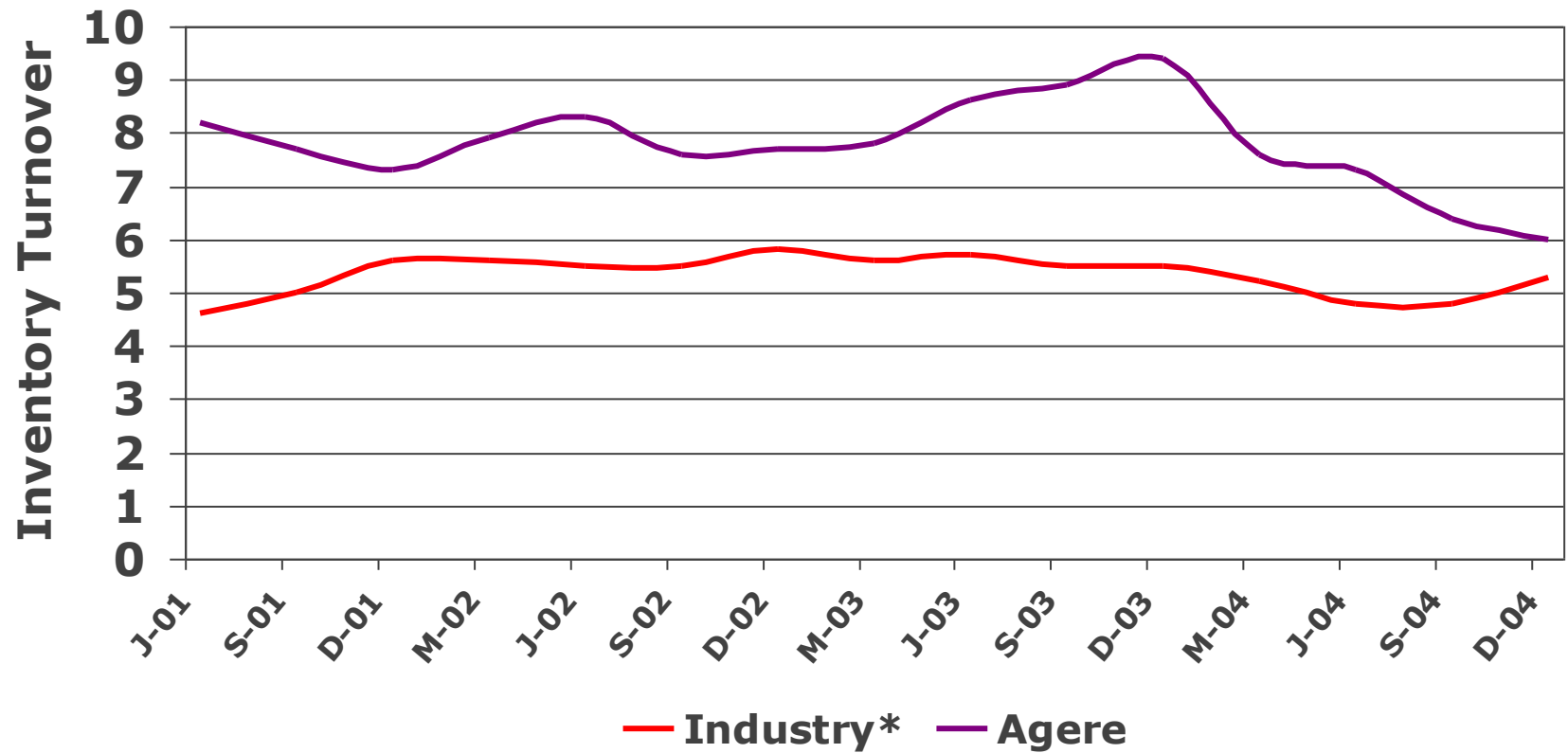




# **Inventory & Operations Planning**

**Chris Armbruster**  
Director  
Supply Chain Strategy  
Agere Systems

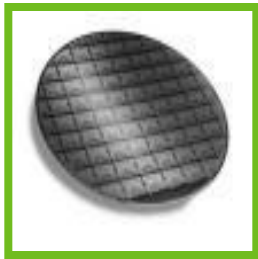
# Semiconductor Inventory Turns



\* Weighted average inventory turnover of 11 semiconductor companies.

# Semiconductor Supply Chain

**Wafer  
Fabrication**



**4-12 Wks**



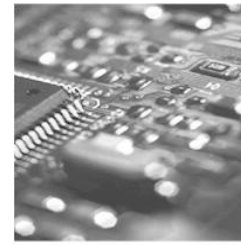
**Package  
Assembly  
& Test**



**2 Days**



**Circuit  
Board  
Assembly**



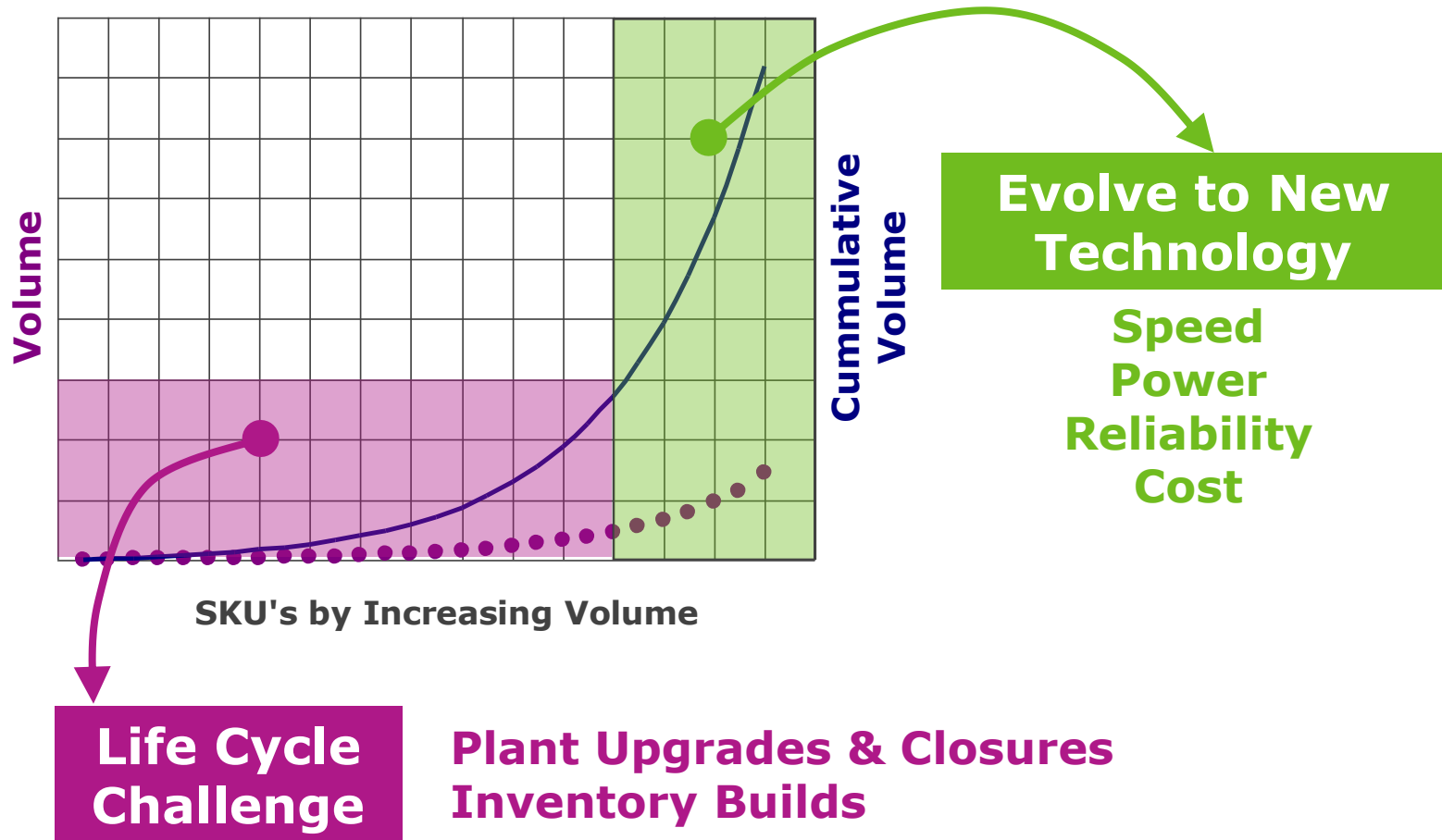
**Hours**

**Process  
Intensive**

**Material  
Intensive**



# Moore's Law Affect on Operations Planning



# Implosion Fallout: Leaner Supply Chains



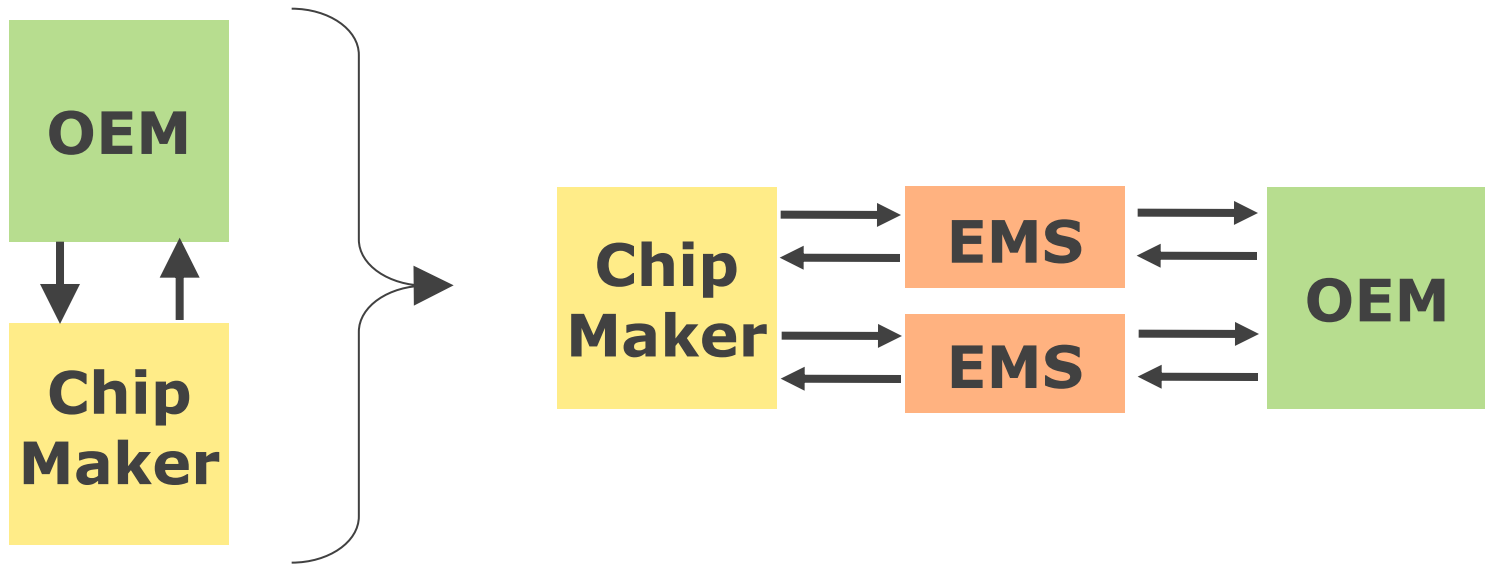
**Significant capacity  
removed or repositioned**

**Long Horizon Planning More  
Important**

**Less Buffering of Noise**

**Tug-of-War between demand  
and supply**

# OEM Evolution



## Challenges

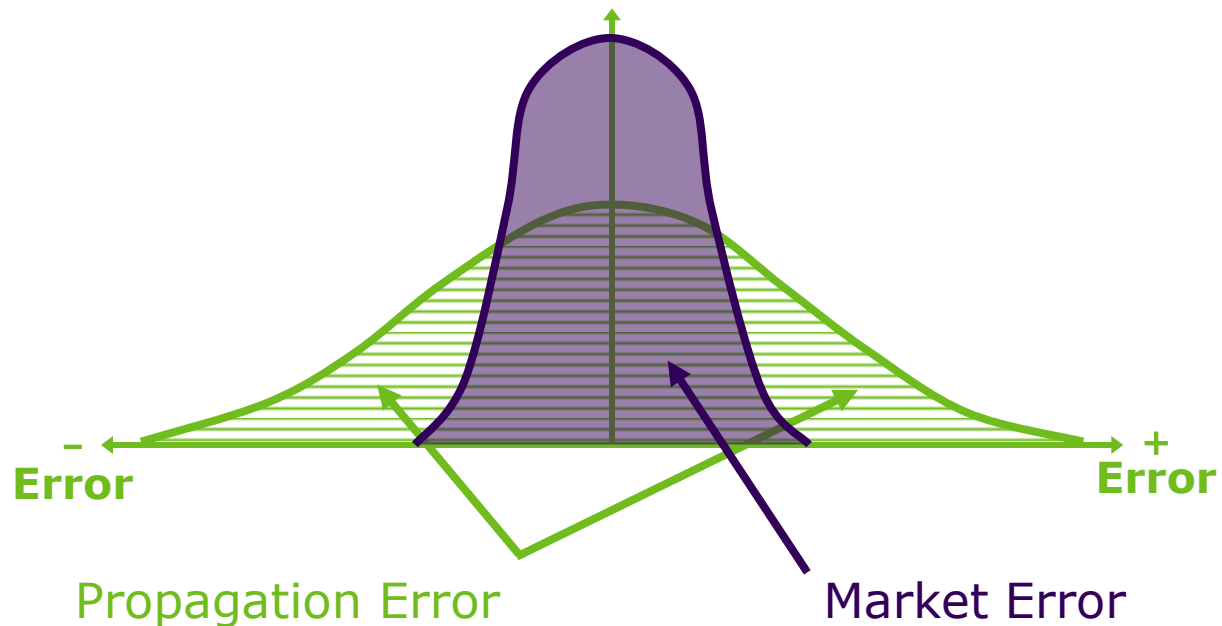
**Distributed Inventory**  
**Redundant Buffering**  
**Demand Signal**



or



# Understanding Demand: 2 Components of Uncertainty

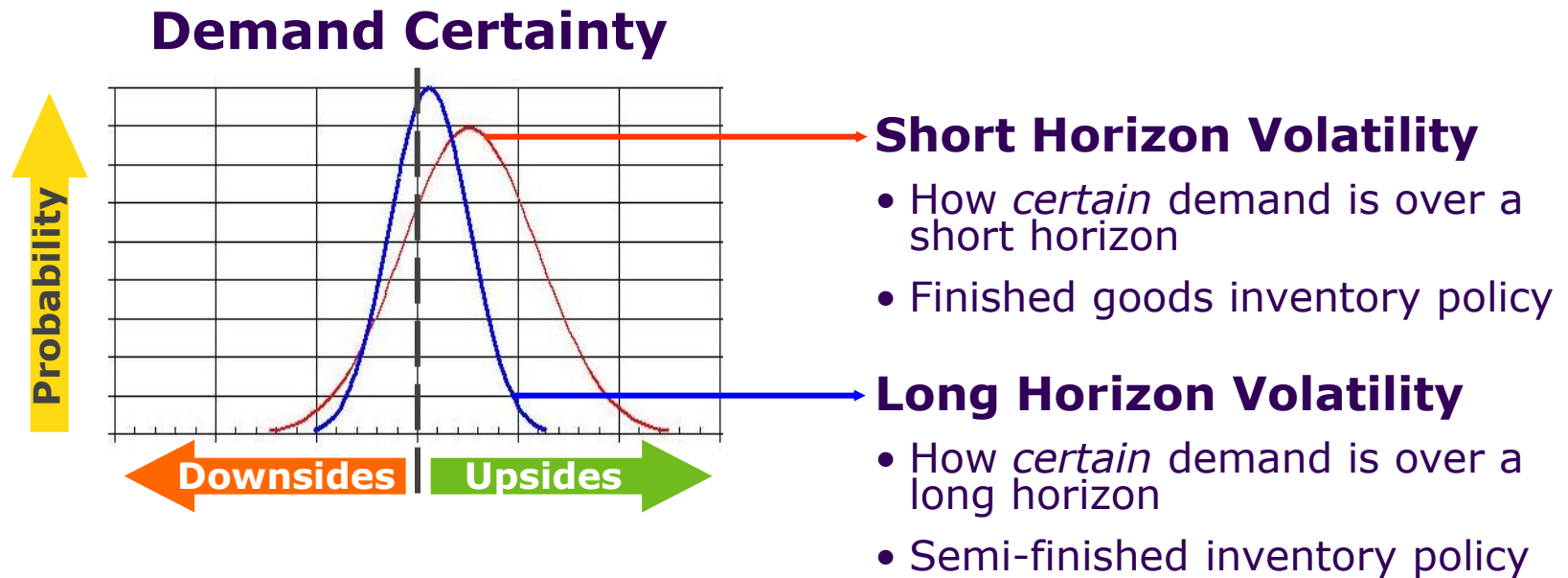


**As demand propagates up the supply chain, the demand signal degrades.**

**Forecasts are often based on uncertain markets.**

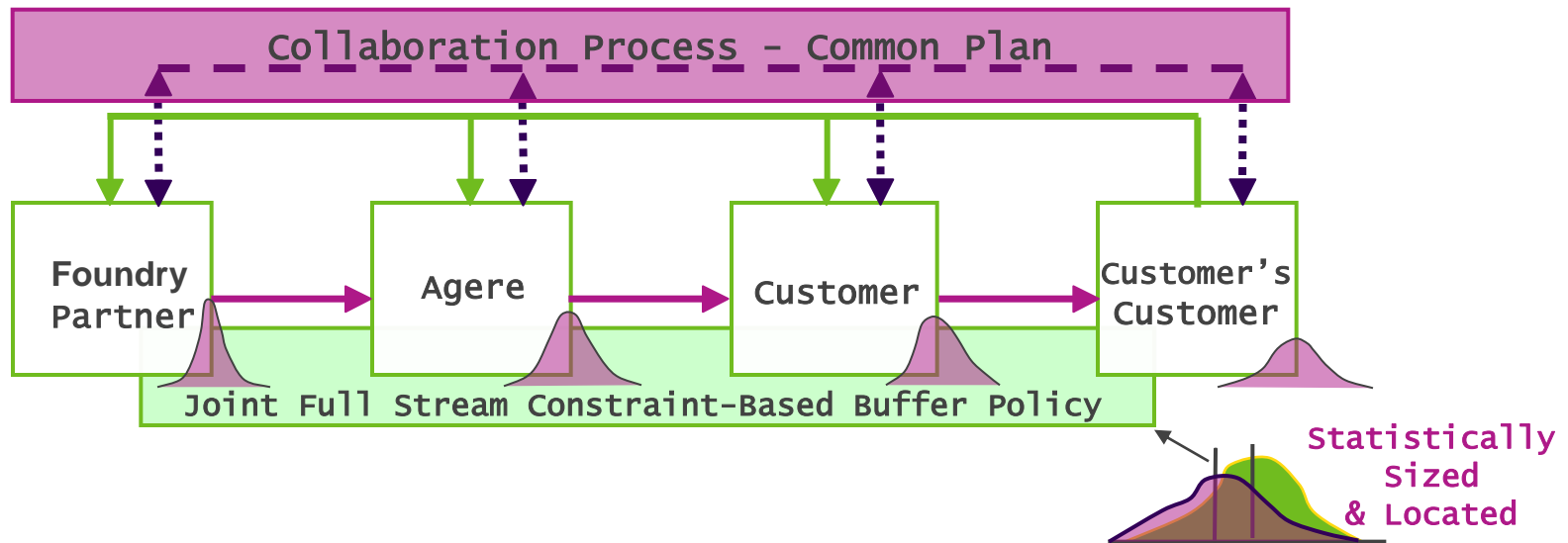


# Understanding Demand Through Profiling



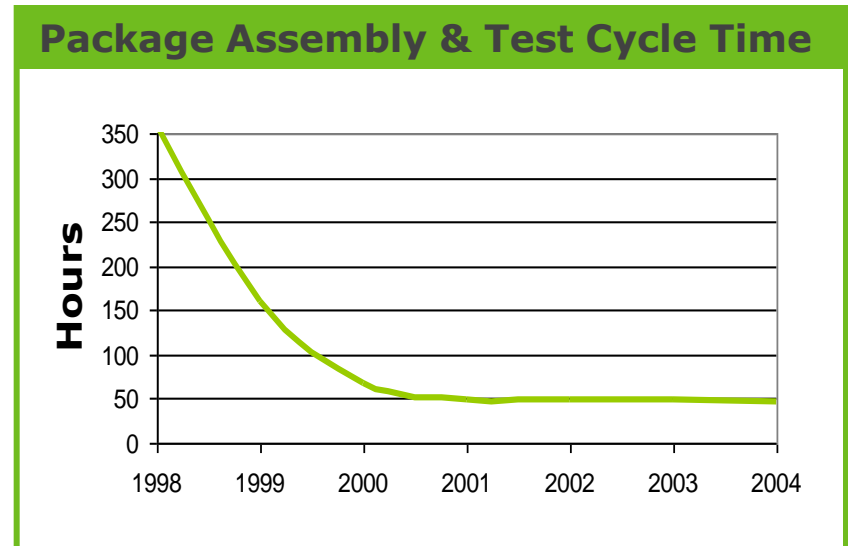
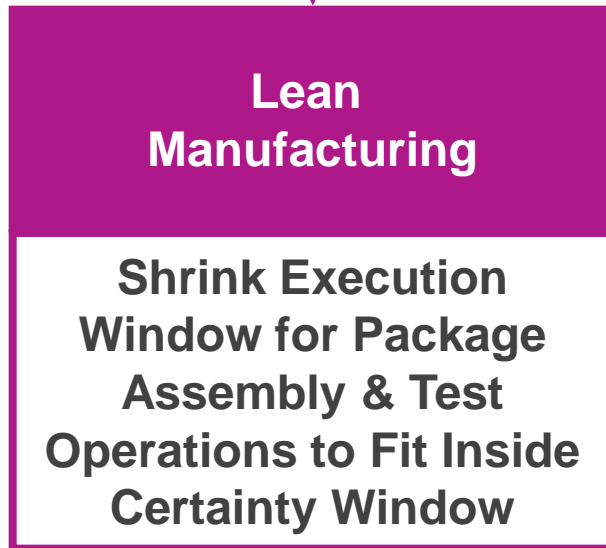
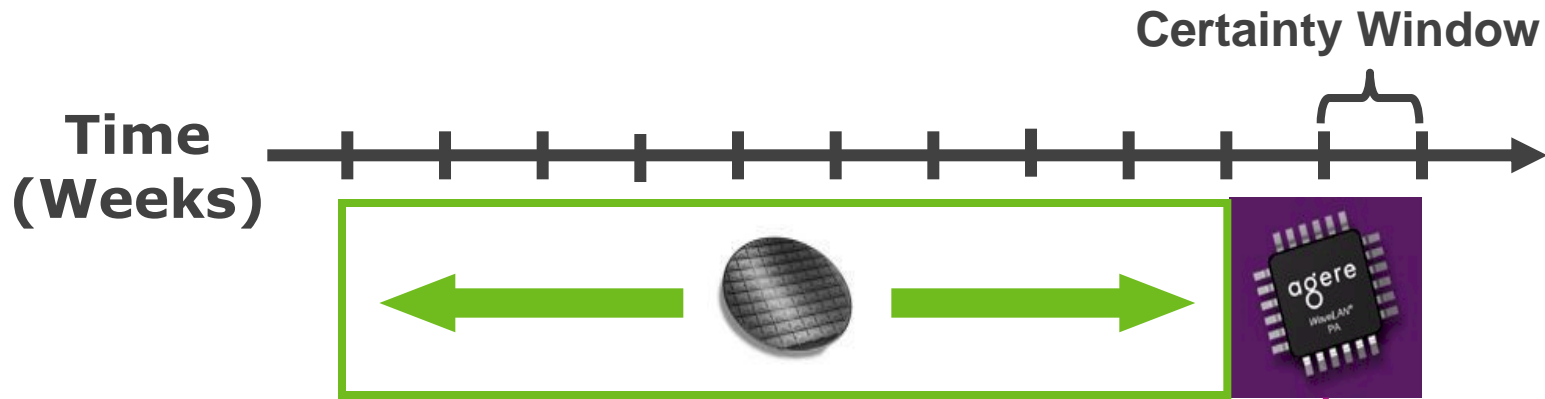
**Our customers are somewhat certain about their demand over a quarter, but beyond the current week they are not sure when in the quarter it will materialize.**

# Improving Demand Through Collaboration



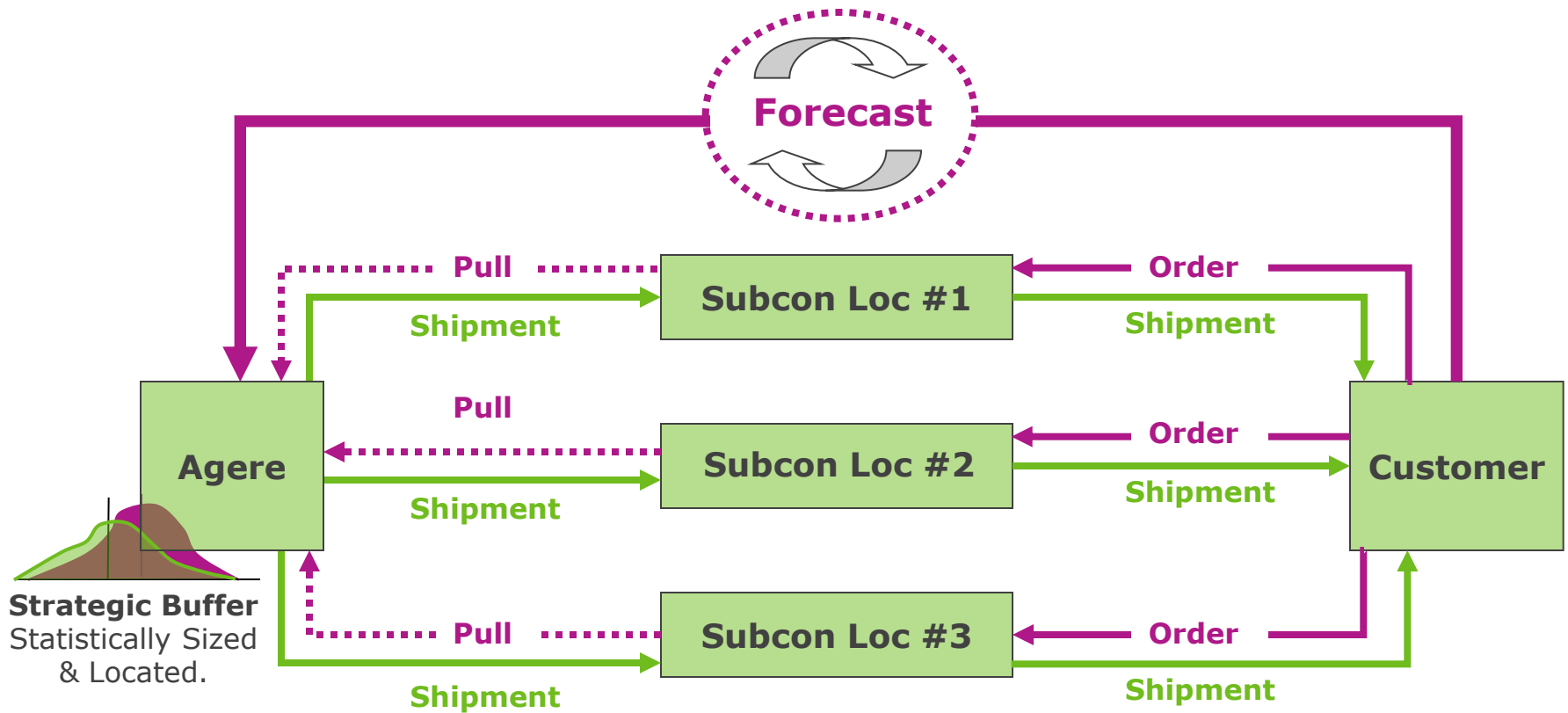
Statistically  
Sized  
& Located

# Executing a Relevant Fulfillment Strategy



# New JIT Fulfillment Models...

## Customer, Subcon & Agere



**Thank You!**