Case study: Detailed Capacity Analysis

Client: Three-Plant Bakery
Project Type: Detailed Capacity Analysis

Background and Activities

- As part of ODD for PE firm for bakery with 3 active sites, performed bottoms up, line-by-line capacity analysis on 3 existing sites
- Based on existing SKU mix, performed bottom-up constraint analysis by work center (ie, mixing, proofing, baking, packaging) for each of the 3 sites to validate management's top-down estimates

Findings & Benefits

✓ Bottoms-up analysis largely confirmed target's 'likely maximum revenue capacity' estimate

✓ Identified specific work center constraints that reduce current revenue potential – providing clear action items if and when buyer wants to add capacity

✓ Provided PE buyer with confidence that seller's management had good handle on capacity and that the growth forecast could be achieved without large incremental capex beyond forecast,

Facility	Product Line	Average Pieces Per Case	Line Speed	Line Efficiency	Net Line Speed	Shifts	Days	Shift Length (Hours)	Case Capacity (Wk)	Sales Weeks	Average Gross Price per Case	Sales Capacity (Year)
redacted		27	6000	80.0%	4800	2	5	8	14,222	50	$29.27	$ 20,814,222
		21	3000	80.0%	2400	1	5	8	4,571	50	$28.57	$ 6,530,286
		14	1800	80.0%	1440	2	5	8	8,409	50	$28.57	
		26	3000	80.0%	2400	1	5	8	3,664	50		
		76	5150	80.0%	4120	1	5	8	2,171	50		$ 4,838,698
		188	7500	80.0%	6000	1	5	8	1,277			$ 2,925,957
		12	2800	80.0%	2240	3	6.25	8	29,217		$17.05	$ 24,907,826
		18	3000	80.0%	2400	3	5	8	15,652	50	$20.52	$ 16,059,130
		146	7500	80.0%	6000	3	5	8	4,936	50	$20.23	$ 4,991,638
		24.5	30000	80.0%	24000	3	5	7.25	10,653	50	$30.03	$ 15,995,571
		1	170	80.0%	136	2	5	8	10,880	50	$23.92	$ 13,012,480
		5	840	80.0%	672	2	5	8	10,752	50	$25.76	$ 13,848,576
		47	6300	80.0%	5040	1	5	8	4,289	50	$42.00	$ 9,007,660
		73	3600	80.0%	2880	1	5	8	1,578	50	$31.15	$ 2,457,863

	Saphineia Est Max Kg (000)	RSFG Model Kg (000)	LTM Kg (000)	$/kg LTM Wtd Avg	RSFG Model $/Kg	LTM Avg $/kg	LTM Wtd Avg $/Kg	Saphineia Est $m	RSFG model $m	RSFG Likely Max$m	LTM $m	Mixing	Forming / Depositing	Blast Freezing	Baking	Freezing	Packaging	Saphineia Est $m	Est $ Rev Ect Interactions	Comme
B&I												Dough/Mixer	Bake/Crumbed/Moul		Oven	Blast Freezer PB	Blast Freezer ID			
Par Baked Bread	7,549.6	9,394.2	6,482.8	$ 3.43	$ 2.65	$ 4.48	$ 3.43	$ 25.9	$ 24.9		$ 22.2	x x	x x		x	x		$25.9	$25.9	
Frozen Dough Glimek	7,079.3	9,254.7	737.7	$ 2.42	$ 1.74	$ 2.44	$ 2.42	$ 17.1	$ 16.1		$ 1.8	x	x			x		$17.1	$18.4	constrained by PB running first by forming
Kaiser	1,537.1	2,523.4	1,021.1	$ 2.34	$ 1.98	$ 2.79	$ 2.34	$ 3.6	$ 5.0		$ 2.4	x	x			x		$3.6	$6.0	constrained by FD-D running first by blast freezer
Total	**16,166.2**	**21,172.3**	**8,241.6**	**$ 2.88**	**$ 2.17**	**$ 3.90**	**$ 3.20**	**$ 46.6**	**$ 46.0**	**$ 30.0**	**$ 26.4**							**$46.6**		
Lelbon												Big Mixers	Rex / Laminating / Glimek		Oven	Blast Freezer	Garlic - Bread / Garlic - Rolls / Garlic - Toast			
Garlic Toast	2,427.6	3,430.2	468.0	$ 3.48	$ 3.54	$ 4.00	$ 3.48	$ 8.5	$ 12.1		$ 1.6	x	x		x		x	$8.5	$8.5	
Garlic Bread	5,037.9	5,189.1	2,082.7	$ 3.16	$ 4.01	$ 3.12	$ 3.16	$ 15.9	$ 20.8		$ 6.6	x	x		x		x	$15.9	$19.6	constrained by running toast first by forming
Garlic - Rolls	803.6	-	45.2	$ 5.97		$ 6.24	$ 5.97	$ 4.8	$ -		$ 0.3	x	x		x		x	$4.8	$4.8	
Lamination	529.7	700.0	341.3	$ 9.01	$ 6.91	$ 9.95	$ 9.01	$ 4.8	$ 4.8		$ 3.1	x	x		x	x		$4.8	$4.8	
Frozen Dough Rex	-	1,003.0	134.7	$ 3.13	$ 2.92	$ 4.53	$ 3.13	$ -	$ 2.9		$ 0.4	x	x			x		$0.0	$3.2	constrained by forming from prior
Frozen Dough Glimek	-	9,254.7	1,159.4	$ 2.12	$ 2.09	$ 2.28	$ 2.12	$ -	$ 6.5		$ 2.5	x	x			x		$0.0	$9.6	constrained by forming from prior
																		Mix->Glim	Mix->Rex	constrained by forming from prior; bottleneck is either mixing or rex former
Par Baked Bread	-	1,022.1	419.5	$ 4.75	$ 4.29	$ 4.47	$ 4.75	$ -	$ 5.3		$ 2.0	x	x	x	x			$0.0	$19.0	$2.4 depending on product
Total	**8,798.9**	**20,598.1**	**4,650.8**	**$ 3.86**	**$ 2.55**	**$ 4.60**	**$ 3.53**	**$ 34.0**	**$ 52.6**	**$ 40.7**	**$ 16.4**							**$34.0**		
Farm												Muffin Mixers / Cake Mixers / Cookie Mixers	Muffin Pails / Baked Muffins / Cakes / Small Cookies / Large Cookies	Cookie Dough Tube	Cookie Spiral Freezer	Oven		Flow Wrapper		
7,152.3 Muffins Pailed	7,152.3	5,591.6	2,440.1	$ 4.17	$ 2.33	$ 4.69	$ 4.17	$ 29.8	$ 13.0		$ 10.2	x	x					$29.8	$29.8	
719.5 Muffins Baked	1,439.0	459.4	719.5	$ 8.28	$ 5.35	$ 8.17	$ 8.28	$ 11.9	$ 2.5		$ 6.0	x	x		x	x		$11.9	$27.6	Artificially constrained to enable Coffee Cake production
111.4 Cookies Baked	111.4	1,022.1	111.4	$ 8.73	$ 8.81	$ 8.98	$ 8.73	$ 1.0	$ 9.0		$ 1.0		x		x	x		$1.0	$11.9	Artificially constrained to enable Coffee Cake production
4,729.0 Cookies Frozen Dough	4,729.0	3,674.1	904.6	$ 5.07	$ 4.35	$ 6.59	$ 5.07	$ 24.0	$ 16.0		$ 4.6	x x	x x	x				$24.0	$24.0	
2,733.7 Coffee Cakes	2,549.7	1,745.6	426.4	$ 7.99	$ 7.93	$ 9.45	$ 7.99	$ 20.4	$ 13.8		$ 3.4	x	x			x		$20.4	$25.4	Constrained by ovens from former
Loaf Cakes		610.2			$ 7.34				$ 4.5			x	x			x				Not produced in LTM; not sure bottleneck as unable to 'weight' specific SKUs
15,446.0 **Total**	**15,981.5**	**13,102.9**	**4,602.0**	**$ 5.45**	**$ 4.49**	**$ 6.25**	**$ 5.45**	**$ 87.0**	**$ 58.8**	**$ 70.8**	**$ 25.1**							**$87.0**		
Tasty Baked	4,100.2	3,837.3	1,257.4	$ 8.11	$ 6.60		$ 8.22	$ 33.3	$ 25.3		$ 10.3									
Excl.par RS Cookie - Tub	6,355.6	-	46.3	$ 5.57		$ 5.57	$ 5.57	$ 35.4	$ -		$ 0.3	x		x				$ 35.4	$ 35.4	
	22,337.07																			
Muffins Pailed	7,152.3	5,591.6	2,440.1	$ 4.17	$ 2.33	$ 4.69	$ 4.17	$ 29.8	$ 13.0		$ 10.2									
Muffins Baked	719.5	459.4	719.5	$ 8.28	$ 5.35	$ 8.17	$ 8.28	$ 6.0	$ 2.5		$ 6.0									
Cookies Baked	111.4	1,022.1	111.4	$ 8.73	$ 8.81	$ 8.98	$ 8.73	$ 1.0	$ 9.0		$ 1.0									
Cookies Frozen Dough	4,729.0	3,674.1	904.6	$ 5.07	$ 4.35	$ 6.59	$ 5.07	$ 24.0	$ 16.0		$ 4.6									
Coffee Cakes	2,733.7	1,745.6	426.4	$ 7.99	$ 7.93	$ 9.45	$ 7.99	$ 21.8	$ 13.8		$ 3.4									
Loaf Cakes		610.2			$ 7.34			$	$ 4.5											
Total	**15,446.0**	**13,102.9**	**4,602.0**	**$ 5.34**	**$ 4.49**	**$ 6.25**	**$ 5.45**	**$ 82.5**	**$ 58.8**	**$ 70.8**	**$ 25.1**									
Excl.par RS Cookie - Tub	5,845.2	-	46.3	$ 5.57		$ 5.57	$ 5.57	$ 31.4	$ -		$ 0.3									