

Forecasting Methods

Mobile Phone Case Examples

NOKIA

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Agenda

- Introduction
- Importance of forecasting
- Short term forecasting methods
- Long term forecasting methods
- Q&A

My name is P.S. Subramaniam.

- Nokia Customer Logistics, North America
- Accountable for planning & order fulfillment for NAM customers

Select companies I have worked with:



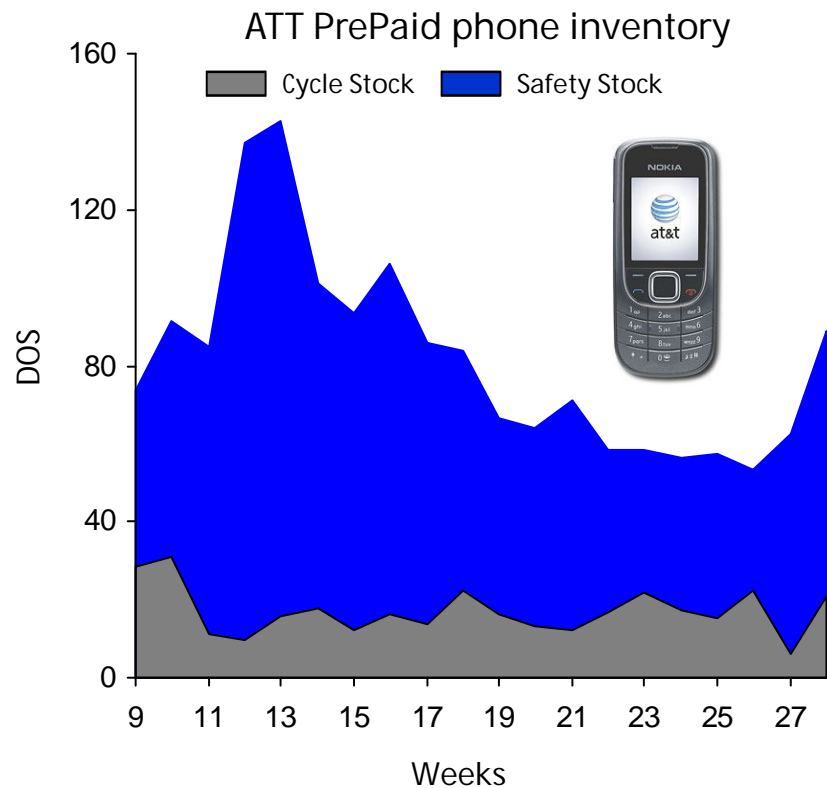
The mobile phone supply chain is complex with perishable and substitutable products.



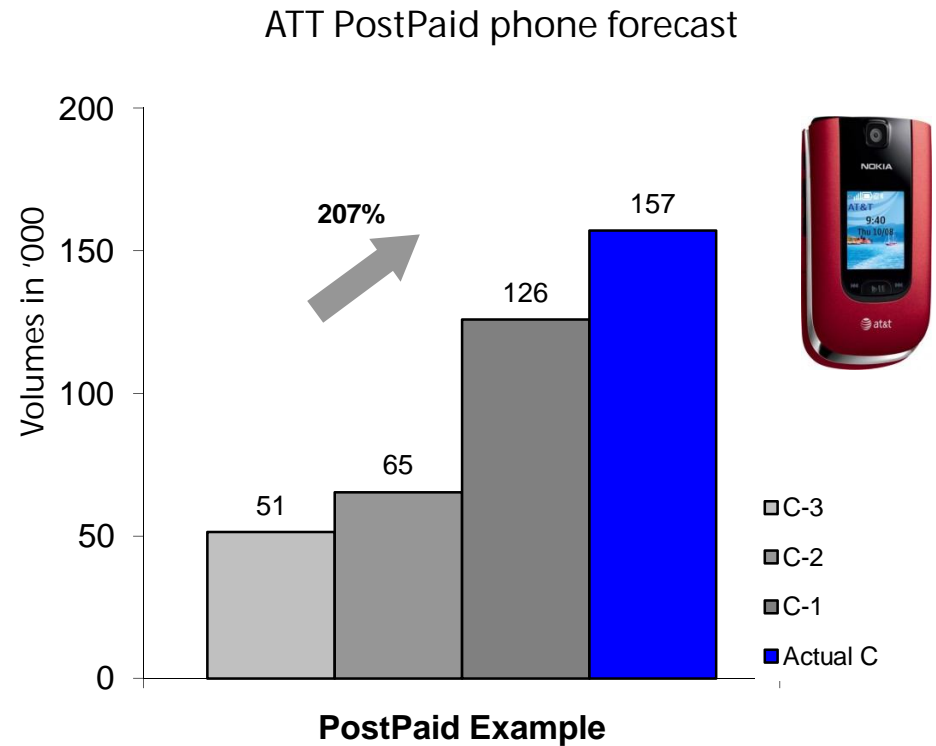
Note: DOS = Days of supply measured as on hand inventory/ avg daily forward looking forecast

Accurate demand forecasting is key to minimizing channel inventory and lost sales.

Channel inventory can be reduced with better forecasts.



Better forecasts can also help minimize lost sales.



There are two types of product forecasts; each driving different decisions.

Stages of a product lifecycle

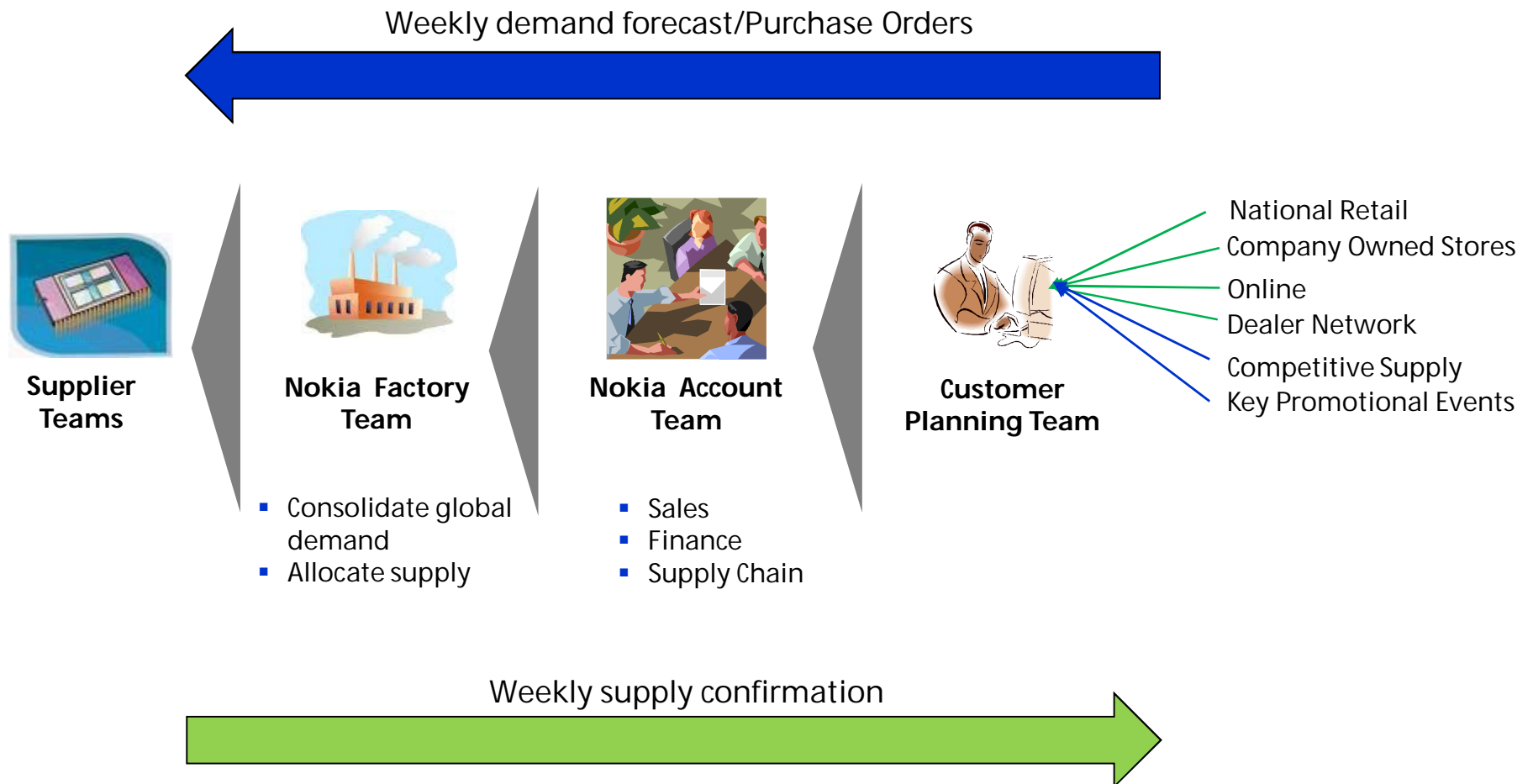
24 – 48 weeks



Short Term Fcst 2- 7 wks 	✓	✓	✓
	✓	✓	✓
Long Term Fcst 8-18 wks			

	Short Term Forecast	Long Term Forecast
Activity	<ul style="list-style-type: none"> ▪ Collaborative planning 	<ul style="list-style-type: none"> ▪ Projected lifetime volume & timing
Decision	<ul style="list-style-type: none"> ▪ Replenishment plan 	<ul style="list-style-type: none"> ▪ Raw material purchase, mfg. plan

Short term forecast is driven by a robust Sales & Operations Planning process.



Quantitative analysis is used to improve the quality of the S&OP process.

Areas of Focus

Sample Methods

Planning

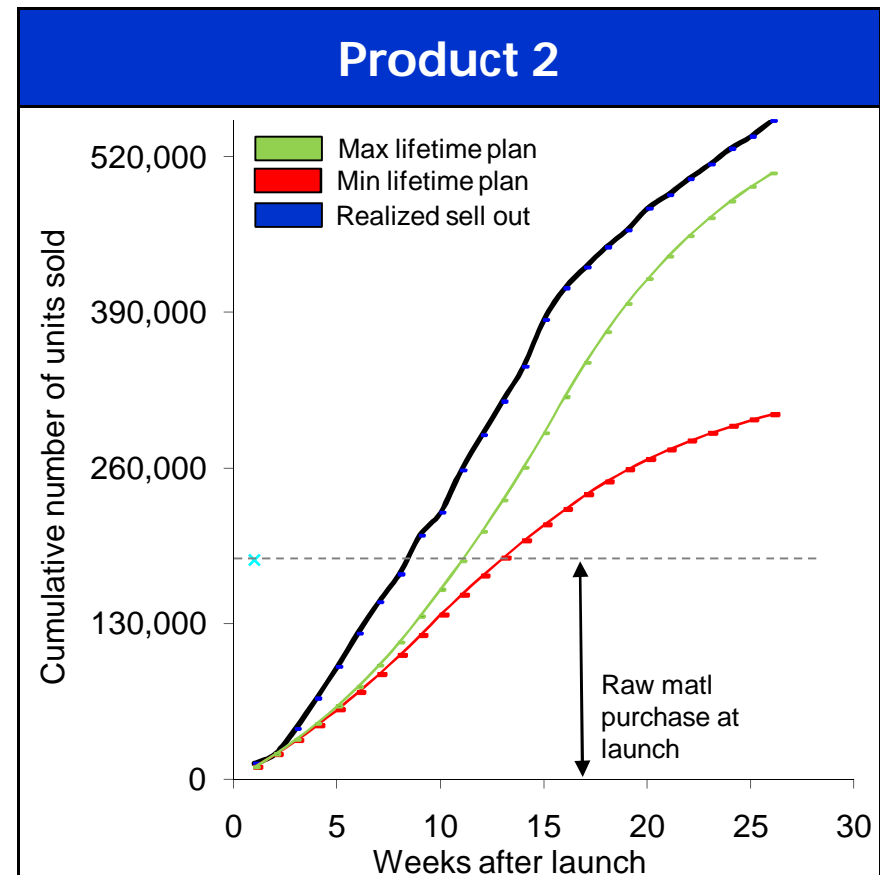
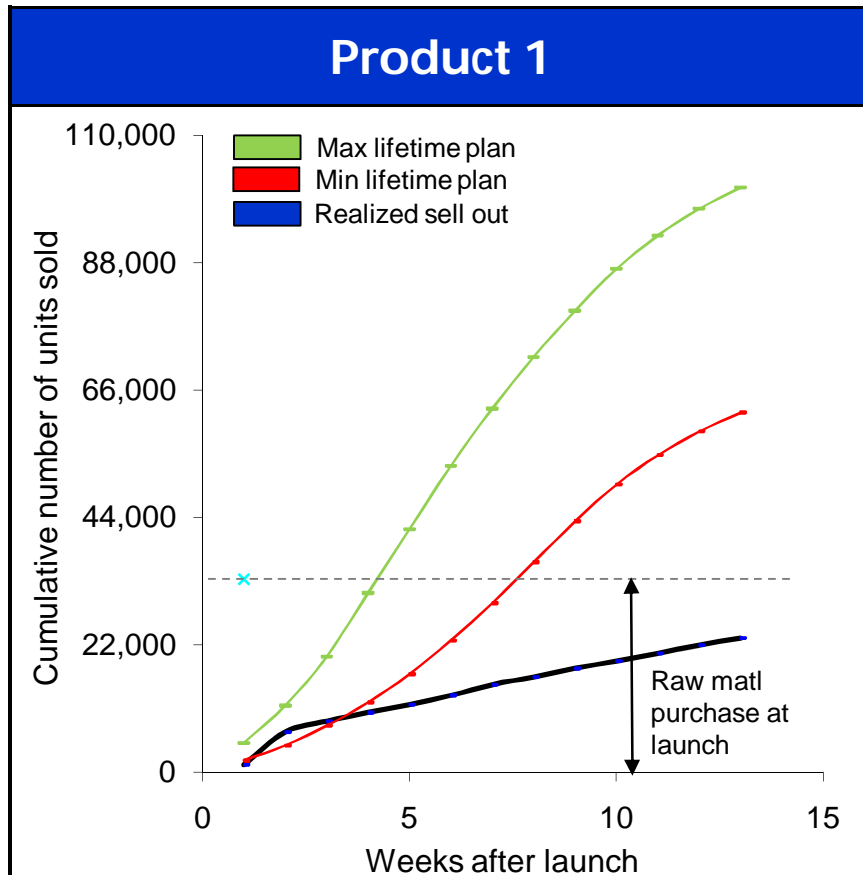
- Analyze consumer sales across channels to proactively adjust forecast
- Model demand lift from promotions
- Detect supply constraints early to proactively substitute products

Execution

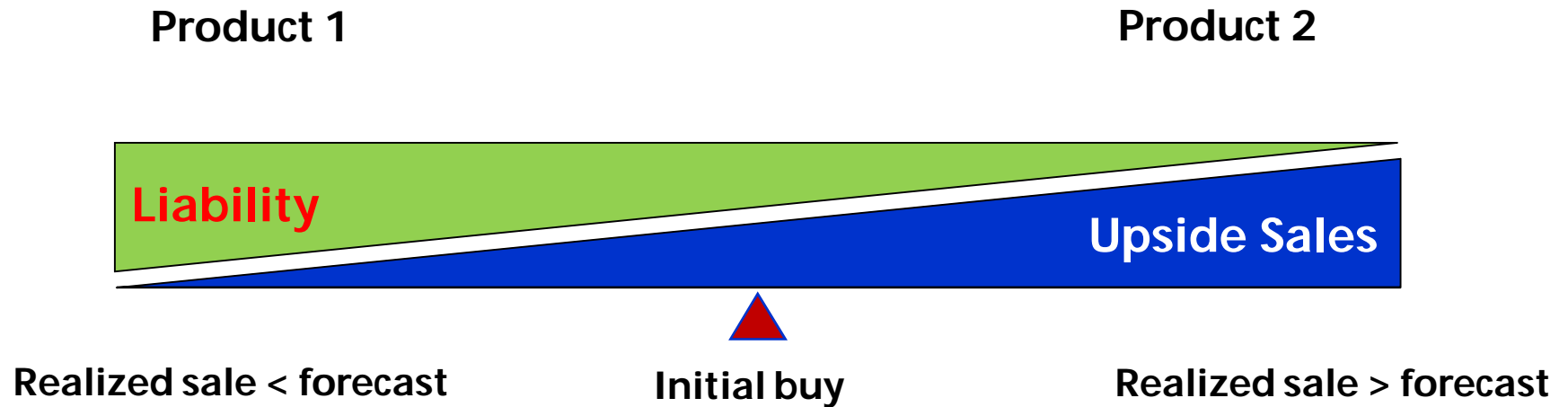
- Increase order lead times
- Track channel inventory anticipating order pull-ins and push-outs

Longer term forecast contributes to prudent raw material sourcing and mfg planning.

Two cases illustrating complexities of launch planning



Initial buy qty is set by heuristics and continually adjusted based on actual sell out in the field.



Activity	<ul style="list-style-type: none"> Reduce purchases for long lead time components 	<ul style="list-style-type: none"> Identify critical gating components 	<ul style="list-style-type: none"> Buffer raw matl inventory of critical components
Objective	<ul style="list-style-type: none"> Minimize matl & mfg equipment liability 	<ul style="list-style-type: none"> Qty of long lead time items ~ 50% planned min life time volumes Launch qty ~15% of planned life time volumes 	<ul style="list-style-type: none"> Minimize lead time to store Maximize sales opportunity

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