

# About Your Speaker

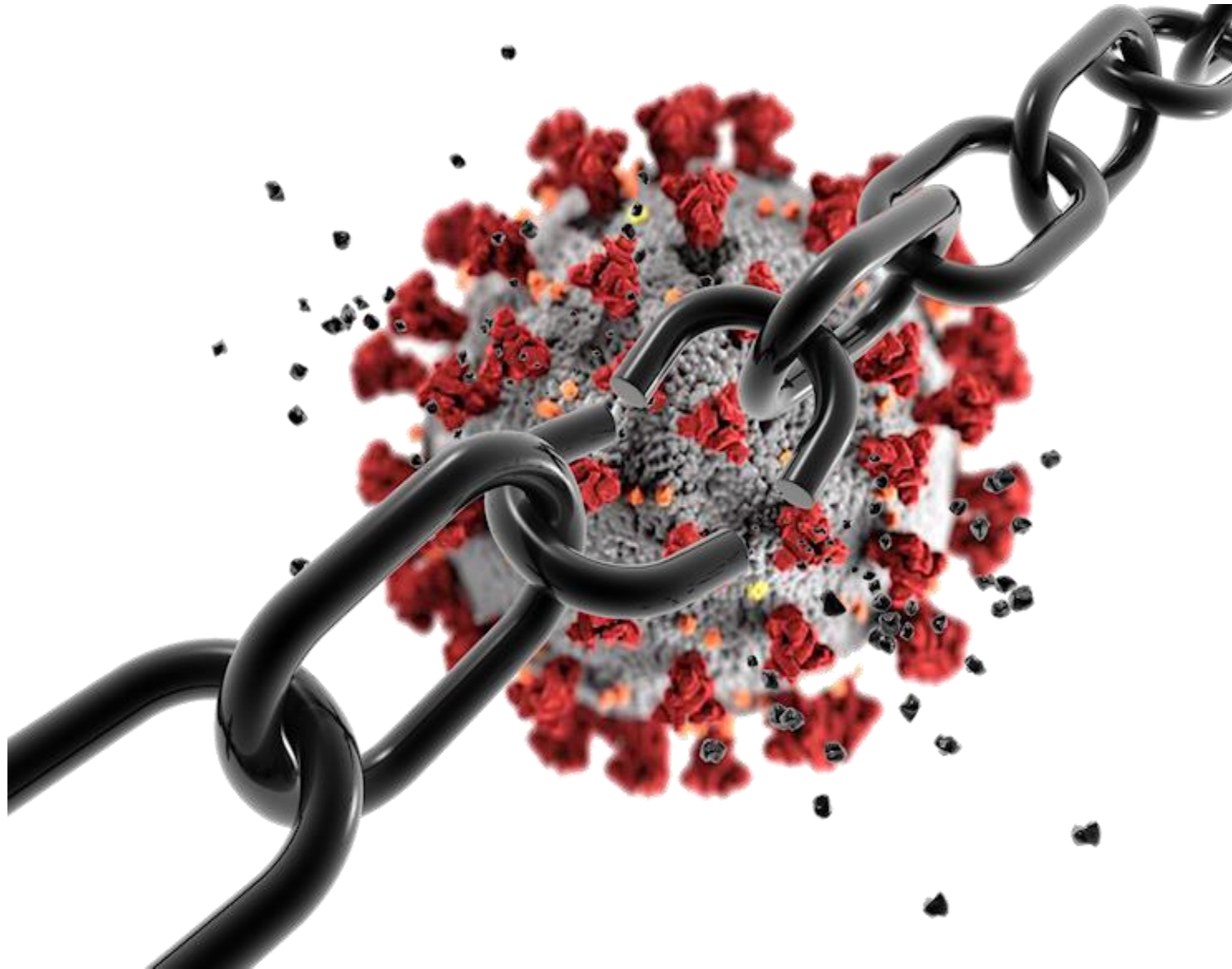
**Keith Launchbury, CFPIM, CIRM, CSCP, DDPP, DDLP**



**is a former President of APICS and an instructor for APICS Certification Programs with over 40 years of business experience. He has consulted to over 150 companies worldwide and is widely recognized as a speaker at International Conferences on Supply Chain Management and Business Planning. He is also a developer of two courseware modules for APICS, a former Chair of the APICS Curriculum and Certification Council. Keith is an accomplished author, having written three books about business, one about health care, and also a novel.**

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# Demand Driven or Die!



**Everyone remembers where they were on important dates like**



**9/11/2001**



**3/11/2020**

# **In 2022 People are Sick to Death of COVID**

- **Over 900,000 Americans are Dead**
- **Over 2,500 more are dying every day**
- **The pandemic is now endemic**
- **It is now the old normal**
- **It has been around since 2019 and is likely to be around for a long time**
- **Vaccination does not stop transmissibility**
- **This virus is very good at mutating into new variants**
- **I think we may run out of letters in the Greek alphabet**

# COVID Broke our Global Supply Chains



# Your Supply Chain is Broken!

- **“Supply chain issues have become the scapegoat of everything that doesn’t happen or arrive on time and of every shortage,” wrote one analyst in the report.**
- **It should be noted that the supply chain struggle is real, however. In December, retailers were expecting revenue losses between 5% and 20% from the previous 18 months because of supply-chain issues, translating into billions of dollars in lost sales.**
- Read more: [Supply-chain issues to bedevil retailers through 2022, according to survey](#)

# **People are also Sick to Death of hearing about Supply Chains Problems**

**I used to think that the general public were completely unaware of Supply Chain Management, they just assumed that their products appeared on the shelf by magic, and when they bought them, they would magically reappear next time they needed to buy them.**

**When I was President of APICS, I was actually quoted once in the Wall Street Journal, I was trying to promote the profession and make it relevant**

**Today everyone on earth knows that Supply Chains are broken, and they are living with the consequences every day**

# Phrases that should be banned in 2022

1. Wait, what?
2. No worries.
3. At the end of the day...
4. That being said...
5. Asking for a friend...
6. Circle back
7. Deep dive
8. New normal
9. You're on mute.
10. **Supply chain**

# Product Shortages are Endemic



# What good is a bicycle with a broken chain?



# **2020 was the year that everything changed**

- **Conventional Forecasting, Planning and Budgeting were rendered useless**
- **The Pandemic changed the Business Landscape**
- **Businesses were forced into survival mode**
- **Traditional Supply Chains broke down**
- **Product shortages became routine**
- **Cost Management was irrelevant**
- **Customers demand rapid response**

# **Business Challenges Continue**

- **No business was prepared for this level of impact**
- **Demand changes are coming at a rapid pace**
- **Businesses face major challenges**
- **Higher demand volatility**
- **Limited supply availability**
- **Extensive supply chain disruption**
- **Ongoing product shortages**
- **Useless inventory**
- **Capacity problems**

# Conventional Wisdom is Virtually Dead



# Global Supply Chains increase lead times and product risk



**Containers  
lost at Sea**



**Chinese  
Junk**

# Queen Elizabeth II Platinum Jubily Plate

**Feb. 1 (UPI) -- Plates and mugs produced to commemorate Queen Elizabeth II's Platinum Jubilee are being sold as unusual collector's items due to misspelling the event as "Platinum Jubily."**

**[Website Wholesale Clearance said](#) the dishes were made by a manufacturing company in China and were meant to be sold in British stores for the queen's Platinum Jubilee, the [celebration of her 70th year](#) on the throne. But they were pulled when the manufacturers discovered the event was misspelled as "Jubily."**

**Wholesale Clearance is selling the entire stock of 10,800 misprinted plates, mugs and tea sets for \$43,817.76.**



# **Conventional Business Models Do not work any more**

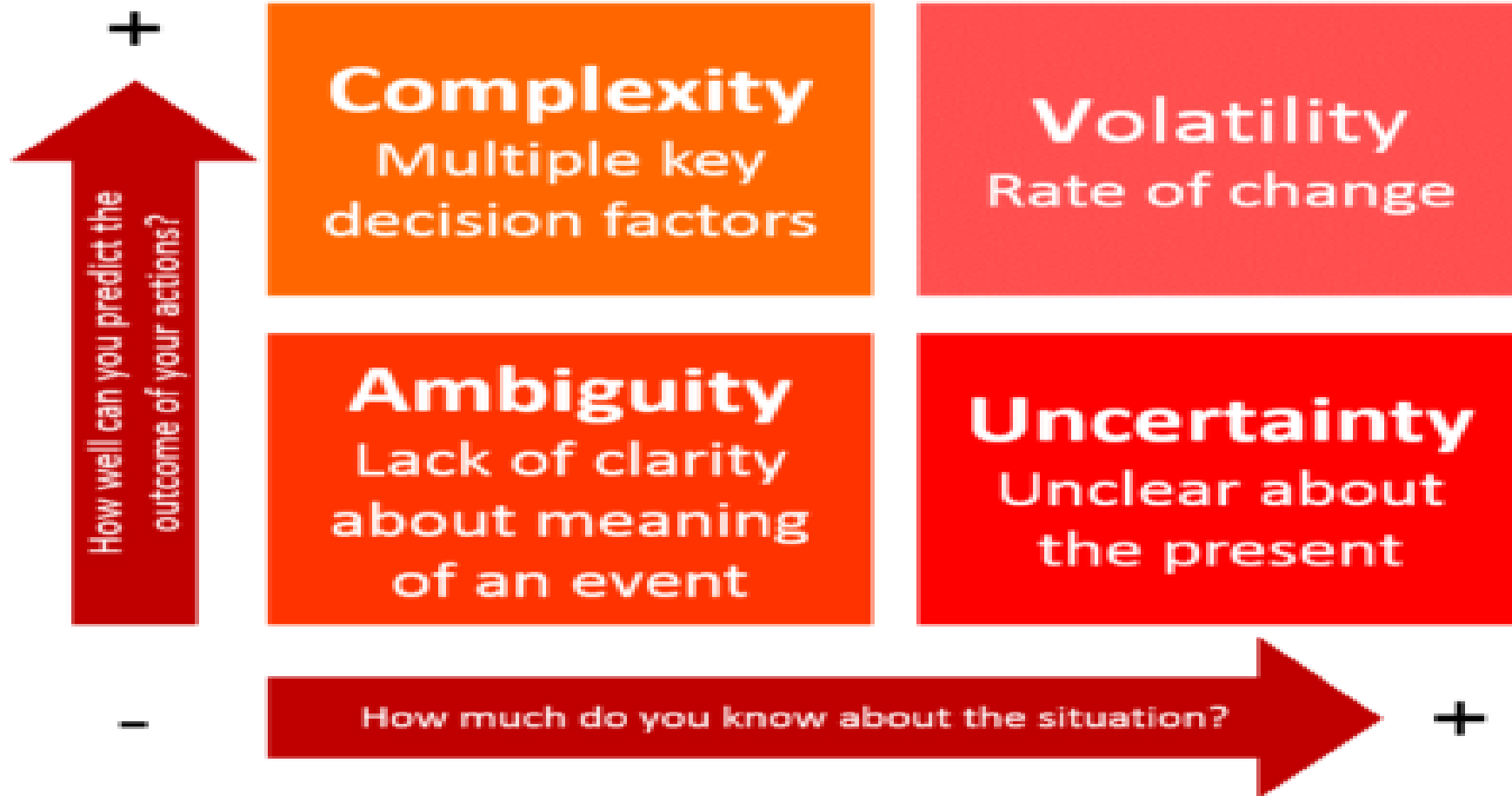
- **The obsessive focus on reducing costs causes businesses to make the wrong decisions (a bimodal distribution of inventory)**
- **Planning systems based on forecasts lead to excess inventory and material shortages (sometimes on the same item!)**
- **Economies of scale lead to bigger batches, bigger containers, bigger ships, larger risks and bigger problems**
- **Efficiency based measurement systems reward maximum utilization, highest output and lowest cost, this leads to higher levels of unsold inventory and does not improve customer service or product flow!**

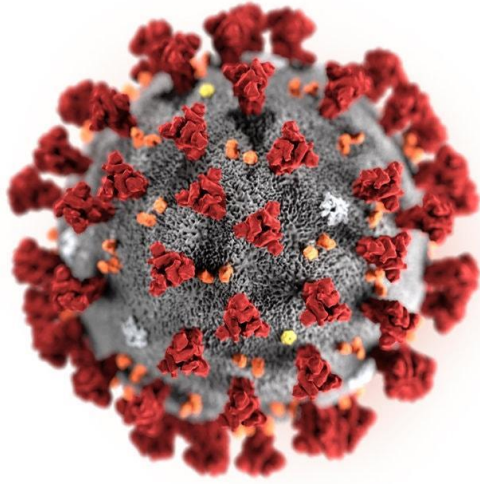
# **The Top 10 Problems with Conventional “Supply Chains”**

- 1. Supply Chains assume linear relationships**
- 2. Supply Chains depend on the weakest link**
- 3. Supply Chains are rigid and inflexible**
- 4. Supply Chains are not integrated**
- 5. Supply Chains plan at the speed of night**
- 6. Supply Chains are Cost driven not Demand driven**
- 7. Supply Chains contain far too much waste**
- 8. Supply Chains are too slow and do not flow**
- 9. Supply Chains contain too much risk**
- 10. Supply Chains are not intelligent**

# We are living in a VUCA World

## VUCA





**The only  
businesses that will  
survive in this  
COVID world will be  
Demand Driven  
Adaptive  
Enterprises**

Improve and  
innovate  
frequently

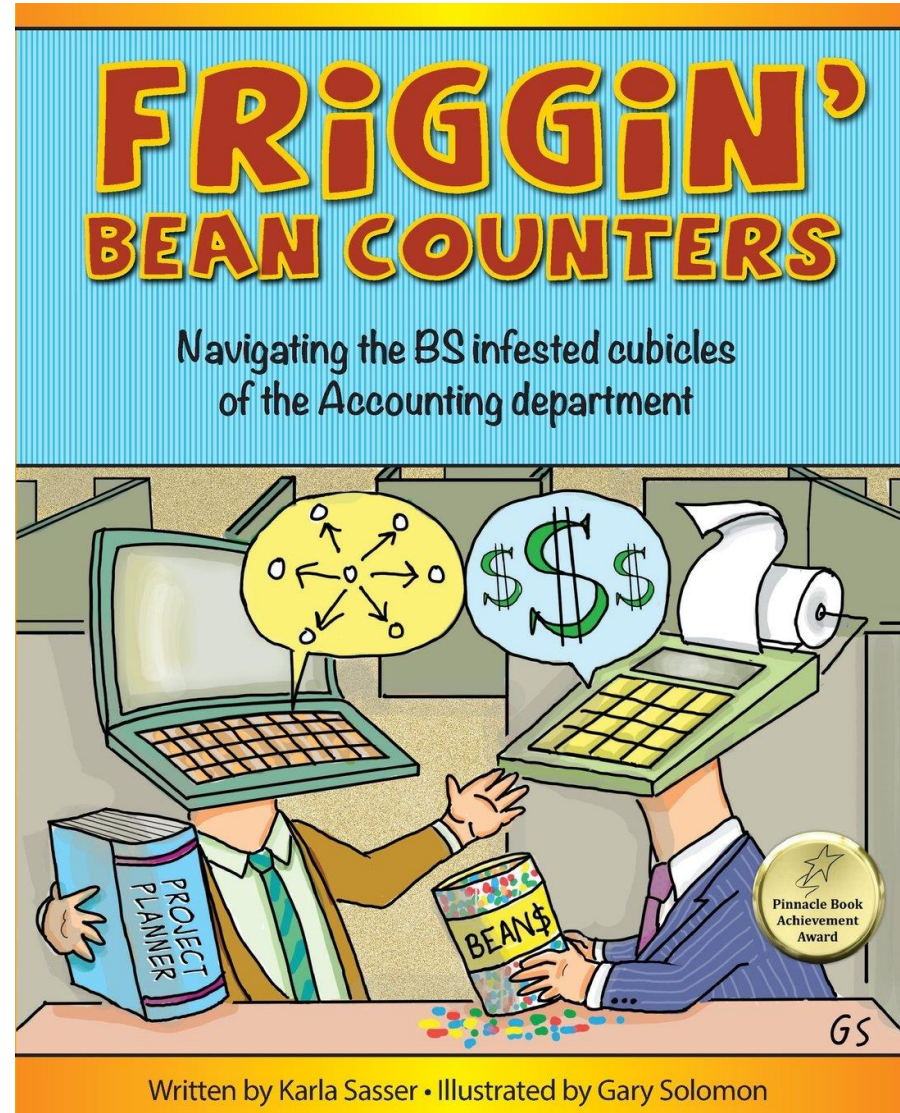
Undertake  
innovations and  
improvements

Adaptive  
enterprise

Implement  
quickly



# Who cares about Product Costs?



# Customers do not care about your Costs

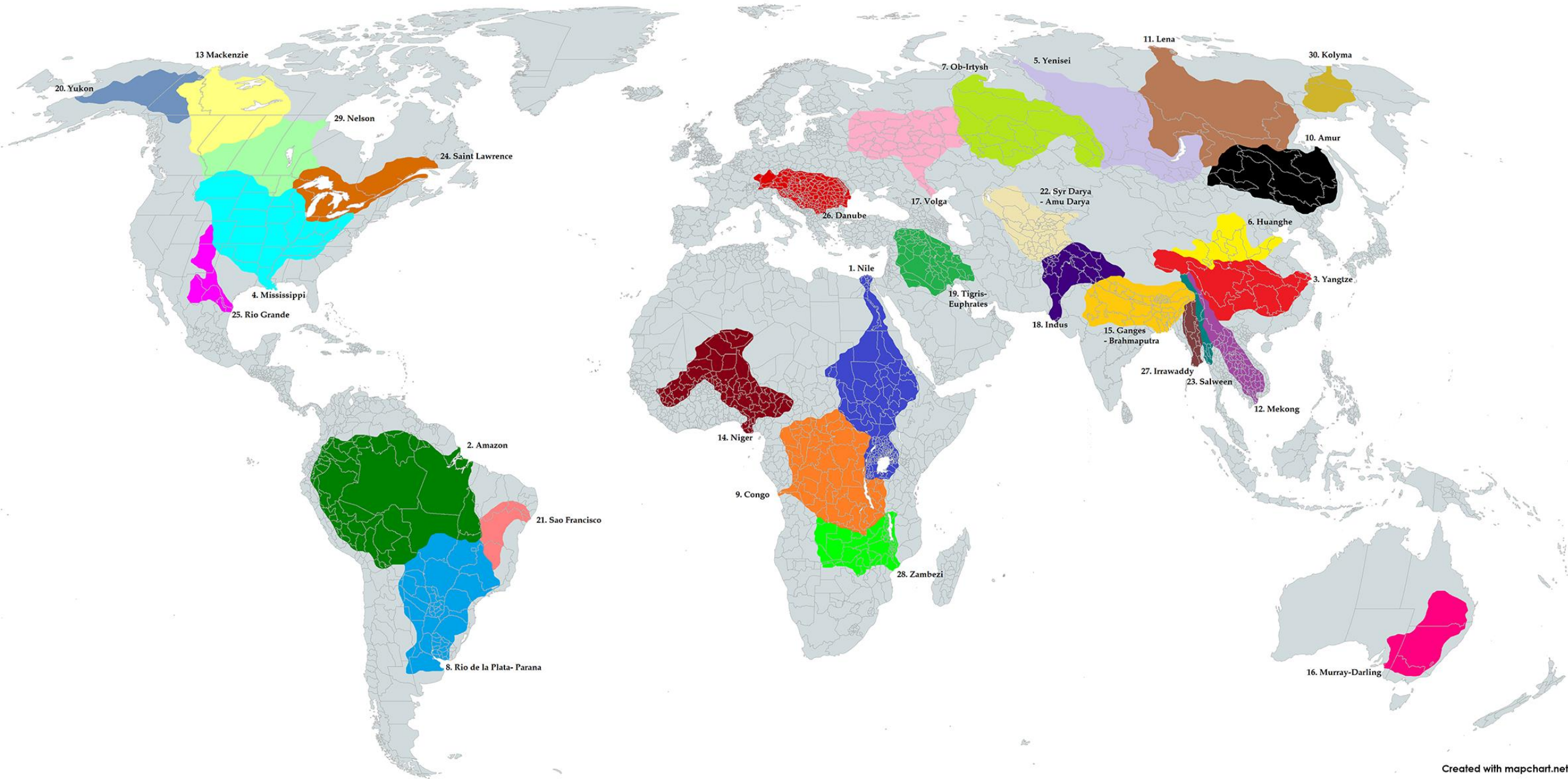
**Customers care about timely, accurate and effective delivery of a service or product at a reasonable price.**



# What goes Jeff Bezos care about?



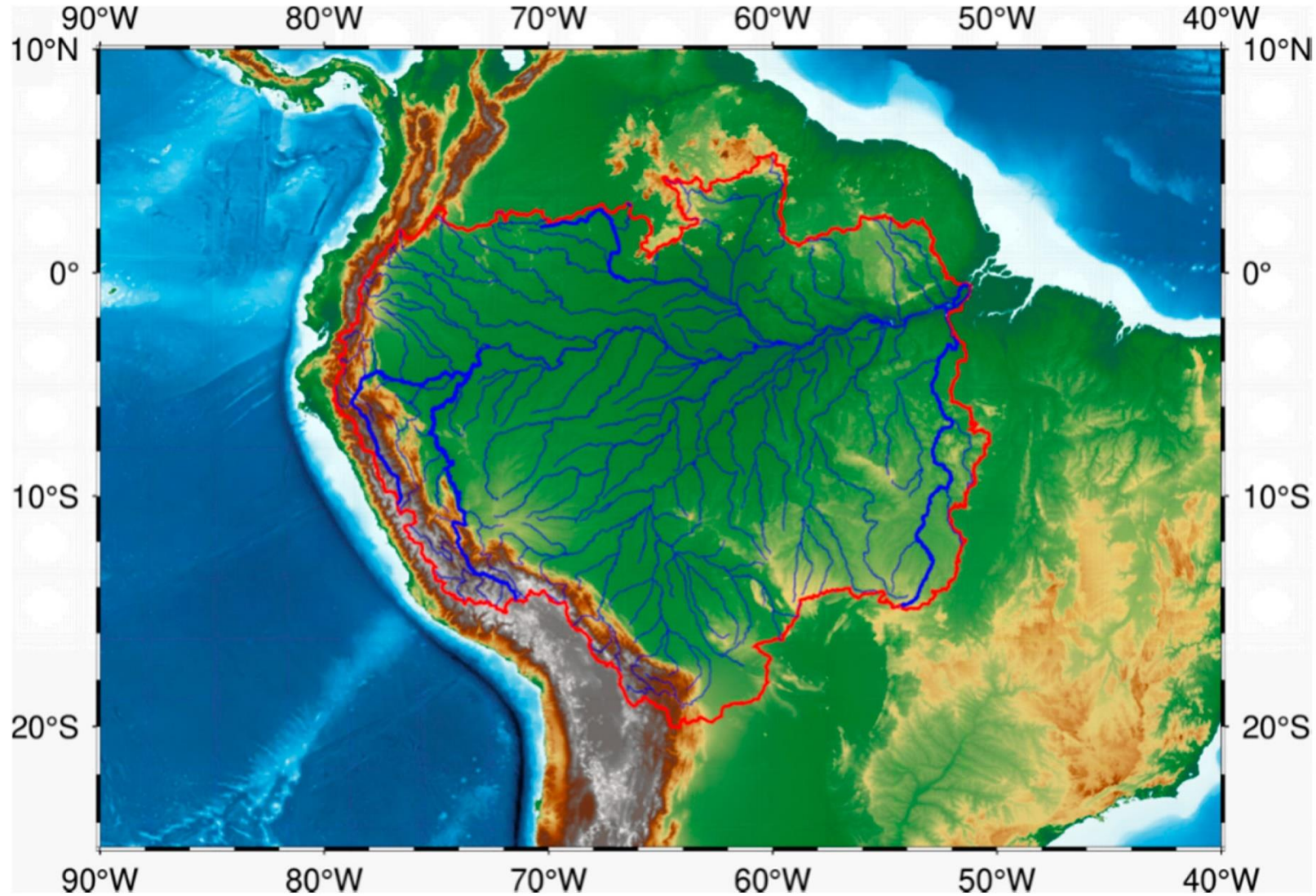
# Drainage Basins of the 30 Longest Rivers or River Systems Worldwide



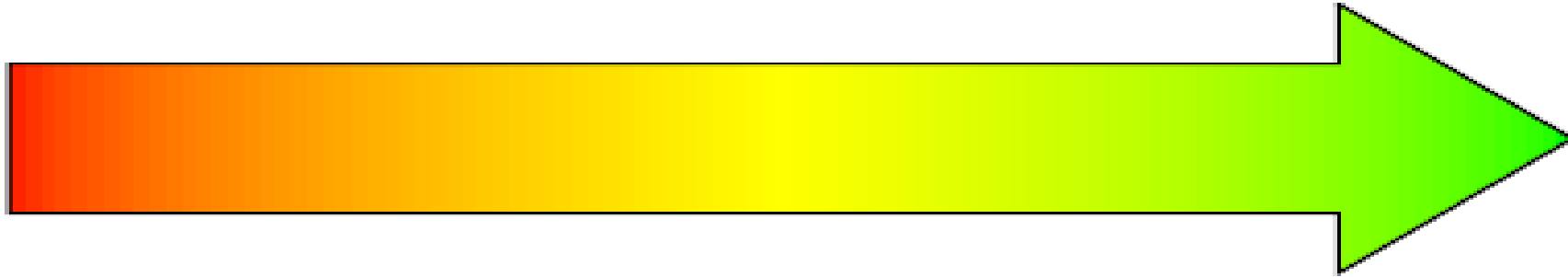
# Largest Watersheds in the World

	<b>Square Km</b>
• <b>Amazon</b>	<b>6,145,186</b>
• <b>Congo</b>	<b>3,730,881</b>
• <b>Nile</b>	<b>3,254,853</b>
• <b>Mississippi/Missouri</b>	<b>3,202,185</b>
• <b>Rio de la Plata</b>	<b>3,170,000</b>

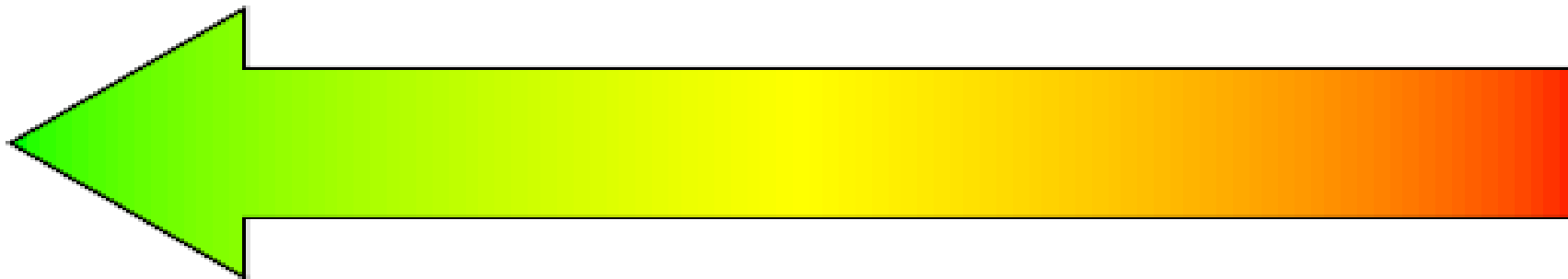
# Jeff Bezos cares about Flow



**Increased Product Flow to Market**



**Creates**



**Increased Cash Flow in Return**

# What is your Product Velocity?

- **Products should flow at the rate of product consumption**
- **Product Flow should be measured in real time**
- **We need to measure product velocity (the speed of sale!)**
- **Product velocity determines profit velocity**

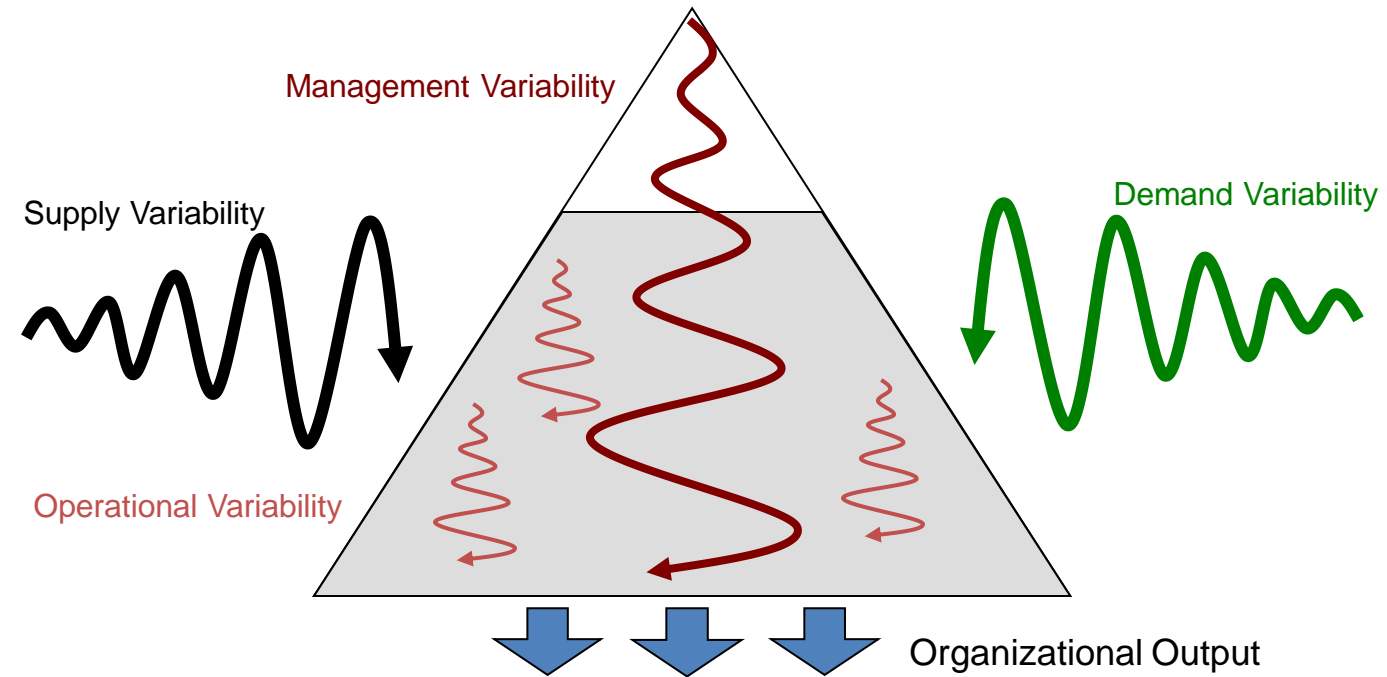


***A Lean Supply Chain  
is all about  
Fast, Flexible Flow***

# **What is important to Flow?**

- **Your Products must have perceived Value**
- **Value is determined by the customer**
- **Products with no Value will not Flow**
- **Customer Orders trigger Product Flow**
- **Product Outflow determines Cash Inflow**
- **Process Variability disrupts Product Flow**

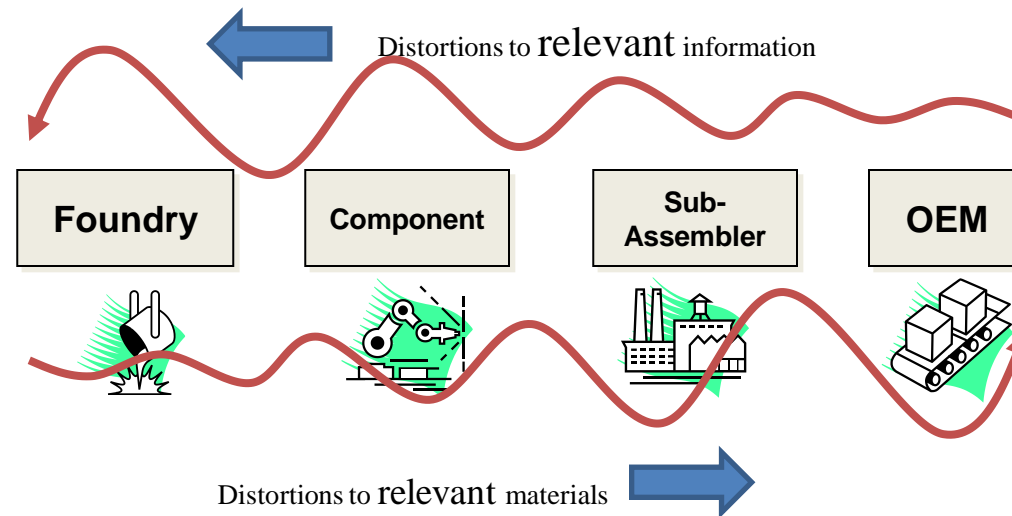
# Sources of Variability



# The Bullwhip Effect

**Bullwhip Effect: “An extreme change in the supply position upstream in a supply chain generated by a small change in demand downstream in the supply chain. Inventory can quickly move from being backordered to being excess. This is caused by the serial nature of communicating orders up the chain with the inherent transportation delays of moving product down the chain.” (APICS Dictionary)**

**The more parts – the worse the effect!**



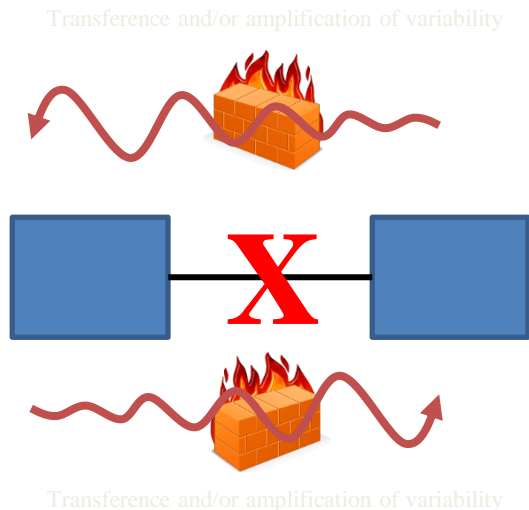
# Mitigating Variability

- **The only way to stop the Bullwhip Effect is to stop distortion from being passed between the parts of the system IN BOTH DIRECTIONS**
- **This is accomplished by “decoupling” and then “buffering” the “decoupling point”**

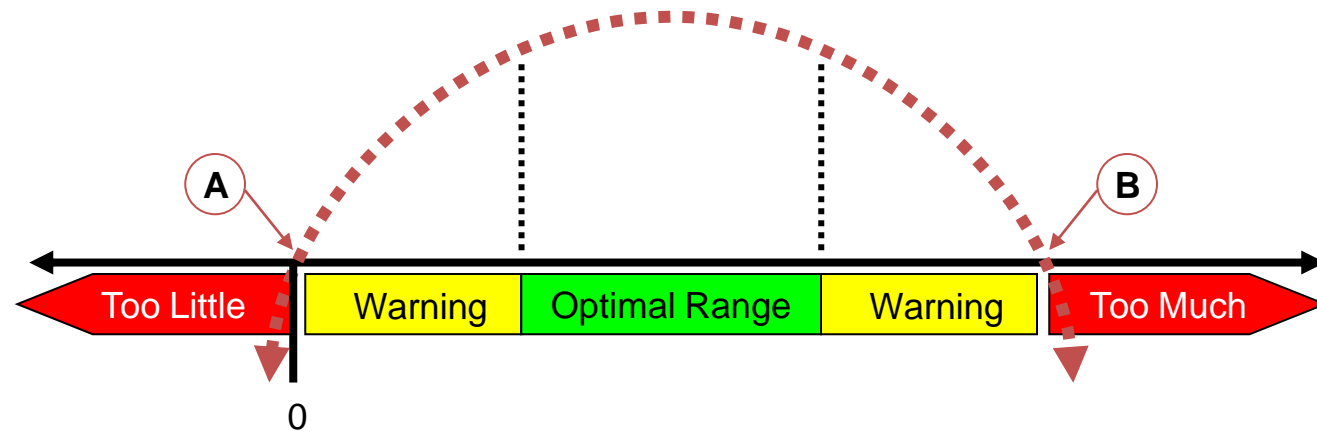
# Decoupling

***Creating independence between supply and use of material. Commonly denotes providing inventory between operations so that fluctuations in the production rate of the supplying operation do not constrain production or use rates of the next operation.***

**(APICS Dictionary, 14ed., page 43)**

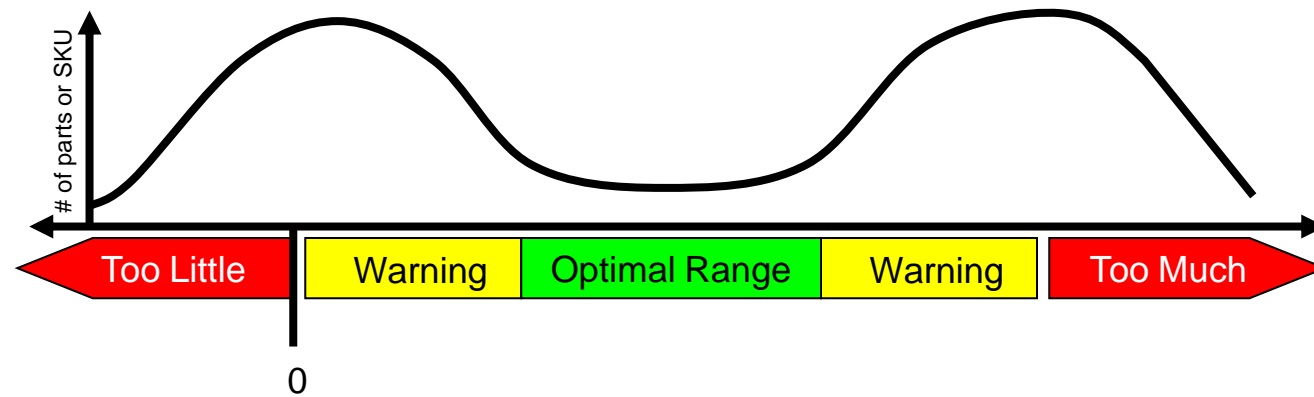


# Two Universal Points of Inventory



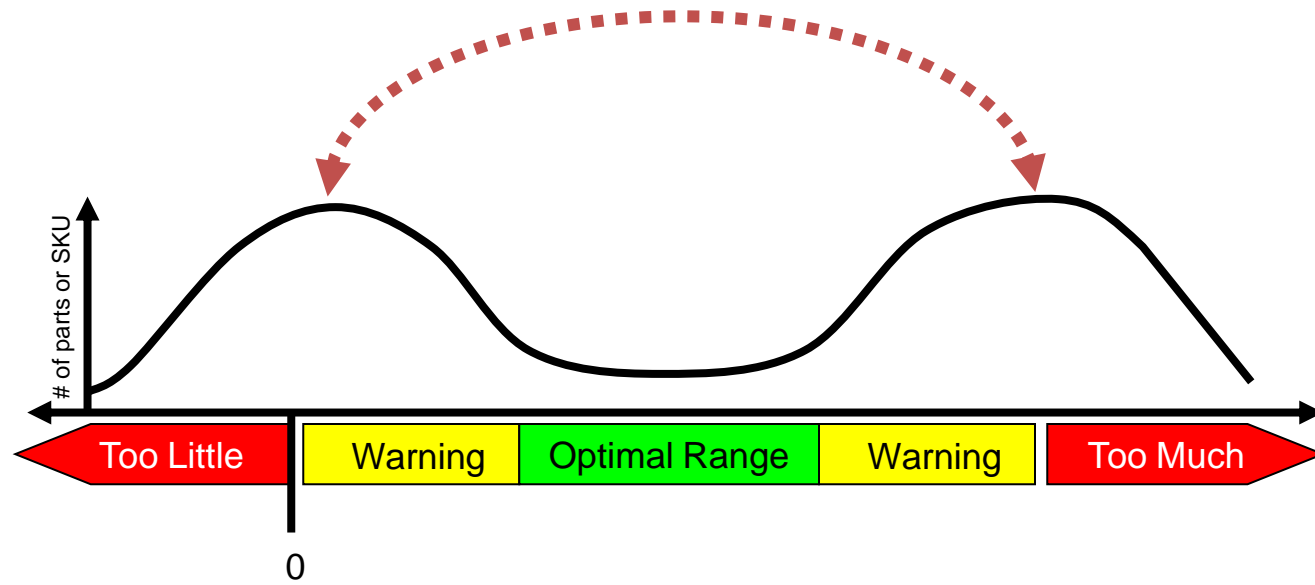
Note: "Optimal" is from an On Hand perspective

# The MRP “Bimodal” Distribution



Note: "Optimal" is from an On Hand perspective

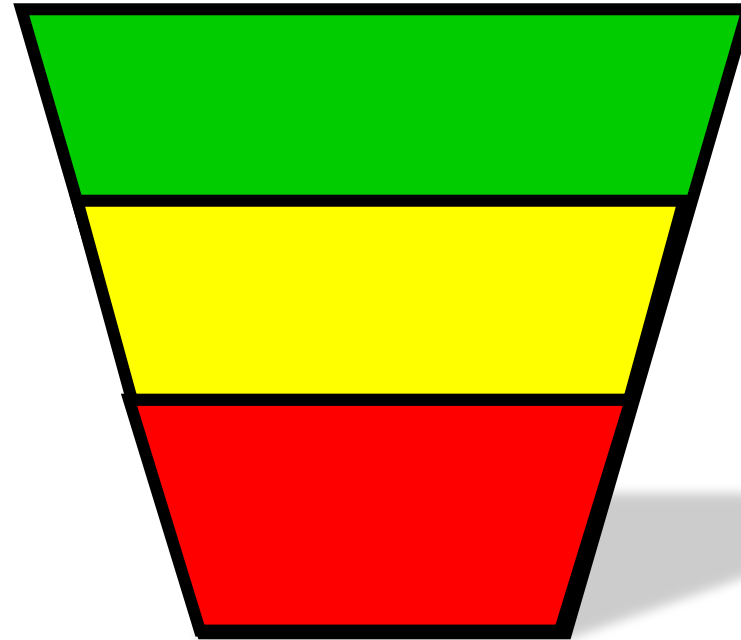
# The Oscillation



Note: "Optimal" is from an On Hand perspective

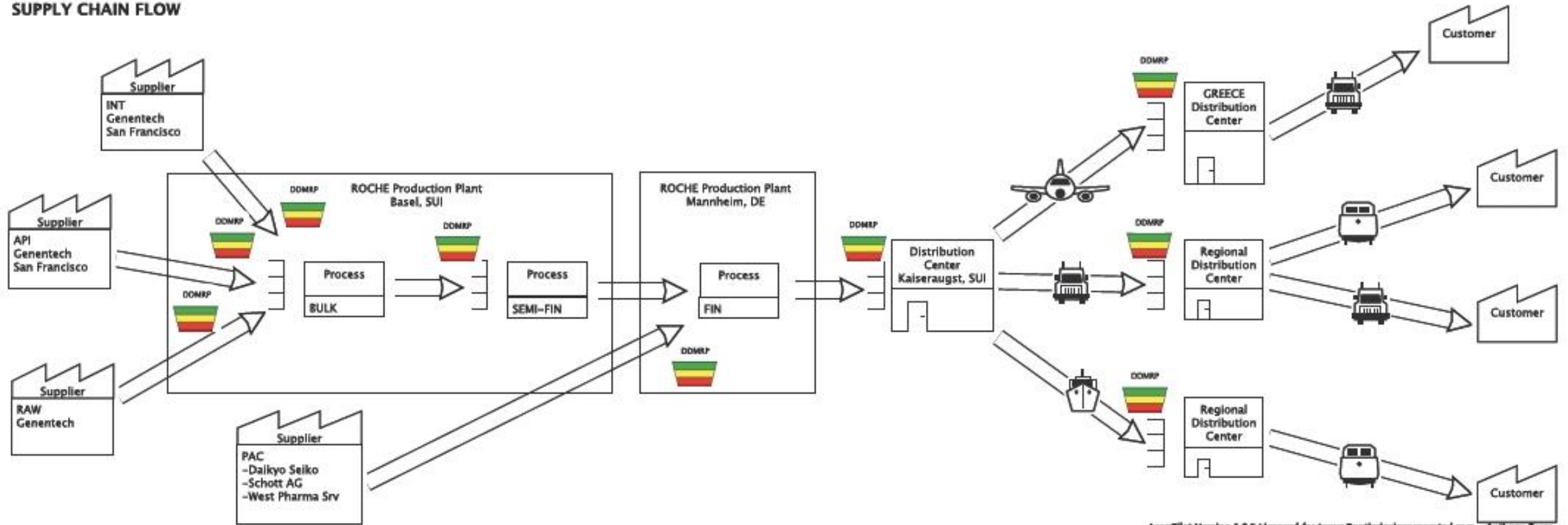
# SMART Buffers

- **Strategic**
- **Managed**
- **Adaptable**
- **Robust**
- **Tolerant**



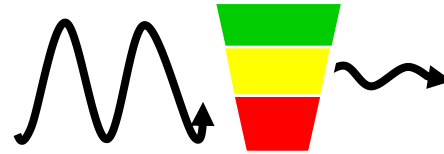
# Buffered Product Flow Network

## SUPPLY CHAIN FLOW

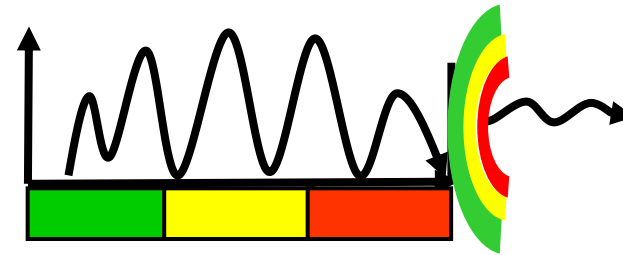


# 3 Types of Buffers Protect Product Flow

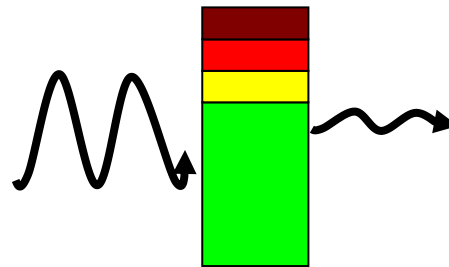
**Stock**



**Time**



**Capacity**



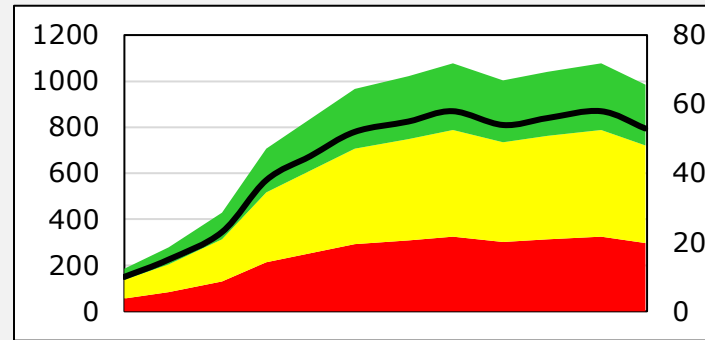
# Criteria used to create Buffers

- **Customer Tolerance Lead Time**
- **Market Potential Lead Time**
- **Demand Variability**
- **Supply Variability**
- **Inventory Leverage and Flexibility**
- **Critical Operations Protection**

# Buffers are Dynamic!

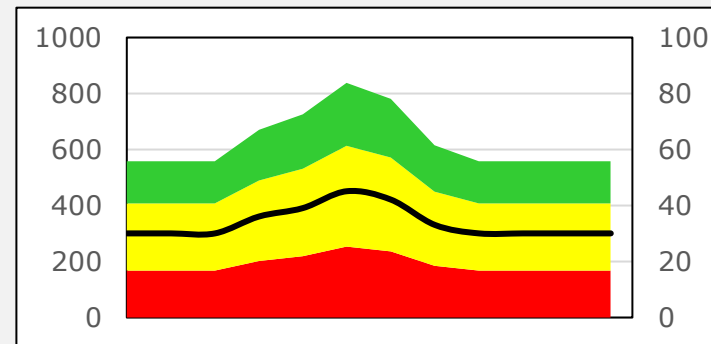
## Recalculated Adjustments

**Buffer levels flex as Average Daily Usage (ADU) is updated.**



## Demand Adjustment Factors

**Buffers are intentionally flexed up or down in anticipation of planned events or seasons.**



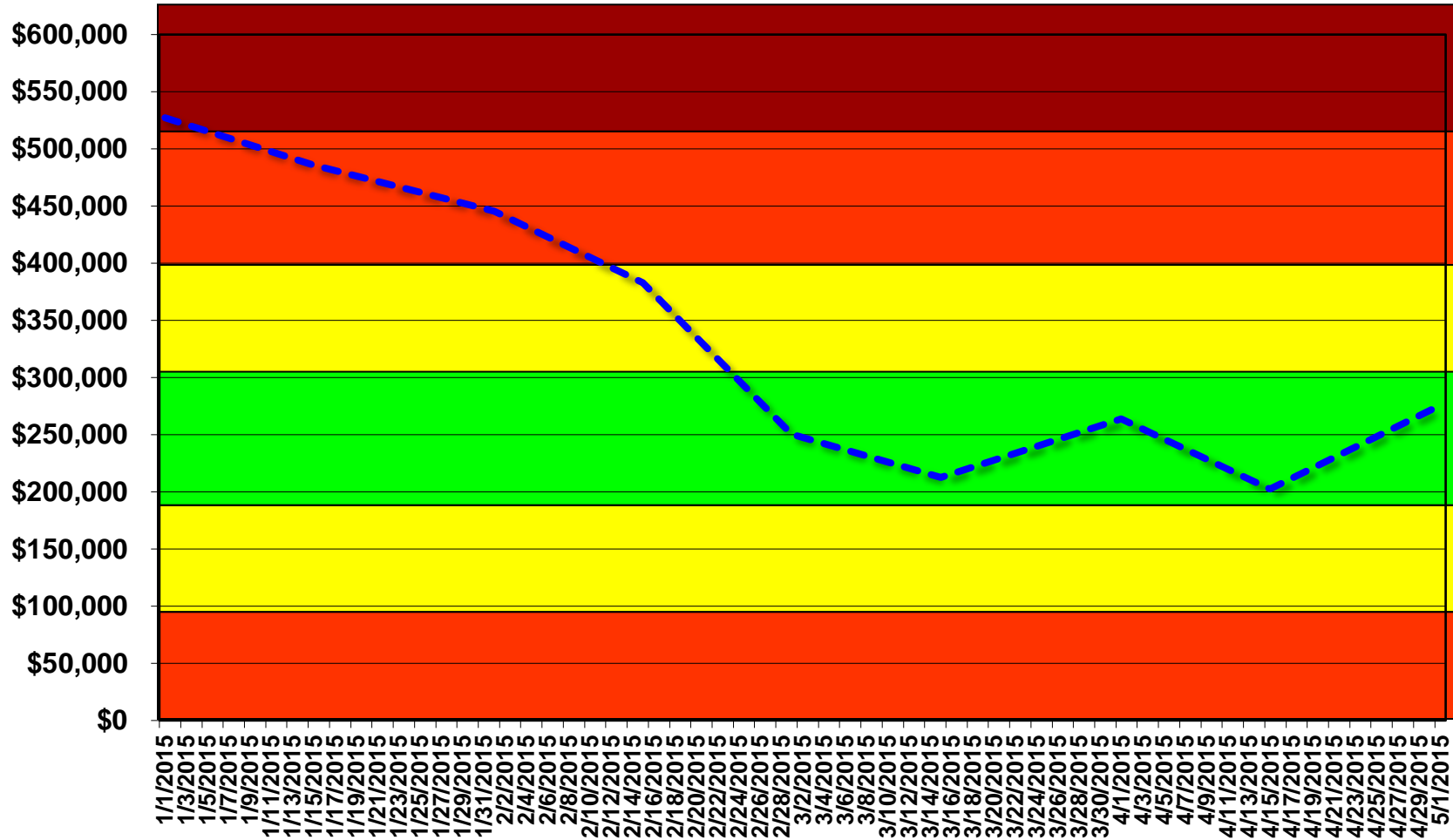
# **Demand Driven Planning**

**Demand Driven Planning is a visual product flow positioning and protection system, designed to improve business performance and increase return on working capital.**

# DDP's Proven Benefits – Camelot Benchmark Study

Proven Business Benefits	Overall	Life Sciences	Chemicals	Consumer Products	Industrial Manufacturing
Inventory Reduction % Median Best in Class	31 60	30 49	32 52	36 60	26 54
Customer Service % Improvement Median Best in Class	11 45	8 16	1 7	2 38	17 45
Lead Time Reduction % Median Best in Class	22 85	25 65	12 40	7 85	60 85

# On Hand \$ Jan - April (Part#1234)



**Demand Driven Planning  
provides the information necessary  
to create Intelligent and Adaptive  
Product Flow Networks**

# For More Information

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