

# COST OF SERVICE

Sven Aunapu  
Director, LifeLine  
Blue Ridge



**BLUEPRINT 2019**  
PLANNING FOR A FLEXIBLE FUTURE

# BUSINESS REQUIREMENT

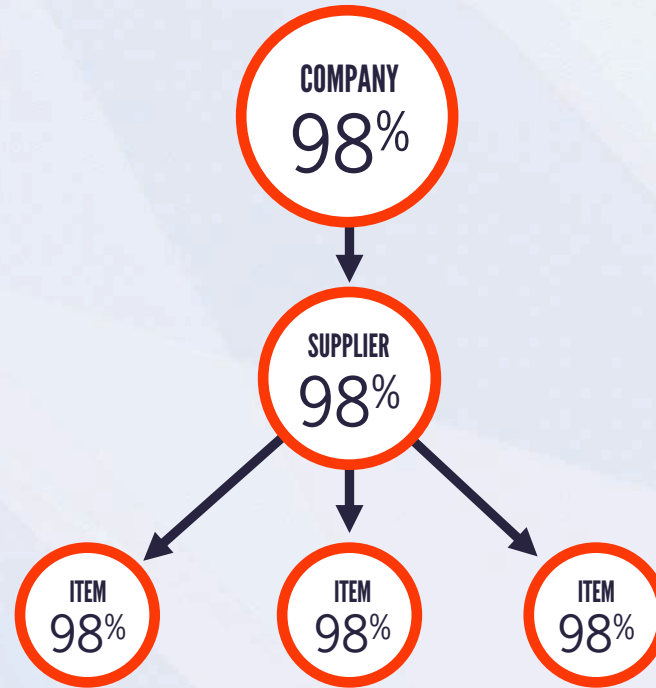
- Achieve the desired service level/fill-rate with the most efficient investment on inventory
- Display multiple service level goals and the cost associated with those desired service level/fill-rate goals in a simulation mode
- Ability to apply the most economical simulation for your business

# SOLUTION

- Run multiple service level strategy simulations at a time and provide the users with the costs associated with each service level goal simulations.
- Performed in simulation mode:
  - Allows the user to change the parameters to gain the most desirable service level goal and the most profit from their inventory investment.
- Run the analysis calculation on a schedule and apply the selected simulation on a scheduled date

# COST OF SERVICE

Service level hierarchy



# COST OF SERVICE

## Service level hierarchy




# COST OF SERVICE

Located on the Administrative Tab – “Cost of Service”

The screenshot displays the BLUE RIDGE software interface. At the top left is the BLUE RIDGE logo. A navigation bar contains tabs for Dashboard, Daily Tasks, Advanced Tasks, Administrative (selected), Reports, and Help. Below this is a secondary menu with options: Activity Code Settings, Activity Monitor, Calendar Years, Cost of Service (highlighted), Customers, Exception Optimization, Forecast Audit List, Global Controls, Interface Settings, Location Hierarchy, Preferences, Product Hierarchy, and Cost of Service List. A sub-menu for 'Cost of Service List' is open, showing a '+ Add New Analysis' button. Below the menu is a table with the following columns: ID, Description, Location, Status, Created, Last Run, Last Update, Last Applied, Scheduled, and User Name.

| ID | Description | Location | Status | Created | Last Run | Last Update | Last Applied | Scheduled | User Name |
|----|-------------|----------|--------|---------|----------|-------------|--------------|-----------|-----------|
|----|-------------|----------|--------|---------|----------|-------------|--------------|-----------|-----------|

# COST OF SERVICE



User: implementation System Name: Training2 System Date: 2/24/2019 - [Logout](#)

Dashboard
Daily Tasks
Advanced Tasks
Administrative
Reports
Help

[Cost of Service Results](#)

[Cost of Service List](#) > [Cost of Service Results](#)

**Details**

Analysis ID :

Description :

Last Analysis Date :

Locations :

Last Applied Date :

Item Group

Run :  Immediate  Scheduled

Last Update Date :

Rank By :

Auto Apply

Next Run Date :

**Parameters**

| Velocity Ranking / Current Service Level Goal |                    | Velocity Ranking                      | Sim 1                                 | Sim 2                                 | Sim 3                                 | Sim 4                                 | Sim 5                                 | Sim 6                                 |
|---|--------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Velocity Ranking                              | Service Level Goal |                                       |                                       |                                       |                                       |                                       |                                       |                                       |
| A 0.00%                                       | A 0.00%            | A <input type="text" value="0.00 %"/> | A <input type="text" value="0.00 %"/> | A <input type="text" value="0.00 %"/> | A <input type="text" value="0.00 %"/> | A <input type="text" value="0.00 %"/> | A <input type="text" value="0.00 %"/> | A <input type="text" value="0.00 %"/> |
| B 0.00%                                       | B 0.00%            | B <input type="text" value="0.00 %"/> | B <input type="text" value="0.00 %"/> | B <input type="text" value="0.00 %"/> | B <input type="text" value="0.00 %"/> | B <input type="text" value="0.00 %"/> | B <input type="text" value="0.00 %"/> | B <input type="text" value="0.00 %"/> |
| C 0.00%                                       | C 0.00%            | C <input type="text" value="0.00 %"/> | C <input type="text" value="0.00 %"/> | C <input type="text" value="0.00 %"/> | C <input type="text" value="0.00 %"/> | C <input type="text" value="0.00 %"/> | C <input type="text" value="0.00 %"/> | C <input type="text" value="0.00 %"/> |
| D 0.00%                                       | D 0.00%            | D <input type="text" value="0.00 %"/> | D <input type="text" value="0.00 %"/> | D <input type="text" value="0.00 %"/> | D <input type="text" value="0.00 %"/> | D <input type="text" value="0.00 %"/> | D <input type="text" value="0.00 %"/> | D <input type="text" value="0.00 %"/> |

# ITEM VOLUME RANKING

One of the things you must do before setting service goal policy is to classify the item/location combinations with a stratification with the most important items set as “A” items, the next most important items as “B” items and so on.



# LIST OF ITEMS

| 1    | ItemId | UnitCost   | UnitSalesPrice | Forecast Units | Forecast \$      | Forecast Profit \$ |
|------|--------|------------|----------------|----------------|------------------|--------------------|
| 2243 | 42199  | \$64.00    | \$116.94       | 0.0            | \$0.00           | \$0.00             |
| 2244 | 25240  | \$250.00   | \$400.00       | 0.0            | \$0.00           | \$0.00             |
| 2245 | 24903  | \$130.25   | \$191.94       | 0.0            | \$0.00           | \$0.00             |
| 2246 | 26267  | \$34.00    | \$43.49        | 0.0            | \$0.00           | \$0.00             |
| 2247 | 40644  | \$52.80    | \$87.10        | 0.0            | \$0.00           | \$0.00             |
| 2248 | 24524  | \$80.00    | \$143.88       | 0.0            | \$0.00           | \$0.00             |
| 2249 | 25005  | \$102.00   | \$215.94       | 0.0            | \$0.00           | \$0.00             |
| 2250 | 46435  | \$80.00    | \$143.88       | 0.0            | \$0.00           | \$0.00             |
| 2251 | 37271  | \$670.00   | \$1,004.98     | 0.0            | \$0.00           | \$0.00             |
| 2252 | 30414  | \$2,060.00 | \$3,000.00     | 0.0            | \$0.00           | \$0.00             |
| 2253 | 57104  | \$33.00    | \$42.00        | 0.0            | \$0.00           | \$0.00             |
| 2254 | 32873  | \$115.00   | \$160.68       | 0.0            | \$0.00           | \$0.00             |
| 2255 | 55628  | \$303.06   | \$480.00       | 0.0            | \$0.00           | \$0.00             |
| 2256 | 43533  | \$57.59    | \$79.80        | 0.0            | \$0.00           | \$0.00             |
| 2257 | 33959  | \$125.00   | \$144.49       | 0.0            | \$0.00           | \$0.00             |
| 2258 |        |            |                |                |                  |                    |
| 2259 |        |            |                | 1,999,226.76   | \$180,761,312.09 | \$112,845,431.79   |

# ITEM VOLUME RANKING

## Ranking by Forecast Units

| Velocity    | Ranking | VelocityCodeTotalFcst | VelocityCodeTotalFcstRunning | Item Count |
|-------------|---------|-----------------------|------------------------------|------------|
| A           | 30%     | 599,768.03            | 599,768.03                   | 20         |
| B           | 30%     | 599,768.03            | 1,199,536.05                 | 96         |
| C           | 20%     | 399,845.35            | 1,599,381.41                 | 200        |
| D           | 10%     | 199,922.68            | 1,799,304.08                 | 260        |
| E           | 10%     | 199,922.68            | 1,999,226.76                 | 1680       |
|             |         | 1,999,226.76          |                              | 2256       |
| Total Units |         | 1,999,226.76          |                              |            |

## Ranking by Forecast Currency

| Velocity          | Ranking | VelocityCodeTotalFcst\$ | VelocityCodeTotalFcst\$Running | Item Count |
|-------------------|---------|-------------------------|--------------------------------|------------|
| A                 | 30%     | \$54,228,393.63         | \$54,228,393.63                | 13         |
| B                 | 30%     | \$54,228,393.63         | \$108,456,787.26               | 75         |
| C                 | 20%     | \$36,152,262.42         | \$144,609,049.67               | 186        |
| D                 | 10%     | \$18,076,131.21         | \$162,685,180.88               | 269        |
| E                 | 10%     | \$18,076,131.21         | \$180,761,312.09               | 1713       |
|                   |         | \$180,761,312.09        |                                | 2256       |
| Total Forecast \$ |         | \$180,761,312.09        |                                |            |

## Ranking by Forecast Profit

| Velocity        | Ranking | VelocityCodeTotalFcstProfit | VelocityCodeTotalFcstProfitRunning | Item Count |
|-----------------|---------|-----------------------------|------------------------------------|------------|
| A               | 30%     | \$33,853,629.54             | \$33,853,629.54                    | 10         |
| B               | 30%     | \$33,853,629.54             | \$67,707,259.07                    | 68         |
| C               | 20%     | \$22,569,086.36             | \$90,276,345.43                    | 166        |
| D               | 10%     | \$11,284,543.18             | \$101,560,888.61                   | 237        |
| E               | 10%     | \$11,284,543.18             | \$112,845,431.79                   | 1775       |
|                 |         | \$112,845,431.79            |                                    | 2256       |
| Total Profit \$ |         | \$112,845,431.79            |                                    |            |

- Units**
- Currency**
- Profit**
- Margin**
- Revenue**
- Units + Currency**
- Units + Currency + Margin**

# COST OF SERVICE

| Velocity Ranking / Current Service Level Goal |                    | Velocity Ranking   | Sim 1 <input type="checkbox"/>   | Sim 2 <input type="checkbox"/>   | Sim 3 <input type="checkbox"/>   |
|---|--------------------|--|--|--|--|
| Velocity Ranking                              | Service Level Goal |  |  |  |  |
| A 0.00%                                       | A 0.00%            | A <input type="text" value="30.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | A <input type="text" value="99.50 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | A <input type="text" value="99.50 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | A <input type="text" value="98.50 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> |
| B 0.00%                                       | B 0.00%            | B <input type="text" value="30.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | B <input type="text" value="98.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | B <input type="text" value="97.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | B <input type="text" value="97.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> |
| C 0.00%                                       | C 0.00%            | C <input type="text" value="20.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | C <input type="text" value="96.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | C <input type="text" value="96.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | C <input type="text" value="94.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> |
| D 0.00%                                       | D 0.00%            | D <input type="text" value="10.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | D <input type="text" value="94.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | D <input type="text" value="94.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | D <input type="text" value="92.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> |
| E 0.00%                                       | E 0.00%            | E <input type="text" value="10.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | E <input type="text" value="92.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | E <input type="text" value="92.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> | E <input type="text" value="90.00 %"/> <input type="button" value="▲"/> <input type="button" value="▼"/> |

# UNDERSTANDING THE COST OF SERVICE

In doing comparison analysis of the trades offs between higher overall service and the cost associated with it, the following metrics available:

- Annual cost of service (**safety stock investment**) associated with each service goal stratification. This is really the “bottom line” number that makes it easy to compare the cost of each possible set of service goal rules.

The following additional metrics also add context along with the cost of service to help you select the service goal rules that are best for your business.

- The annual demand in both units and currency
- The average demand filled in units and currency
- Average shortages in units and currency
- Overall service level percent in units and currency

# COST OF SERVICE

| Results Description       | Sim 1         | Sim 2         | Sim 3         |
|---------------------------|---------------|---------------|---------------|
| Forecast in Currency      | 12,696,081.29 | 12,696,081.29 | 12,696,081.29 |
| Forecast in Units         | 1,759,249.42  | 1,759,249.42  | 1,759,249.42  |
| Filled in Currency        | 12,066,754.63 | 12,038,158.64 | 11,852,908.65 |
| Filled in Units           | 1,707,115.82  | 1,701,796.37  | 1,682,465.11  |
| Shortage in Currency      | 629,326.65    | 657,922.65    | 843,172.64    |
| Shortage in Units         | 52,133.60     | 57,453.05     | 76,784.31     |
| Service Level in Currency | 95.18         | 94.97         | 93.52         |
| Service Level in Units    | 97.04         | 96.74         | 95.64         |
| Safety Stock Investment   | 697,892.55    | 687,571.20    | 628,199.18    |

# COST OF SERVICE

| Results Description       | Sim 1         | Sim 2         | Sim 3         |
|---------------------------|---------------|---------------|---------------|
| Forecast in Currency      | 12,696,081.29 | 12,696,081.29 | 12,696,081.29 |
| Forecast in Units         | 1,759,249.42  | 1,759,249.42  | 1,759,249.42  |
| Filled in Currency        | 12,066,754.63 | 12,038,158.64 | 11,832,908.65 |
| Filled in Units           | 1,707,115.82  | 1,701,796.37  | 1,682,465.11  |
| Shortage in Currency      | 629,326.65    | 657,922.65    | 843,172.64    |
| Shortage in Units         | 52,133.60     | 57,453.05     | 76,784.31     |
| Service Level in Currency | 95.18         | 94.97         | 93.52         |
| Service Level in Units    | 97.04         | 96.74         | 95.64         |
| Safety Stock Investment   | 697,892.55    | 687,571.20    | 628,199.18    |

## Tips and Nuances:

- Only Active, Watch and Custom Activity Codes are considered
- A forecast large enough to generate safety stock needs to be attached to the item for safety stock improvement to be listed.
- Before selecting “Item Group”, make sure it is populated and valid
- An item with ‘no forecast’ will be assigned a “Null” velocity code.

### New Activity Code Settings

Activity Code Description

Include on Order Item List

Calculate Demand Forecast

Calculate Lost Sales

Create Forecast Exceptions

Calculate SOQ Always

Calculate SOQ for Events Only

Calculate SOQ for Backorders Only

Don't Allow Interface Override

Include in OCO

Include in Cost of Service Analysis

Bypass All Processing

Include in Dashboard Analytics

Create Item Alerts

Include in Order Summary Alerts

Additional Order Summary Alerts

Allow Event Buys

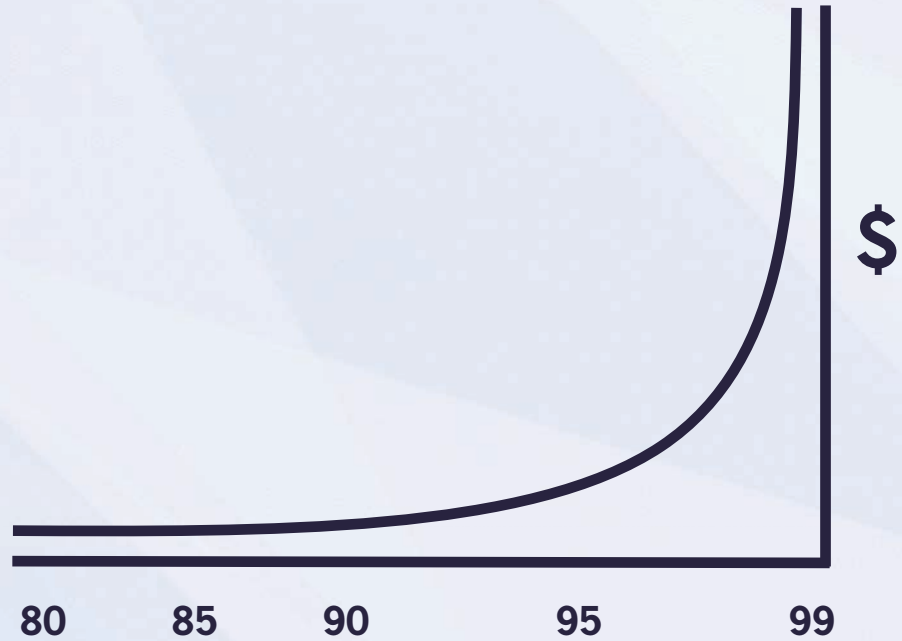
Allow Push Allocations

Allow Overstock Transfers

Allow Forward Buys

# COST OF SERVICE

Safety Stock Requirements



# COST OF SERVICE

