

Supply Review

Template

S&OP / IBP Management Review

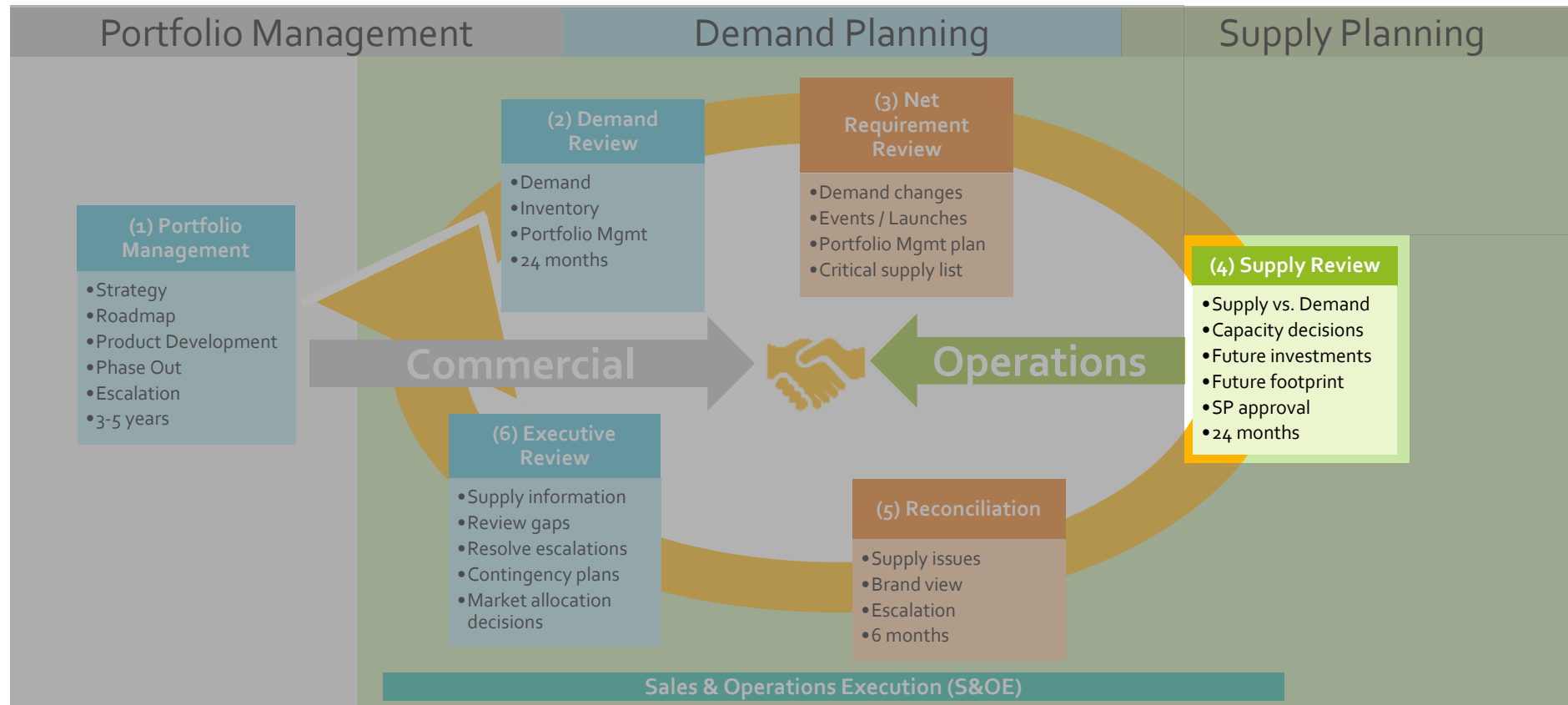
February 2021

Christian Jahn (MBA / CSCP)

Executive Supply Review (ESR)

Context & Objectives

The ESR within the S&OP Planning Cycle



The ESR within S&OP Planning Structure

Demand Planning	Supply Planning	Capacity Planning	Aggregation	Time Frame
Product Portfolio Strategy & Forecasting	Network Strategy	Footprint Strategy	Division/ Franchise/ Business Unit	3 – 5 Years
Demand, Sales & Logistic Planning	Operations Planning	Resource Planning	Brand/ Product Family/ Value Stream	18 – 24 Months
Delivery Schedule	Master Production Schedule (MPS)	Rough-Cut-Capacity (RCCP)	Product Groups/ Capacity Groups SKUs	6 – 12 Months
Distribution & Order Requirements (DRP)	Materials Requirements (MRP)	Capacity Requirements (CRP)	SKUs	3 – 6 Months



Objectives of Executive Supply Review

Stakeholders

Chair:

Leader Operations

Owner:

Leader Supply Planning

Plant Leader(s)

Procurement Leader(s)

Finance Leader(s)

R&D / Engineering
Representative

Strategic Sourcing
Representative

Demand Planning
Representative

- **Review & looking forward** – *deliver visibility on supply* – accept or modify the provided supply scenarios (changes vs. last cycle / major constraints)
- **Make decisions** based on *delivered scenarios* for each brand, product family and / or capacity group where required
- **Authorize changes** in production or procurement rates, where significant costs or other consequences are involved, *orchestrated by supply planning*
- **“Break the ties”** for areas where the supply planning team was unable to reach consensus – discussions and *deep dives are based on exceptions*
- **Confirm supply plan** and decide to address adjustments in the commercial business plan, if needed – *agree and commit to action items* by the different stakeholders
- **Review performance & issues** regarding service, product launches, capacity constraints, special projects and other issues
- **Review and change** existing policies and strategies where needed with regards to balancing demand and supply

Executive Supply Review (ESR)

Review Structure (Template)

Review Structure - Agenda

Topic	Content/ Description	Page(s)
Focus topics , decisions required of ESR Decision tracker of the last ESRs	Scope of Review, Attendance & Meeting actions , Progress tracking, Exceptions and/or topics handed over to Reconciliation and/or Executive Review	8 - 10
KPIs by location, brand and/or product family	KPIs by exception (Trend & Performance review): Service, Supply Plan Attainment, Safety Stock Health & Inventory Positioning	11
Forecast/ NRP Update , Key changes & Trends	Net requirement / forecast Summary (update on changes vs. last cycle) Input to Supply Alignment , Inventory & Positioning, Capacity Planning	12
Engineering update	Update on R&D, NPI and CI projects , Input to Supply Alignment and Capacity Planning	13
Strategic Sourcing update	Update on Strategic Supply Status , Supply Alignment, Supply gaps by exceptions, Capacity bottlenecks, Corrective actions – resource and/or capital requirements	14
Supply response summary	Supply Alignment & Confirmation , Scenarios and assumptions, Cash & cost requirements	15
Supply Topics & Deep dives , Constraints, and/or SPoRs	Constraint Review & Supply Alignment , Supply gaps by exceptions, Capacity bottlenecks, Corrective actions – resource and/or capital requirements	16 – 19
Financial alignment	Financial Projection & Reconciliation , Inventory outlook, Demand & Supply Alignment (NRP – SP – Inventory – Shipments) vs. budget and/or latest projection	20
Capacity Review Tracker	Status and progress of capacity development plan , reviewed and decided in Capacity Review	21
Project Status Tracker	Status and progress of running Strategic Projects and/or Manufacturing Transfers	22
Decision review , ESR Quality & Minutes	Meeting actions, Decisions made documentation , Attendance tracking	23

Participants	Information sharing with
<ul style="list-style-type: none">✓ Name 1 (Role / Location)✓ Name 2 (Role / Location)✓ Name 3 (Role / Location)✓ Name 4 (Role / Location)✓ Name 5 (Role / Location)✓ Name 6 (Role / Location)✓ ... <p><u>Guest:</u></p> <ul style="list-style-type: none">➤ Name 7 (Role)	<ul style="list-style-type: none">– Name A (Role)– Name B (Role)– Name C (Role)

Decisions required and/or Focus Topics to be reviewed within the ESR

Example

Business Unit	Location/ Supplier	Decision Required	Owner	Due Date	Validation Required via Reconciliation or Executive Review? Y/N
Franchise 1	Location 1	<ul style="list-style-type: none"> Des-Investment, In-Sourcing and/or New Product Introduction to mitigate long-term over-capacity 	Plant Manager	DD/MM/YY	Y
Franchise 2	Location 3	<ul style="list-style-type: none"> Add additional capacities from external partner for 2 months, but at a higher cost rate (\$55k) and short-term headcount increase needed (+4 FTE) 	Plant Manager	DD/MM/YY	N
Franchise 3	Location 4	<ul style="list-style-type: none"> Escalation to Reconciliation and/or Executive S&OP Review due to upcoming supply rupture Allocate additional engineering resources (\$150k) Re-allocate additional capacities for 3 months for supply catch up (20% upcharge costs = \$250k) 	Planning Leader Plant Manager	DD/MM/YY	Y
...	...				

Business Unit	Location/ Supplier	Focus Areas / Information sharing / Knowledge Building
Franchise 1	Supplier X	Supplier opened 2 nd location. Ready for growth to support Brand A

Decision made & Topic Tracker

Topic	Location/ Supplier	ESR from	Owner	Status

Executive Summary of KPIs

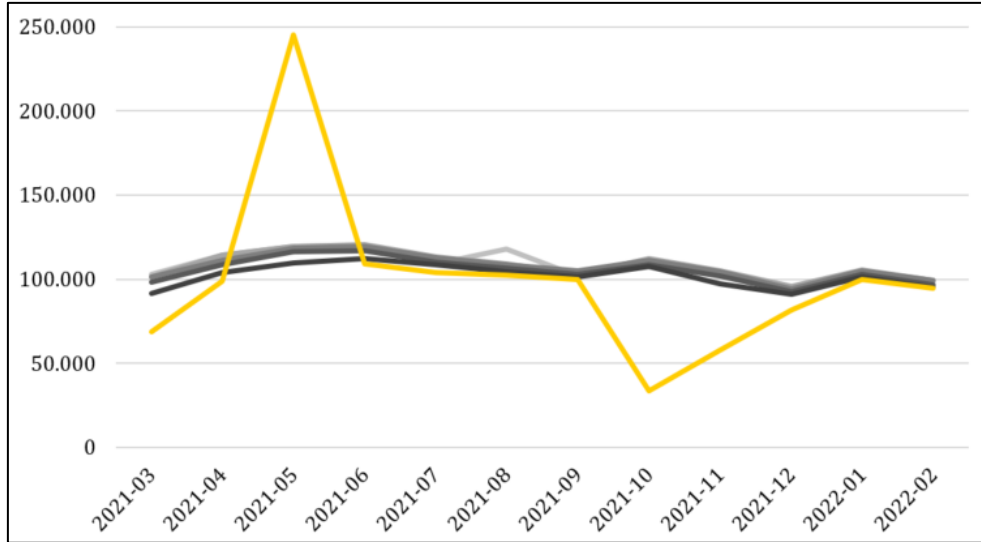
Example

Location / Area	Product Availability	Backorder vs. COGS	Supply Plan Attainment (SPA)	Supply Plan Mix Attainment (SPMA)	Safety Stock Health (SSH)	Lines below Safety Stock / Net Health / Gap	Lines above Safety Stock / Excess	Capacity Utilization	Comment
Location 1	97% →	2,4% →	114% ↑	68% ↑	89% ↑	12% / 43% / \$1'630k ↓	27% / \$3'750k ↓	72% ↑	<ul style="list-style-type: none"> ➤ Main issue Capacity Utilization ➤ KPIs on positive trend in general
Location 2	95% ↑	0,7% →	98% →	78% →	95% →	5% / 72% / \$250k →	12% / \$1'750k ↑	89% →	<ul style="list-style-type: none"> ➤ All KPIs on positive trend
Location 3	92% ↓	4,2% →	92% ↑	67% ↓	78% ↓	18% / 54% / \$2'250k ↑	9% / \$1'200k ↑	108% ↑	<ul style="list-style-type: none"> ➤ Supply Mix Issues in Manufacturing ➤ Over-time and Backorder
Location 4	67% ↓	12,3% ↓	94% ↑	76% ↑	69% ↓	29% / 25% / \$2'750k ↑	6% / \$125k ↓	122% ↑	<ul style="list-style-type: none"> ➤ Higher demand as forecasted ➤ Catch up via Overtime
Total	93% ↓	3,8% →	97% ↑	70% ↑	83% →	15% / 49% / \$6'880k ↑	15% / \$6'825 ↓	95% ↑	<ul style="list-style-type: none"> ➤ Main issue product availability ➤ Other KPIs on positive trend
Target	≥ 96%	≤ 2%	90% - 110%	≥ 75%	≥ 85%	≤ 10% / ≥ 85%	≤ 10%	75% - 90%	↑ Trend vs. last review

- Comment A
- Comment B
- Comment C
- ...

Key NRP Changes versus last ESR (12m rolling)

Example

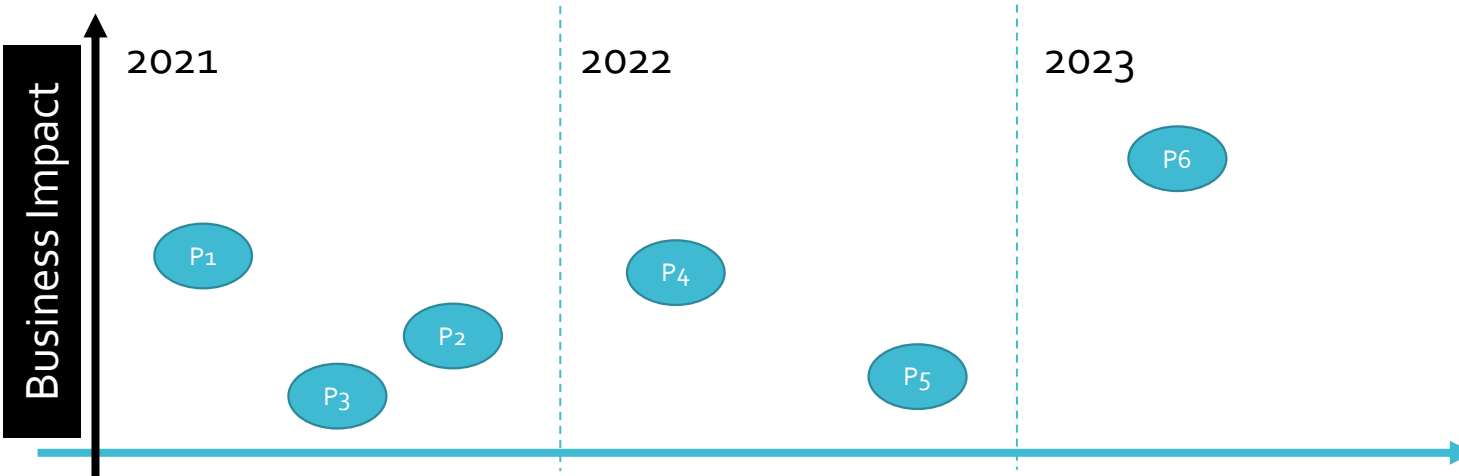


Location	Product Group	Last cycle (12 months)	Current Cycle (12 months)	Change
Location 1	Group A	41.400	43.800	+6%
	Group B	31.500	35.900	+14%
	Group C	1.172.300	1.139.800	-3%
Location 2	Group D	1.021.600	1.011.900	-1%
Location 3	Group E	11.700	11.200	-4%
Location 4	Group F	34.800	34.500	-1%
	Group G	19.000	18.700	-2%
Total		2.332.300	2.295.800	-2%

Key Implications for Changes of latest NRP (12m rolling)

- Overall net requirement forecast stable vs. last cycle
- **Challenge:** biggest market adjusted regional safety stock strategy: Ramp up in May and ramp down in October → Supply response and/or reconciliation strategy needed!
- ...

Engineering Project Summary & Status



Project	Revenue 3rd Year	COGS 3rd Year	Gross Margin	Revenue cannibalized
1	\$12m	\$6m	50%	80%
2	\$2m	\$0.5m	75%	-
...				
6	\$25m	\$10m	60%	20%

Project	#SKU	Location/ Supplier	Resources/ Staffing	Make vs. Buy	Process Development	Capacity Status	Transfer Completion	Launch Start	Supply Confirmed
Name 1	xx	Plant A					MM/YY	MM/YY	
Name 2	xx	Plant B					MM/YY	MM/YY	
Name 3	xx	Supplier X					MM/YY	MM/YY	
Name 4	xx	Plant A					MM/YY	MM/YY	
...					MM/YY	MM/YY	

Risks / Concerns	Changes / Impacts	Decisions Required
<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C

Strategic Sourcing – Key Supplier Summary

Supplier	Product Group	2020 Actuals	2021 Projection	2021 YTD	Quality	Supply Health ≤ 6 months	Supply Health > 6 months
Name 1	Group A	\$1,200k	\$1,900	\$300k	Green	Green	Red
Name 2	Group B, C	\$900k	\$950k	\$200k	Green	Green	Green
Name 3	Group D, E	\$750k	\$300k	\$50k	Yellow	Green	Green
Name 4	Group A	\$500k	\$100k	\$20k	Red	Green	Red
...							

Example

Risks / Concerns	Changes / Impacts / Opportunities	Decisions Required
<ul style="list-style-type: none"> ➤ Portfolio transfer from Supplier 4 to Supplier 1 in progress. Capacity ramp up at Supplier 1 delayed → Risk of supply constraints / rupture starting in 8 months ➤ ... 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ Extend contract Supplier 4 by 6 months to mitigate capacity ramp up delay at Supplier 1 → higher costs of \$250k ➤ ...

Supply Response Summary by Location within network

Location (Brand / Product Family)	Supply Response Summary / Mitigation Actions & Status
Location 1 (Brand A, Brand B, Brand C)	Written Status Summary ... Over-Capacity ... Major Action Items: - A - B - C
Location 2 (Brand C)	Written Status Summary ... Major Action Items: - A - B - C
Location 3 (Brand A, Brand B)	Written Status Summary ... Supply Constraints ... Major Action Items: - A - B - C
Location 4 (Brand D)	Written Status Summary ... Supply Gap and/or Rupture ... Major Action Items: - A - B - C
...	...

Impact Summary to reconcile Supply & Demand

Supply Response to Demand (Revenue Risk / \$)	Cost / Headcount (Request / \$)	Inventory / Output (Change, Risk / \$)	Capital Investment (Additional / \$)
N/A	N/A	N/A	N/A

Supply Health Status by Location & Manufacturing Area

Example

Location 4

Manufacturing Area	Safety Stock Health (SSH)	3 months Demand Plan (COGS / Units)	3 months constrained/ confirmed Supply Plan	Supply health < 3 months	Supply health 3-9 months	Supply health > 9 months	Comment
Area 1	58%	\$750k (7k Units)	\$800k \$50k (8k Units)	61%	82%	100%	<ul style="list-style-type: none"> Supply confirmed for Demand Safety stock health back in 4 months
Area 2	84%	\$1.000k (6k Units)	\$1.200 \$200k (7k Units)	86%	96%	100%	<ul style="list-style-type: none"> Supply and Safety Stock confirmed
Area 4	57%	\$1.600k (160k Units)	\$1.550k (\$50k) (150k Units)	62%	80%	100%	<ul style="list-style-type: none"> Supply confirmed for Demand Safety stock health back in 5 months
Area 5	43%	\$1.750k (150k Units)	\$1.500k (\$250k) (130k Units)	39%	44%	97%	<ul style="list-style-type: none"> Supply not confirmed next 3 months Ongoing backorder risk Capacity ramp up in progress Supply back on track in 3 months and Safety stock health back in 12 months
Area 6	88%	\$300k (2k units)	\$300k (\$0k) (2k units)	95%	100%	100%	<ul style="list-style-type: none"> Supply and Safety Stock confirmed

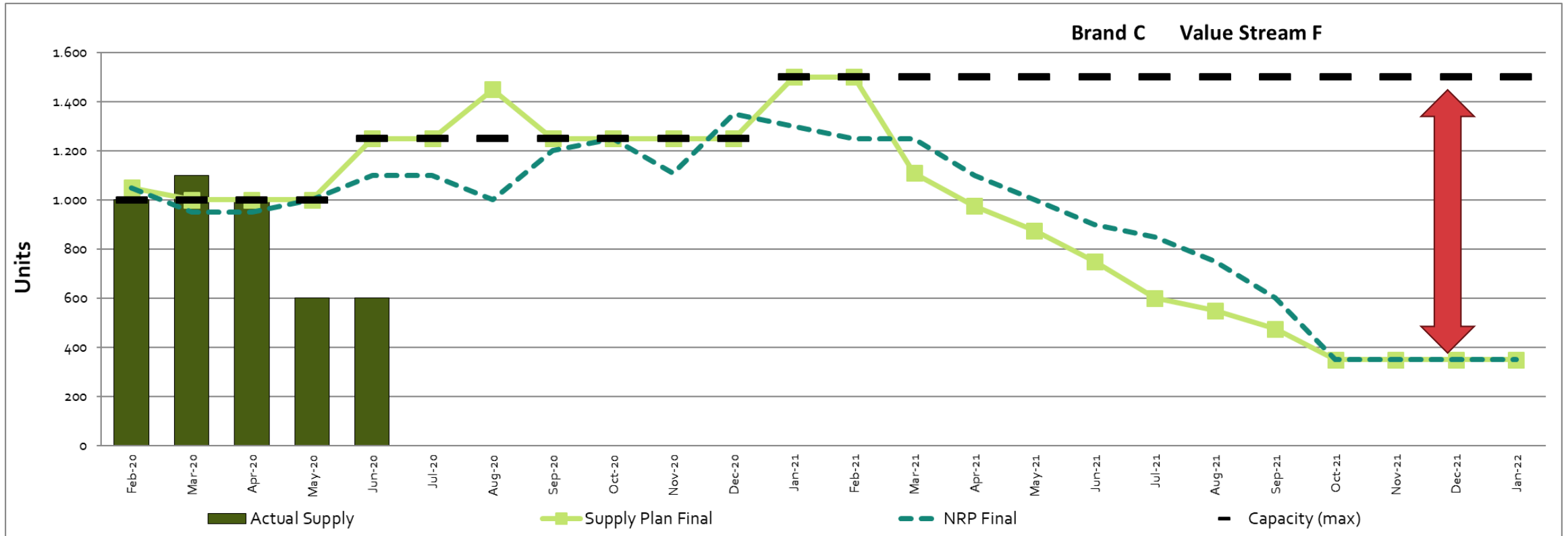
Thresholds



Supply health:
Demand Plan confirmed **AND** Safety stock health in place

Location 1 – Value Stream F

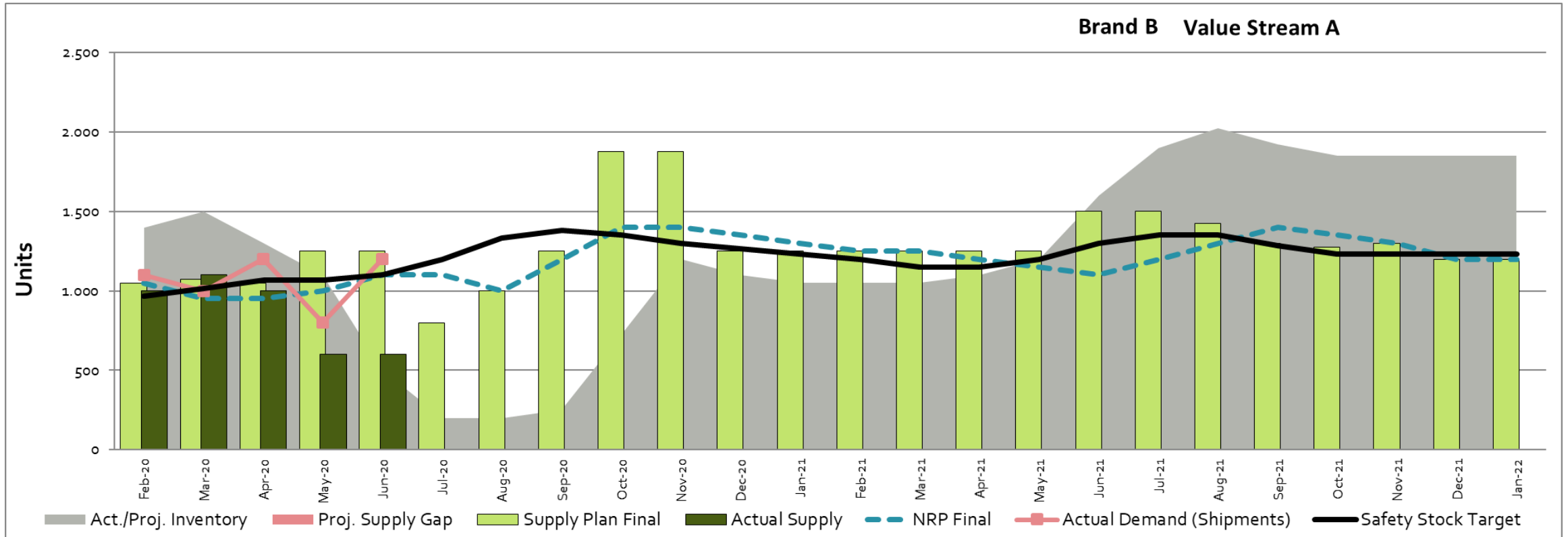
- Over Capacity -



Demand - Supply Assumptions/ Impacts	Capacity / Safety Stock Assumptions	Completed Action Items
<ul style="list-style-type: none"> ➤ Long-term Demand decrease due to phase out and/or cannibalization ... 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C
Risks / Concerns	Changes / Impacts / Opportunities	Decisions Required
<ul style="list-style-type: none"> ➤ Over-Capacity (Waste): Negative P&L Impact – Under-Absorption – Depreciation challenges – ... 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ Des-Investment, In-Sourcing and/or New Product Introduction!

Location 3 – Value Stream A

- Supply Constraints -

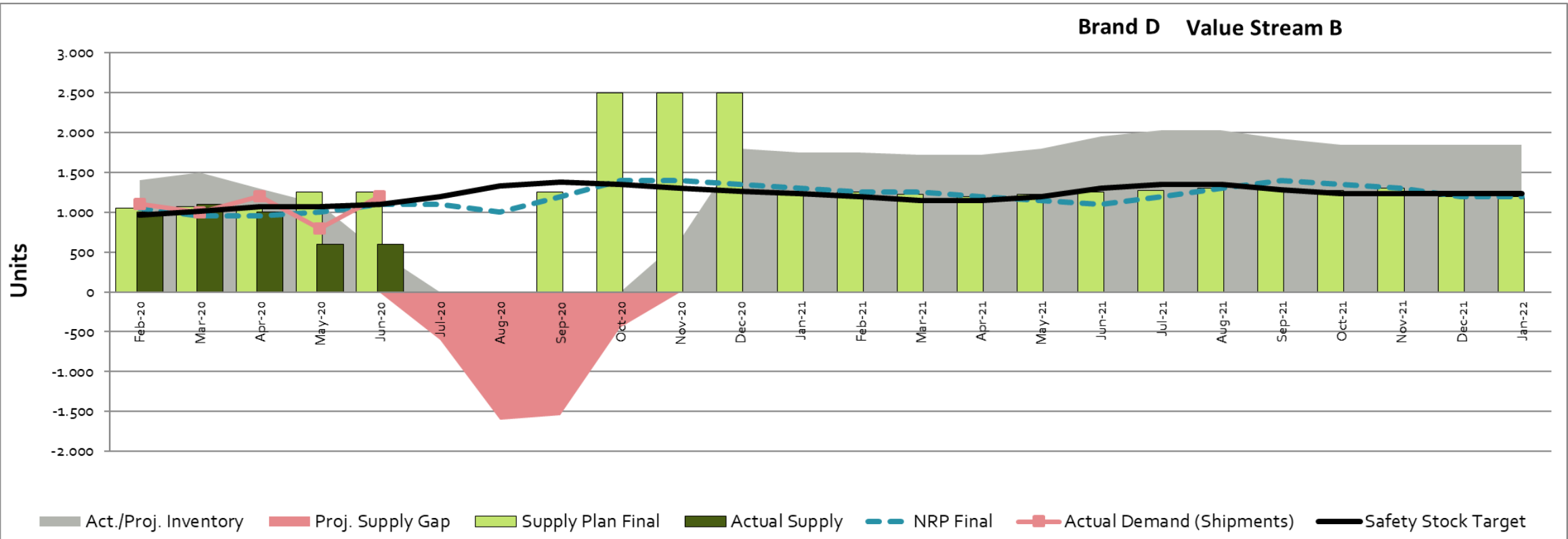


Demand - Supply Assumptions/ Impacts	Capacity / Safety Stock Assumptions	Completed Action Items
<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ Capacity decrease due to needed maintenance activities ... 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C
Risks / Concerns	Changes / Impacts / Opportunities	Decisions Required
<ul style="list-style-type: none"> ➤ Long-Term challenges with Safety Stock Level to keep Product Availability Commitment – Revenue Risk and potential Top Line Impact ... 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ Add additional capacities from external partner for 2 months, but at a higher cost rate (\$55k) and short term headcount increase needed (+4 FTE)

Location 4 – Value Stream B

- Supply Gap/ Rupture-

Brand D Value Stream B



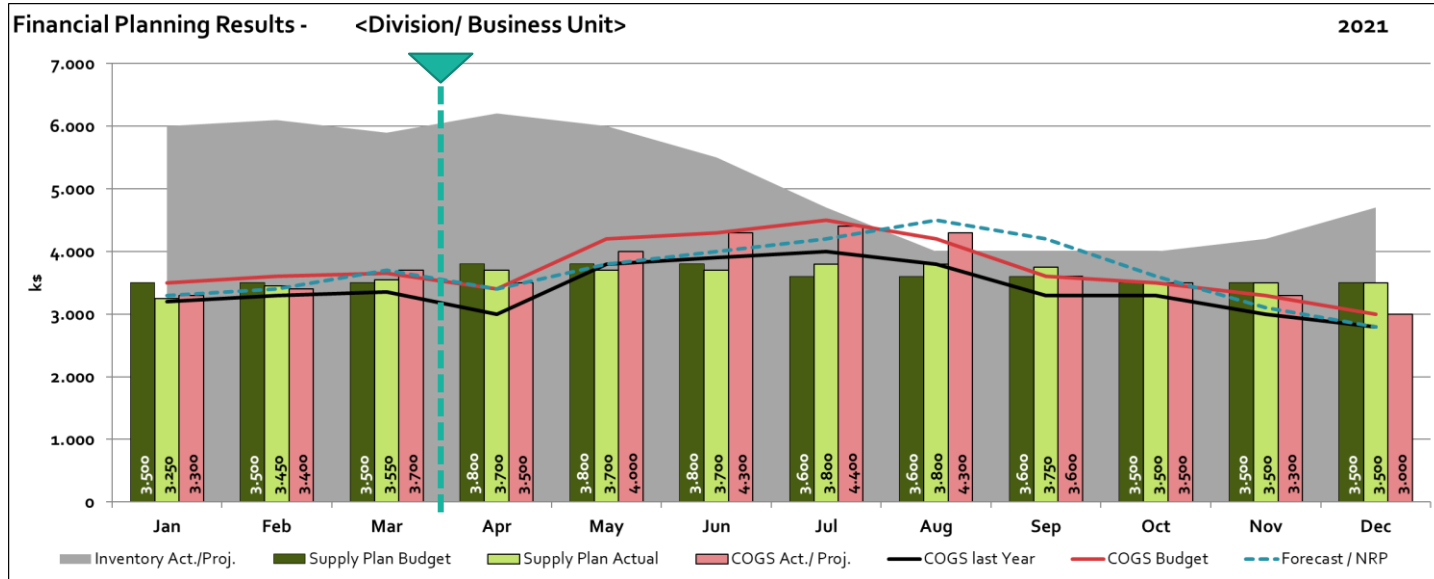
■ Act./Proj. Inventory
 ■ Proj. Supply Gap
 ■ Supply Plan Final
 ■ Actual Supply
 - - - NRP Final
 ■ Actual Demand (Shipments)
 — Safety Stock Target

Demand - Supply Assumptions/ Impacts	Capacity / Safety Stock Assumptions	Completed Action Items
<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ Supply Rupture due to equipment break-down in bottleneck area 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C
Risks / Concerns	Changes / Impacts / Opportunities	Decisions Required
<ul style="list-style-type: none"> ➤ Supply back log catch up not possible with normal capacity offer ... ➤ Revenue loss / risk of \$600k per month of rupture 	<ul style="list-style-type: none"> ➤ A ➤ B ➤ C 	<ul style="list-style-type: none"> ➤ Escalation to Reconciliation and/or Executive S&OP Review ... ➤ Allocate additional engineering resources (\$150k) ... ➤ Re-allocate additional capacities for 3 months for supply catch up (20% upcharge costs = \$250k) ...

18-Feb-21

Financial Alignment – Supply Network

Example

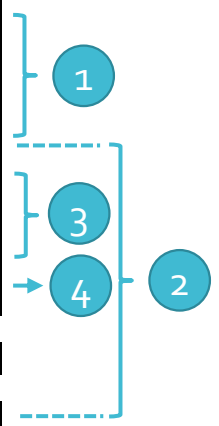


Risks / Concerns
<ul style="list-style-type: none"> Q1 Shipments \$0,4m behind budget Q2 Forecast \$0,6m below expectations FY variance of \$0,3m between latest projection of Division vs. Operations ...
Changes / Impacts / Opportunities
<ul style="list-style-type: none"> Q3 Forecast shows an upside potential of \$0,6m ...
Decisions Required
<ul style="list-style-type: none"> Follow up and reconciliation needed with Division/BU needed to close forecast variance ...

Summary

- Division (DP vs. Shipments):**
- ① Net Requirement Plan – COGS: **Not aligned**
- Location Financials (SP vs. FI-Plan):**
- ② Supply Plan – Inventory – COGS: **aligned**
- Location Operations (Execution vs. SP):**
- ③ Supply Plan execution: **aligned**
- Inventory (Cash impact):**
- ④ Inventory Change: **decrease**

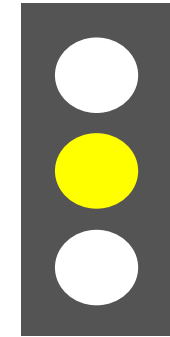
m\$	Q1	Q2	Q3	Q4	Total
COGS last Year	\$9,9	\$10,7	\$11,1	\$9,1	\$40,8
Forecast / NRP	\$10,4	\$11,2	\$12,9	\$9,5	\$44,0
Variance COGS vs. FC	\$0,0	\$0,6	-\$0,6	\$0,3	\$0,3
COGS Budget	\$10,8	\$11,9	\$12,3	\$9,8	\$44,8
COGS Act. / Proj.	\$10,4	\$11,8	\$12,3	\$9,8	\$44,3
COGS Budget Variance	-\$0,4	-\$0,1	\$0,0	\$0,0	-\$0,5
SP Budget	\$10,5	\$11,4	\$10,8	\$10,5	\$43,2
SP Act. / Proj.	\$10,3	\$11,1	\$11,4	\$10,5	\$43,2
SP Budget Variance	-\$0,3	-\$0,3	\$0,5	\$0,0	\$0,0
Average Inventory	\$6,0	\$5,9	\$4,2	\$4,3	\$5,1
Inventory Change	-\$0,2	-\$0,7	-\$1,0	\$0,7	-\$1,1
Avg. DII forward	51	45	32	40	42
SP - Inventory - COGS	\$0,0	\$0,0	\$0,0	\$0,0	\$0,0
COGS Growth rate in %	6%	10%	11%	8%	9%



Capacity Review Tracker (18 months rolling)

Area	Q1/YY	Q2/YY	Q3/YY	Q4/YY	Q1/YY	Q2/YY
Value Stream A	CER: +2 CNC Milling 		Transfer: 1 CNC Milling from Value Stream F 			CER: +1 CNC Milling
Value Stream B	CER: +2 CNC Long turning 			CER: Replacement 1 CNC milling with Robot 		
Value Stream C		Headcount: +5 FTE 		Headcount: +5 FTE 		
...						

Actual Month

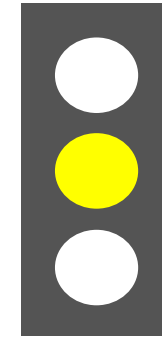


Risks / Concerns
➤ CER for Value Stream B not yet approved, high failure risk of current equipment
Changes / Impacts / Opportunities
➤ N/A
Decisions Required
➤ Escalation of CER approval for Value Stream B to Sr. Management

Project Status Tracker (12 months rolling)

Actual Month

Topic	Q1/YY	Q2/YY	Q3/YY	Q4/YY	Comment
Transfer-Project A	Planning & Staffing 	Specification and CER approval 		Implementation 	<ul style="list-style-type: none"> ✓ 3 FTE hired, 2 FTE reallocated ✓ 3 Suppliers contact for equipment offer, current estimated cost: \$750k
Sourc-Project B	Define Consignment Strategy 			Contract Closure 	– Portfolio Scope not yet finalized
...					



Risks / Concerns
<ul style="list-style-type: none"> ➤ Delay of consignment strategy can impact next year inventory budget by \$2,3m
Changes / Impacts / Opportunities
<ul style="list-style-type: none"> ➤ Timeline of Sourcing Project B can be improved w/ additional Resources
Decisions Required
<ul style="list-style-type: none"> ➤ Re-allocate 1 FTE in addition on Sourcing Project B for 6 months: +\$40k Project costs

Decisions made within the ESR

Example

Business Unit	Location/ Supplier	Decision Required	Owner	Due Date	Validation Required via Reconciliation or Executive Review? Y/N
Franchise 1	Location 1	<ul style="list-style-type: none"> Des-Investment, In-Sourcing and/or New Product Introduction to mitigate long-term over-capacity 	Plant Manager	DD/MM/YY	Y
Franchise 2	Location 3	<ul style="list-style-type: none"> Add additional capacities from external partner for 2 months, but at a higher cost rate (\$55k) and short-term headcount increase needed (+4 FTE) 	Plant Manager	DD/MM/YY	N
Franchise 3	Location 4	<ul style="list-style-type: none"> Escalation to Reconciliation and/or Executive S&OP Review due to upcoming supply rupture Allocate additional engineering resources (\$150k) Re-allocate additional capacities for 3 months for supply catch up (20% upcharge costs = \$250k) 	Planning Leader Plant Manager	DD/MM/YY	Y

Franchise 1 / Location 1: Approved

Franchise 2 / Location 3: Not approved – reach out Location 2 to review support opportunities in-house

Franchise 3 / Location 4: Approved – escalation will be managed via Reconciliation meeting

Author

Introduction summary

Christian Jahn

Diplom-Betriebswirt (BBA) – DHBW Lörrach

MBA (Business Integration) – Julius-Maximilians-University Würzburg

Certified Supply Chain Professional (CSCP) – APCIS

Chief Technology Manager (CTM) – WZL RWTH Aachen & Fraunhofer IPT

SAP Certified Business Associate (ERP 6.0)

Professional Background

- Supply Chain Management, Planning & Execution
- Operations & Plant Management
- Business Process Development, Implementation & Validation
- ERP & IT Solutions
- Quality Management
- 20+ years in Metal Processing & Medical Device Industry

www.scm-knowhow.com

