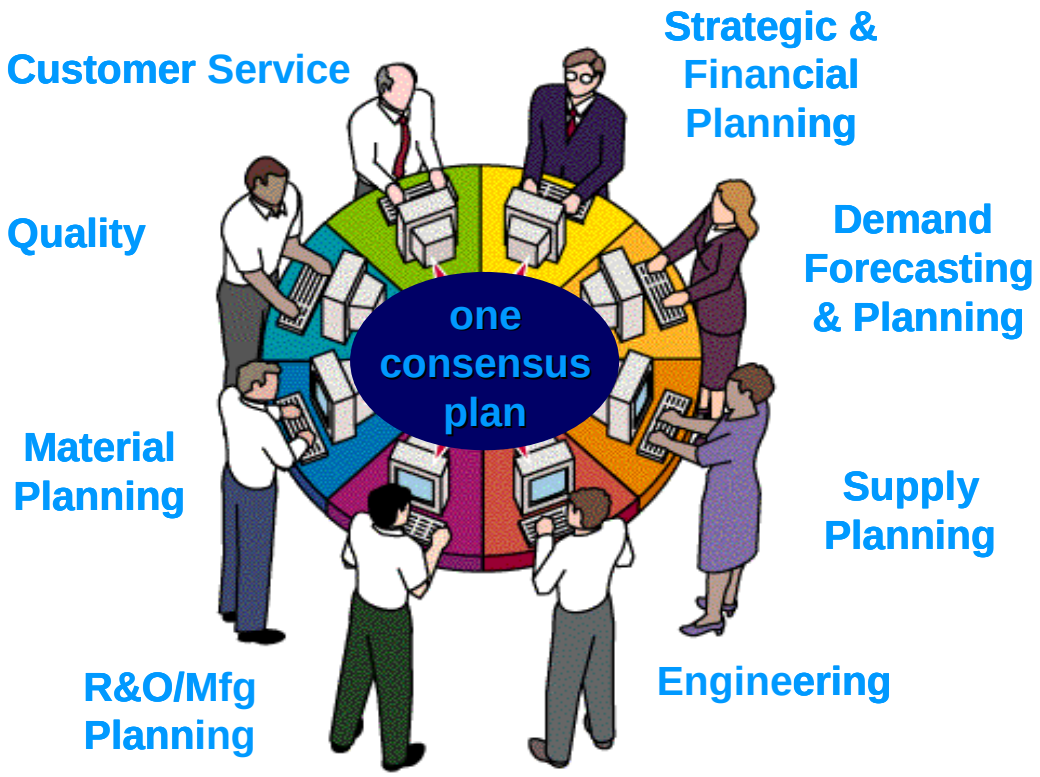
Sales, Inventory, Operations Planning (SIOP)

August 6, 2020

Sales, Inventory, Operations Planning (SIOP)



SIOP—Definition and Expectations

1. Strategically directs the business
2. Integrated and aligned plans
   (Financial, Demand, Production, Supply, Inventory, Backlog, NPD and Capacity)
3. Open Communication Venue
4. Plans to address gaps (action)
5. Execution and accountability
6. Alignment
7. Executive Sponsorship

APICS Industry Standard Definition:

A process to develop tactical plans that provide management the ability to strategically direct its business to achieve competitive advantage on a continuous basis by integrating customer-focused marketing plans for new and existing products with the management of the supply chain. The process brings together all the plans for the business (sales, marketing, development, manufacturing, purchasing, and financial) into one integrated set of plans. The process must reconcile all supply, demand, and new product plans at both the detail and aggregate levels and tie to the business plan.

WHAT SIOP **SHOULD** BE USED FOR

- Drive high level forecast (not replenishment) to suppliers
- Production, capacity, and market right sizing
- Align business, financial, and operations plans
- Track execution to plan
- Create action plans for gaps (financial, production, and supply)

MISCONCEPTIONS OF SIOP

- Used for SKU level component replenishment (best in class SKU level component requirements still less than 70%)
- Used as an MRP system
- Just a Sales and Marketing exercise
- A once a month process

SIOP Process Overview

Demand

Participants
- Demand Planning
- Sales
- Marketing
- Product Management
- Finance
- Central Planning

Key Activities
- Historical Sales Review
- Market Intelligence Review
- Forecast Accuracy Review
- Develop Unconstrained Demand Plan

Supply

Participants
- Sourcing
- Operations
- Distribution
- Production Control
- Tactical Purchasing
- Central Planning

Key Activities
- Capacity and production planning
- Market (Super, WIP, FG) Inventory Analysis

Reconciliation

Participants
- Production Control
- Demand Planning
- Central Planning

Key Activities
- Gap Analysis and Resolution
- Review significant business changes

Executive SIOP

Participants
- Executive Team
- Operations Management
- Sales Management
- Finance
- Central Planning

Key Activities
- Final Plan Approval
- Team consensus

Demand Phase

Inputs

- Historical Demand Review
  (12 month min. preferred)
- Forward Market Intelligence / Assumptions
  - Promotions
  - Special Events
  - Customer Knowledge (new / deleted)
- New Products
- Sales Confirmed Bookings / Backlog
- Obsolescence
- Forecast Accuracy Review

Outputs

- Demand Forecast Level by SKU, (unconstrained) 6 month minimum
- Financial Revenue Plan to Forecast Plan Comparison
  - Identify Gaps and Potential Solutions

Variable	If not same, when?	If never, why?
Demand Review Level (product / process family min.)		Business / Customer driven (ie – big box retail done at a SKU level)
Demand Review Forum and Ownership		As long as GBU lead, organizational structures will vary
Forward Forecast / Demand Methodology		Business / Customer(SKU) driven
Modeling Tool (APO, Demand Solutions, BI w/ Macro)	TBD – pending funding and determination of best solution (2011)	

Supply Chain Phase

Inputs

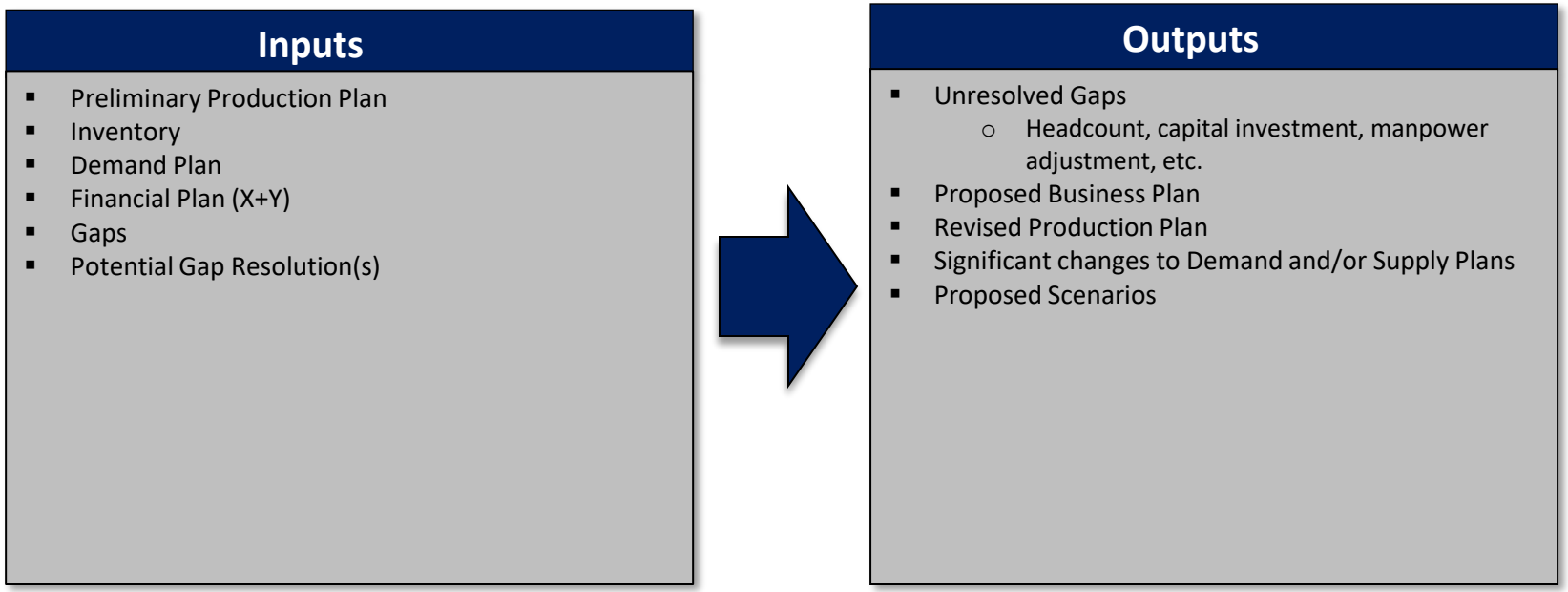
- Demand Forecast Level by SKU, (unconstrained) 6 month minimum
- Key Production capacity
- Key supplier capacity
- Historical performance to plan
  - OTD
  - Past Due $'s to Customer
- Production Backlog
- Inventory Position / Targets

Outputs

- Preliminary Production Plan
  - Inventory
  - Build Schedules
  - Productivity Forecast
  - Earned Hours Required
  - Capacity Constraints – Labor / Machinery
  - Staffing Level
- Gaps and Potential Solutions

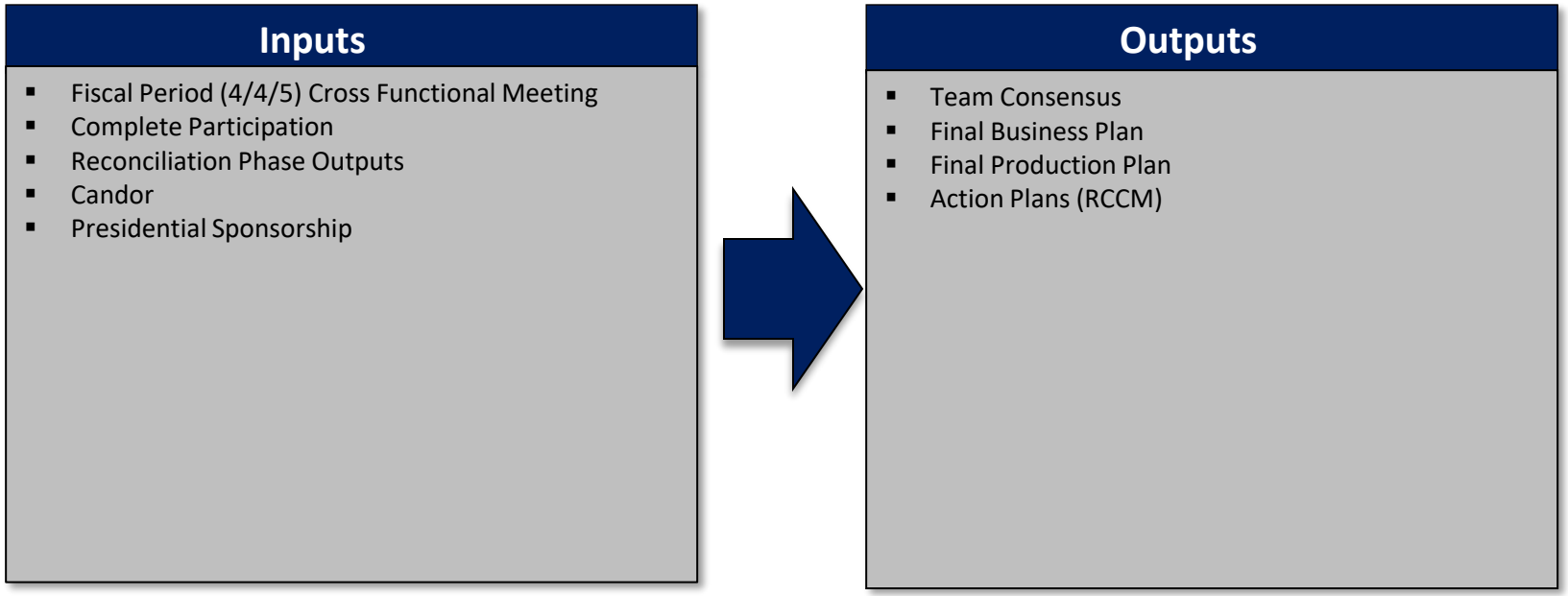
Variable	If not same, when?	If never, why?
Production Performance Review (assumption of Hour/Hour and TAKT review)	As dictated by lean implementation plans across GBU's	
Production Plan Format	Q4 202X	

Reconciliation Phase



Variable	If not same, when?	If never, why?

Executive SIOP Phase



Variable	If not same, when?	If never, why?
Functional Level Attendance (buyers, production supervisors, etc.)		Functional leads at a minimum but up to the GBU discretion beyond that.

Appendix

Demand Sequence

Pull historic data into your chosen modeling tool (Demand Solutions/APO/BI/etc) in gross units (see glossary) by financial period (4-4-5 month).

Make sure to use the order due date, not the ship date so the forecast is based on when the customer wanted the product

Generate a statistical forecast (spin the data through your modeling software)

Review and make adjustments to the statistical forecast based on feedback from multiple inputs (Product Managers/Sales Managers/etc)

Compare resulting adjusted forecast to financial plan (using average selling price x unit forecast), make adjustments as necessary (financial forecast should be very close to the unit forecast)

The final, adjusted demand plan is then passed to the Supply step

Supply Chain Sequence

Convert the data to a useable format for use in developing the Production Plan. This may involve loading the data into your ERP system and spinning through MRP to see net requirements

Develop the Production Plan. This can include Days-on-Hand Target Inventory, Past Due requirements, Backlog, Internal Capacity Concerns and Prior Period Performance, Supplier Constraints. The production plan format and calculation may vary by site and division. Some examples are attached for reference. In some cases, the updated production plan will be updated into the ERP/MRP system to show net component requirements for supply chain

The supply team then evaluates the plan and identifies/elevates/resolves any concerns

Note that how the information is passed from demand to supply teams may vary by division due to differences in modeling tools and ERP systems

Glossary of Appendix Terms

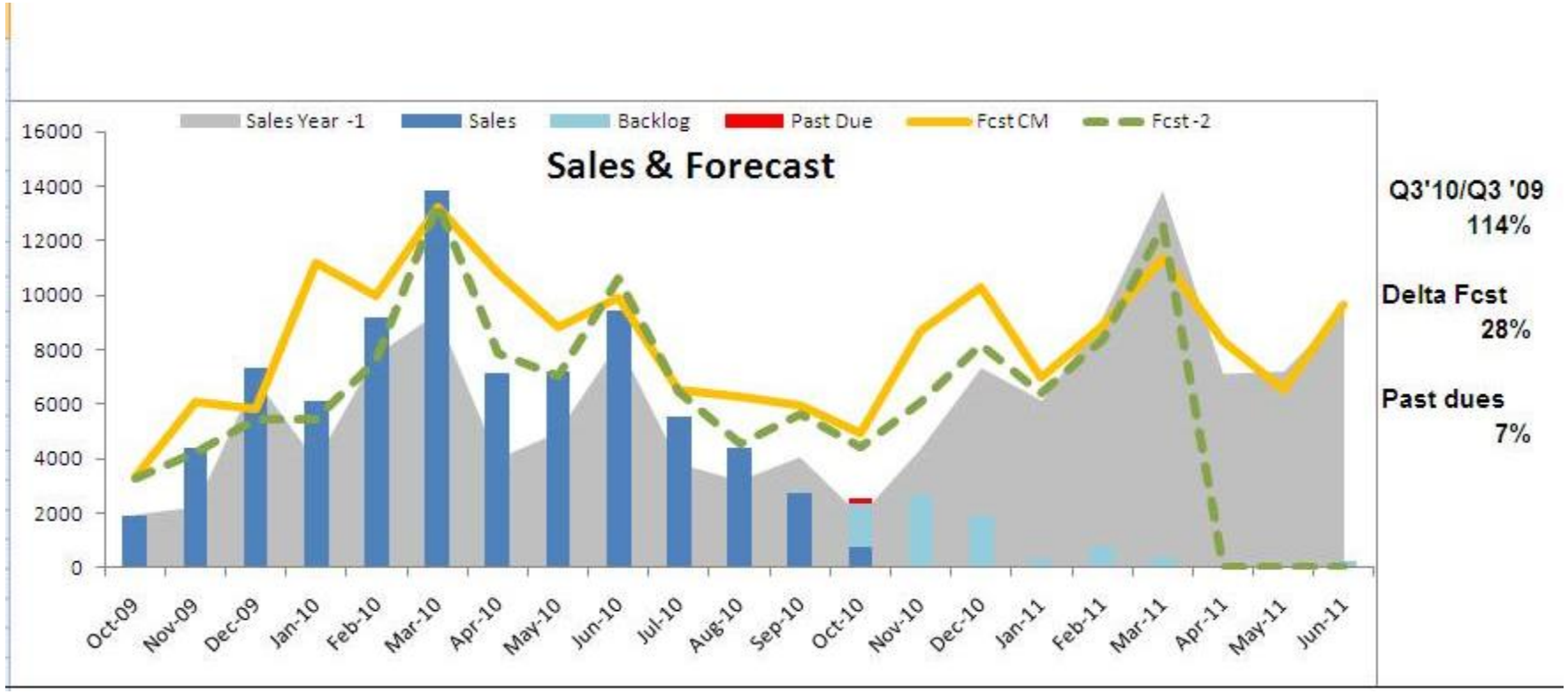
- Gross Units - This includes *all* outbound units by SKU including warranty and promotional sales. In most cases, do not include returns in the calculation

- Average Selling Price – Net Order Value/Gross outbound units. Used to tie units forecast to the Financial plan. Use a 6-month minimum time horizon, being aware of the potential impact of promotional programs and price increases will have on average selling price – you may want to adjust the time horizon based on one-time-only promotions or the average selling price based on known future price increases

- Forecast Accuracy (time horizon) – Use one level up from the SKU forecast (product family, in most cases), use forecast units, measure the actual vs the forecast provided for that period 2 months prior
  1-(|Forecast-Actual|/Forecast)

- Forward Forecast Horizon – use 6-months as a minimum

Demand Screen Format / Template



Production Plan Template

			SEP	OCT	NOV	DEC	JAN
Regular Workdays			5	20	18	22	20
Scheduled Production Days			5	21	19	24	20
Units			36	36	36	36	36
Hrs/Day or Shift			8.5	9.3	9.3	9.3	8.8
Shifts			2	2	2	2	2
Current Capacity			3057	13974	12643	15971	12590
DSFM Sales Forecast [Ref Only]			0	0	0	0	0
Expected Sales of MTS		RV	1,067	11,363	12,854	15,445	8,592
Total Expected Sales			1,135	13,374	15,300	19,430	10,551
MTS Build	83%		3,400	11,963	10,197	11,986	10,631
ATO	17%		68	2,011	2,446	3,985	1,959
Total Projected Build		INV Start	3468	13974	12643	15971	12590
Projected Inventory		4,285	6618	7218	4562	1102	3141
Daily Rate (Scheduled Days)			694	665	665	665	629
Daily Rate (Regular Workdays Days)			611	699	702	726	629
*Production Capacity Can Flex +/- 20%				14%	1%	3%	-13%
			Q4 ave	709		Q1 ave	635
I Day =770		DOH Planned		9.4	5.9	1.4	4.1
		JUN '07		593	(452)	(596)	347
Clock / Punch	**Run Time**	Earned Hrs		**2,449**	**2,186**	**2,774**	**2,153**
8	**7.25**	Days	5	21	19	24	20
9	**8.08**	Hrs Req	17.00	18.50	18.50	18.50	17.50
10	**9.08**	Rate	35.97	35.97	35.97	35.97	35.97
12	**9.92**			2	2	2	3

Production Plan Template

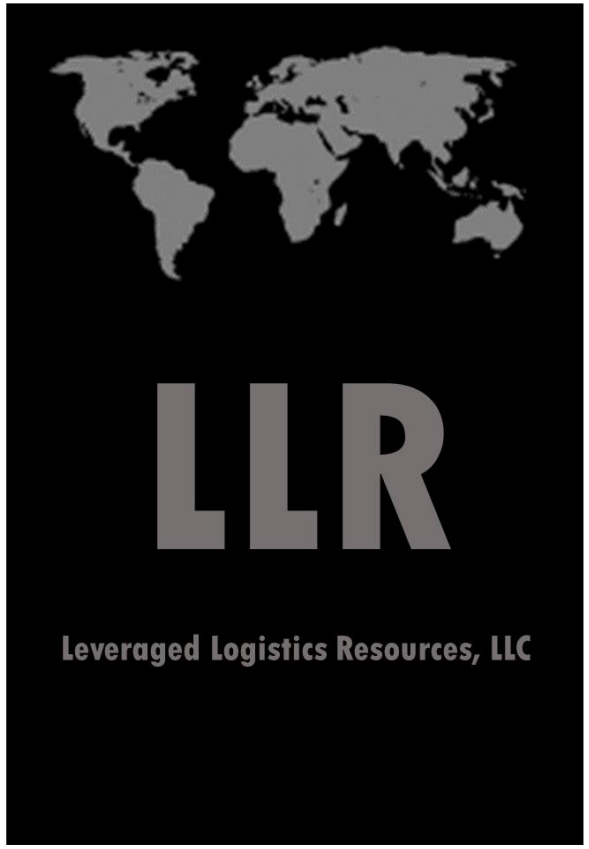
Updated 10/18/10	244 Models								
	MSO - LINE 1, 1-2 DR. - STD								
101E	**Jul-10**	**Aug-10**	**Sep-10**	**Oct-10**	**Nov-10**	**Dec-10**	**Jan-11**	**Feb-11**	**Mar-11**
Production Days	19	20	24	20	18	22	19	20	25
Sales Days	19	20	24	20	18	22	19	20	25
	ACTUALS (Units)			PLAN (Units)					
BOOKINGS FORECAST	1413	1514	1796	1579	1424	1748	1506	1538	1886
Actuals	1406	1477	1924						
Bgks D/R	74	74	80	79	79	79	79	77	75
PRODUCTION PLAN	1808	1943	2038	1760	1424	1748	1506	1538	1886
Actuals	1365	1717	1960						
Prod D/R	72	86	82	88	79	79	79	77	75
INVENTORY	245	289	348	507	507	507	507	507	507
Backlog - Time Phased		Past Due	4	164	0	0	0	0	0
Backlog	286	112	168	146	146	146	146	146	146
AVAIL Inventory	-41	177	180	361	361	361	361	361	361
AVAIL DOH	-1	2	2	5	5	5	5	5	5
AVAILABILITY/DRA	57.0%	65.2%	81.4%	Current Month Time Phased Backlog does not include Past D					
			Oct fcst	1579	1424	1748	1506	1538	1886
				79	79	79	79	77	75
			Sep fcst	1798	1515	1402	1685	1288	1438
				90	84	64	89	64	58
CM-2			Aug fcst	1807	1522	1387	1666	1211	1434
				90	85	63	88	61	57
			Jul fcst	1806	1532	1375	1674	1229	1449
				90	85	63	88	61	58

SIOP Metrics

What validates that SIOP is working and effective?

- Attendance / Engagement
- SQDCC Improvement

Discussion?



Douglas Bley

Principal

Leveraged Logistics Resources, LLC

10912 Whitetail Rd
Rogers, MN 55374

Phone: +1 (612) 327-5072
Email: Douglas.Bley@LevLogRes.com

www.LevLogRes.com