

3D Printing Business Model			Metronome Production			Radio Production			Custom Speaker Enclosures			Custom Keyboard Keycaps			Template Product Production		
Business Logistics			Order Details			Order Details			Order Details			Order Details			Order Details		
~16 hours printing a day max, 400hrs weekly/printer max 400% = 2400hr			Metronomes Requested 300			Radios Requested 100			Speakers Requested 50			Keycap Sets Requested 225			Product Requested 0		
Number of Machines Available			Material(s) Needed PETG			Material(s) Needed ABS			Material(s) Needed PC, TPU			Material(s) Needed ABS			Material(s) Needed Material		
Prusa 3 MK4 (300mm print area)			PETG cost (\$/kg) 40			ABS cost (\$/kg) 45			PC (1.2kg @\$60), TPU (.3kg @\$50) cost 87			ABS cost (\$/kg) 45			ABS cost (\$/kg) 0		
Raise3D Pro2 (450mm)			# Product per Unit 4			# Product per Unit 2			# Product per Unit 2			# Product per Unit 2			# Product per Unit 0		
BigRep ONE V3 (1000mm)			# Metronomes in parallel 8			# Radios in parallel 6			# Product in parallel 2			# Product in parallel 6			# Product in parallel 0		
Stratasys F900 (1200mm build size)			Print Cycles Required 37.5			Print Cycles Required 16.6666667			Print Cycles Required 25			Print Cycles Required 37.5			Print Cycles Required 0		
Staff Available			Unit Input Values			Unit Input Values			Unit Input Values			Unit Input Values			Unit Input Values		
Technicians 2			Print time per unit (hours) 4			Print time per unit (hours) 8			Print time per unit (hours) 12			Print time per unit (hours) 0.15			Unit Material Weight (kg) 0		
Working Hours Available 120			Unit Material Weight (kg) 0.25			Unit Material Weight (kg) 0.75			Unit Material Weight (kg) 1.5			Unit Material Weight (kg) 6			Print time per unit (hours) 0		
Labor Rate (\$/hr) 25			Assembly time (hours) 0.67			Assembly time (hours) 1.33			Assembly time (hours) 2			Assembly time (hours) 0			Assembly time (hours) 0		
Number of Hours of Production Weekly 72			Post-processing time (hours) 0.5			Post-processing time (hours) 1			Post-processing time (hours) 1.5			Post-processing time (hours) 1.5			Post-processing time (hours) 0		
Number of Hours of Production Monthly 288			Operating Rate (\$/hr) 2			Operating Rate (\$/hr) 2			Operating Rate (\$/hr) 2			Operating Rate (\$/hr) 2			Operating Rate (\$/hr) 0		
Production Statistics:			Production Statistics:			Production Statistics:			Production Statistics:			Production Statistics:			Production Statistics:		
Output Values			Output Values			Output Values			Output Values			Output Values			Output Values		
Print Cycles * Products Per Unit			Print Time 150			Print Time (hrs) 133.3333333			Print Time (hrs) 300			Print Time (hrs) 5.625			Print Time (hrs) 0		
# Products Required * Material Weight			Material Used 75			Material Used (kg) 75			Material Used (kg) 75			Material Used (kg) 1350			Material Used (kg) 0		
# Products Required * Material Cost			Material Cost \$3,000.00			Material Cost \$3,375.00			Material Cost \$6,525.00			Material Cost \$60,750.00			Material Cost \$0.00		
Print Cycles * Assembly Time			Assembly Time 25.125			Assembly Time 22.16666667			Assembly Time 50			Assembly Time 0			Assembly Time 0		
Print Cycles * Post-processing time (including Testing/QA)			Post-Processing 18.75			Post-Processing 16.66666667			Post-Processing 37.5			Post-Processing 56.25			Post-Processing 0		
(Assembly Time + Post-processing time) * Labor Rate			Labor Cost 1096.875			Labor Cost 970.8333333			Labor Cost 2187.5			Labor Cost 1406.25			Labor Cost 0		
Print Time * Operating Rate (formulas used)			Operating Cost 300			Operating Cost 266.6666667			Operating Cost 600			Operating Cost 11.25			Operating Cost 0		
Total Production Cost (\$):			Metronome Production Cost (\$): \$4,396.88			Radio Production Cost (\$): \$4,612.50			Speakers Production Cost (\$): \$2,862.50			Keycaps Production Cost (\$): \$2,767.50			Template Production Cost (\$): \$0.00		
Total Labor Time 226.46			Metronome total labor hours: 43.875			Radio total labor hours: 38.83333333			Speakers total labor hours: 87.5			Keycaps total labor hours: 56.25			Template total labor hours: 0		
Total Print Time 588.96			Metronome Production total hours: 193.875			Radio total hours: 172.1666667			Speakers Production total hours: 387.5			Keycaps Production total hours: 61.875			Template Production total hours: 0		
Total Production Hours 815.42			Price order per unit 17.5			Price order per unit 60			Price order per unit 65			Price order per unit 20			Price order per unit 0		
(from B19) Labor Hours leftover 61.54			Rush order (if applicable)			Rush order (if applicable)			Rush order (if applicable)			Rush order (if applicable)			Rush order (if applicable)		
(assuming ~1960 hours monthly) Print Hours Leftover 1331.04			Bulk discount (if applicable)			Bulk discount (if applicable)			Specialized Order 25			Bulk discount (if applicable)			Bulk discount (if applicable)		
~Fixed Operating Costs (Rent, Parking, Taxes): \$2,500.00			Total Revenue (300 Metronomes) \$5,250.00			Total Revenue (100 Radios) \$6,000.00			Total Revenue (50 Speakers) \$4,500.00			Total Revenue (225 Keycap Sets) \$4,500.00			Total Revenue (800 Product) \$0.00		
Total Revenue (675 Products) 0			Gross profit: \$853.13			Gross profit: \$1,387.50			Gross profit: \$1,637.50			Gross profit: \$1,732.50			Gross profit:		
Gross profit: \$5,610.63			Profit Margin 19.40%			Profit Margin 30.08%			Profit Margin 57.21%			Profit Margin 62.60%			Profit Margin		
Profit Margin 38.33%																	
Total Net Profit \$3,110.63																	
Bed Calibration Hours 5																	
~2 Hours of maintenance required per machine 10																	
Buffer Time and Unexpected Quality Control Issues 16																	
Potential Storage Costs for Temperature/Humidity 0																	
Total margin of error 31																	
Hours leftover after accounting for a margin of error 30.54																	
Overnight Printing can be applied to certain larger jobs																	