is 100 units, the lead time is 5 days, and the safety stock is 50 units. Using the formula above, we can calculate the reorder point as follows:

- Reorder Point =  $(100 \times 5) + 50 = 550$  units

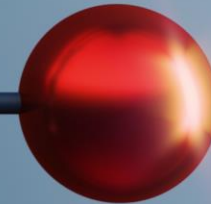




# MRO Inventory Optimisation

Calculate your MIN or ROP

- Manually if you have to.
- Hire someone to help.
- Buy a Tool that helps you.



# Final Summary:

## Demand Signal

- Measure to Understand to Improve

## Material Criticality

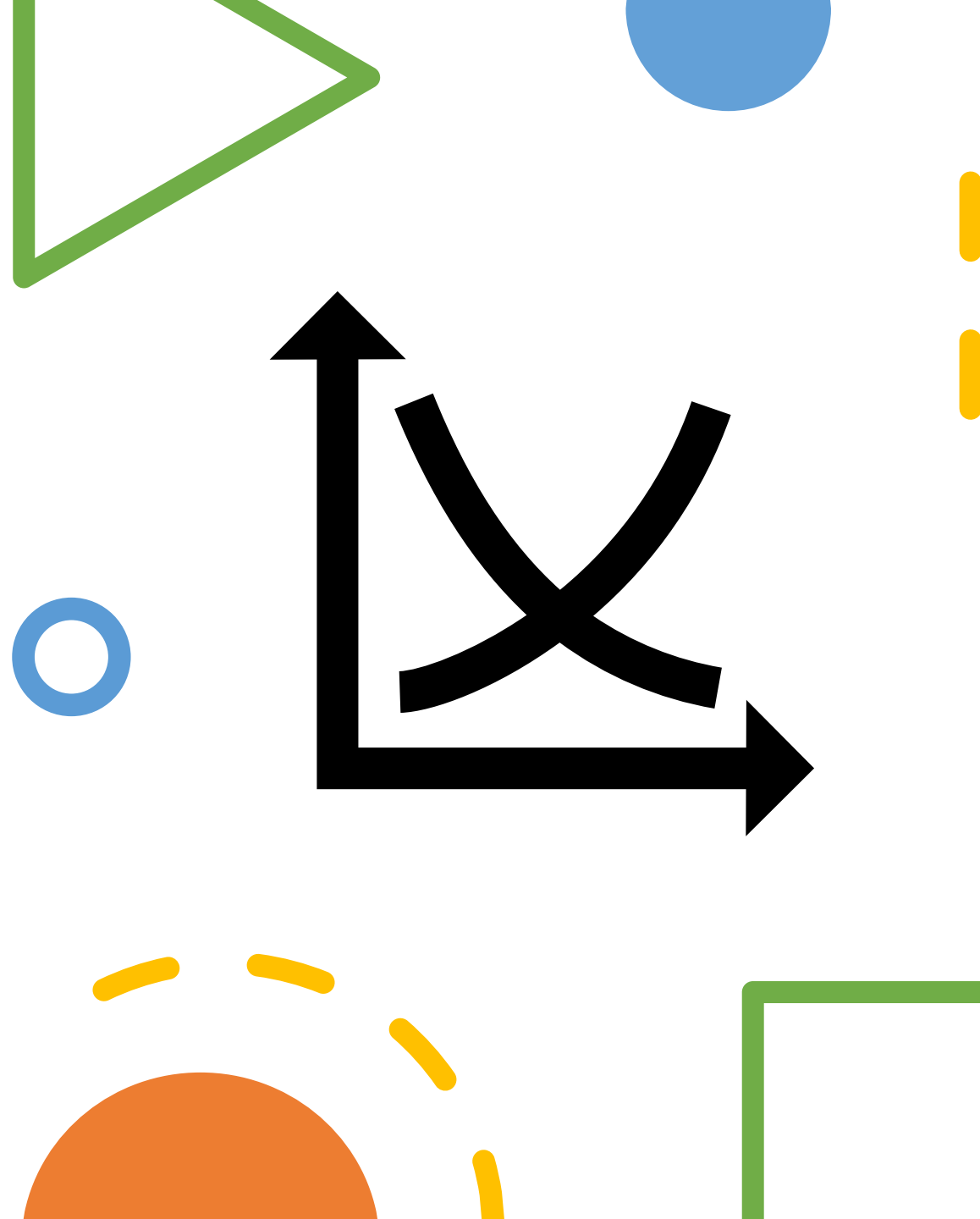
- Clearly identify which materials are critical to your operations
- Collectively and without Emotion!

## Lead Time

- They MUST be updated regularly!
- Your Reorder Points depend on it!

## Calculate your ROP's or MIN's

- How often? More often than NEVER.





## How to Connect with Me

Email: [tim@missinglinkss.com](mailto:tim@missinglinkss.com)

Phone: 0467 734 084

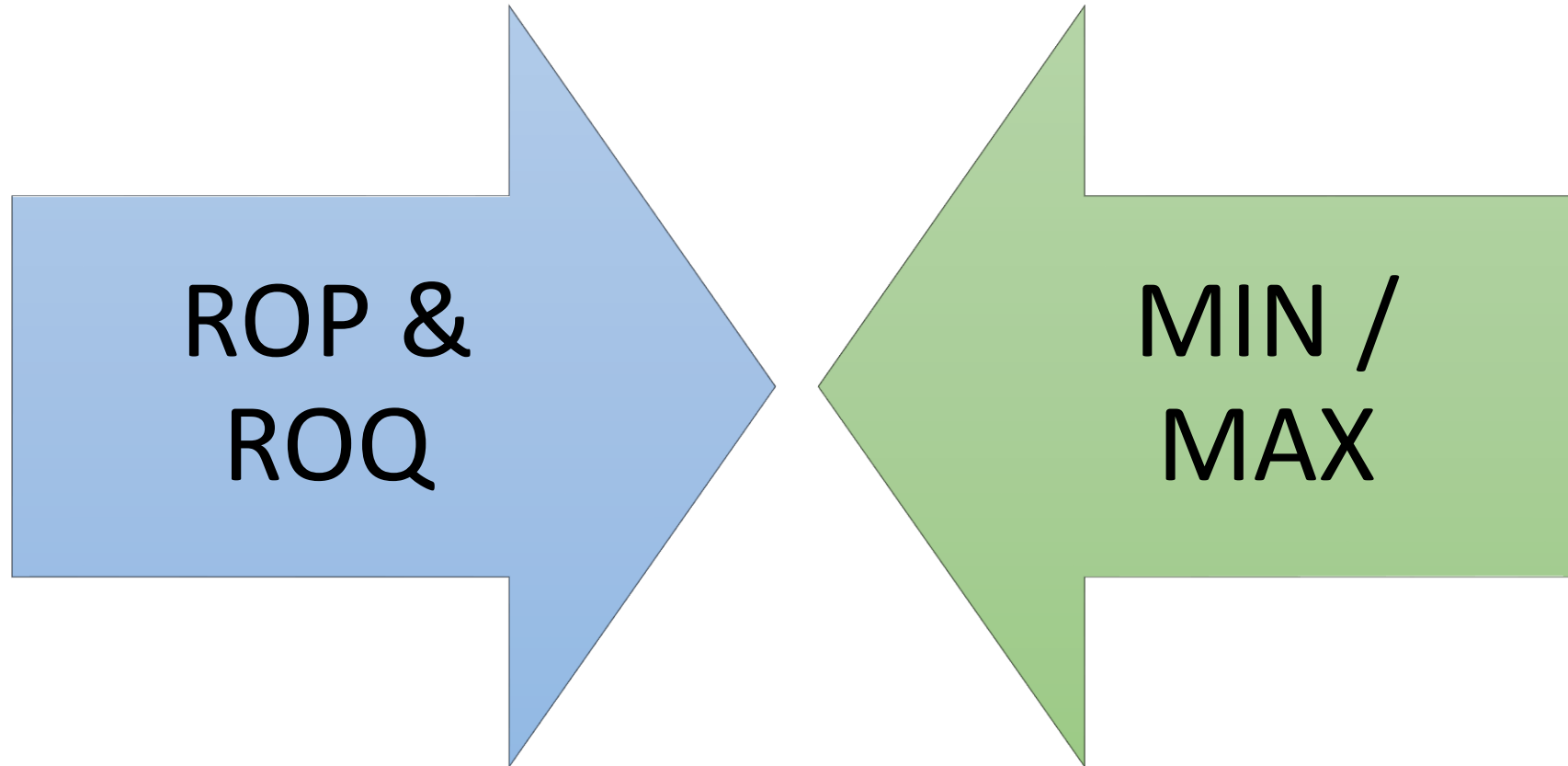
LinkedIn: [www.linkedin.com/in/tim-mclain](https://www.linkedin.com/in/tim-mclain)



# Inventory Optimisation

Covering **RISK** (ROP) at the lowest possible **COST** (ROQ).

*Which do you use, and why?  
The difference can be significant.*



*WHEN to order and HOW MUCH to order. How do you establish or calculate these values?*

# Purchasing Automation

*A measure of maturity and opportunity*

With good data most ERP systems have been designed to create PO's for you, all you need to do is feed it the right information.



## What good looks like:

- Very low Free Text spend
- High Cost, Critical materials, and fast-moving materials are on contract to drive automation and cost competitiveness.
- Materials that are not on contract have Info Records assigned.

*The best Inventory is no inventory at all **BUT** you have visibility or security of*

- *where the materials are,*
- *how much they cost,*
- *and how long it will take to have it on site.*

**\*Note:** Automated PO's is significantly cheaper than manual PO's