CURRENT SCENARIO

SUMMARY OF TOY INDUSTRY, CURRENT STATE OF SIGMA TOYS & ANALYSIS OF FINANCES

MARKET SCENARIO → IDENTIFICATION OF ISSUES → RECOMMENDATIONS → IMPLEMENTATION ROAD-MAP

OVERALL MARKET DESCRIPTION OF TOY INDUSTRY

Sources: Invest India, IBEF, Bain

US$1.2bn Value of Toy Industry Market in India as of 2020

12% Forecasted CAGR of domestic Toy demand

18% Purchases of Toys are made Online

80% Population will belong to Gen-I by 2027

2.5x Increase in Income per Capita by 2027

1.2x Affluent consumers in Tier II & III cities by 2025

1 Overview : Sigma Toys

Headquartered in Mumbai

15% market share in Indian Toy Market

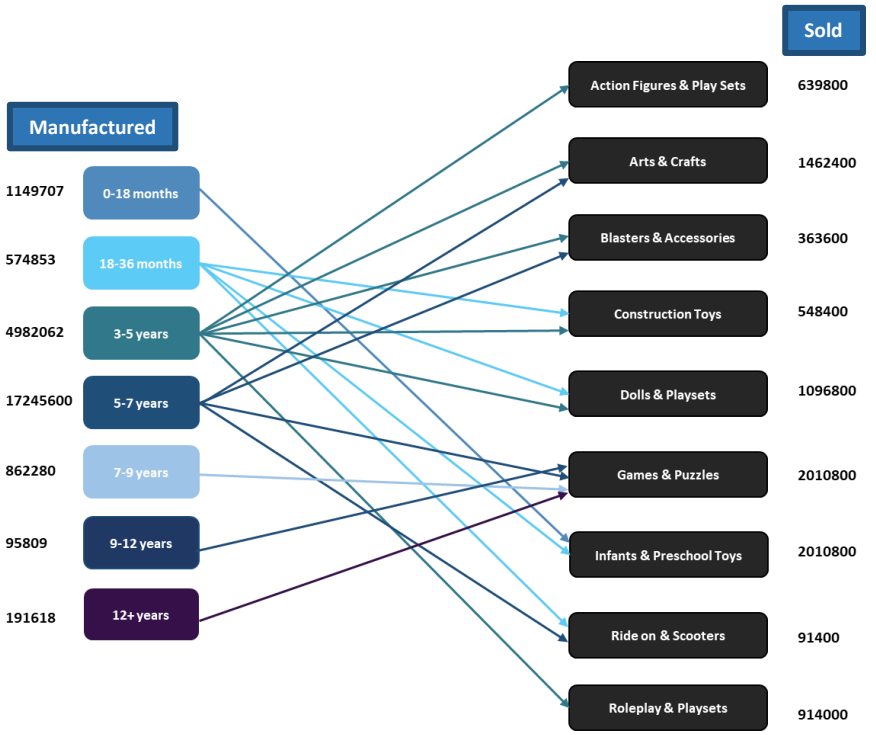
- **Manufacturing Plant Locations** - Noida, Nagpur, Bhubaneshwar, Lucknow, Rajkot
- **Wholesale Distribution Stores** - Delhi, Chennai, Kolkata, Goa, Mumbai, Jaipur, Bhopal, Shimla
- **Channels of Distribution** – Retail only
- **Employees** – 50 in PVC Manufacturing plant, 8 in Toy Manufacturing Plant, 2 manage Distribution Center Facility
- **Average Selling Price** – INR 500/piece
- **Price of Rejected Toys** – INR 50/toy

2 Insights : Target Market & Offered Categories

- **Toys Manufactured** – 95,80,889
- **Toys Sold (Revenue/500)** – 91,40,000
- For **age group 7-9, 9-12, and 12+ years**, the only category is Games and Puzzle

Sigma Toys produces **(21,50,905)** more toys for infants & pre-school than able to sell **(20,10,800)** by **6.9%**

- Focus age group should be **3-5 years** as it caters to lot of toys category



3 Analysis of Financials

Particulars	2020	2019	2018
Cost of Revenue	82.71%	81.66%	77.81%
Direct Material	79.87%	79.15%	74.38%
Direct Labor	2.84%	2.51%	3.44%
Gross Profit	17.29%	18.34%	22.19%
Internal SG&A	2.41%	2.01%	2.50%
External SG&A	5.25%	5.03%	5.63%
EBIT	9.63%	11.31%	14.06%
Interest	0.44%	0.25%	1.25%
Tax	20.45%	20.00%	20.00%
Net income	6.56%	8.54%	9.38%
Pre-tax Margin	8.53%	10.80%	12.19%

- Cost of Raw Materials has **increased**
- Labor Cost of the company has **decreased** but it has not had much impact on Gross Profit
- Net income has **decreased** due to **increase** in raw material cost
- Company has **reduced debt, internal expense & increased revenue**

KEY ADDRESSABLE ISSUES

PROBLEMS WITH REVENUE

Sigma Toys lost an opportunity to earn an additional revenue of INR 108 Cr

The company was not able to meet the demand for 2020 by 21 lakh units

Low Capacity Utilization & Idle time for Equipment is not utilized well

- Throughput rate of **Reactor (R1)** is the lowest
- Thus, **R1** proves to be a **bottleneck** in the manufacturing process
- PVC production capacity per day is **lower than expected**

Throughput Rate for each Equipment				
Equipment	Output (MT PVC)	Processing time in hours	Waiting time in hours	Througput rate (MT PVC per hour)
R1 (Bottleneck)	355	4	4	44
C1	248	1	0	248
E1	213	0.5	0	426
D1	195	1.5	0	130
M1	177	1	0	177

- Scrapped Toys are sold at average INR 50, despite cost of toys amounting to approximately **INR 350**
- Company only uses **Retail Channel** for sales, **highly limiting** their revenue increasing options

PROBLEMS WITH COST

Bhubaneshwar has highest packaging cost, highest error rate & lowest efficiency, still it receives highest yearly PVC shipment increasing final cost

- **Packaging cost, error rate & taxes** of every toy manufacturing plant vary
- Despite this, all the plants run at **similar capacity utilization** of 60%. This increase the cost of the final product
- Transportation cost rising as **no Optimum route** from Toy manufacturing plant to distribution center has been found
- **Employee attrition is high**, due to hectic working schedule resulting in increased costs of hiring and training new joiners
- The company is facing **shelf availability issues** leading to opportunity cost
- Sigma Toys has **high error rate** at some plant locations

Gantt Chart highlighting inefficiencies in the PVC Manufacturing Plant. Click the chart to view the complete Day's Operations.

Legend: In Process, Idle, Cannot be Used

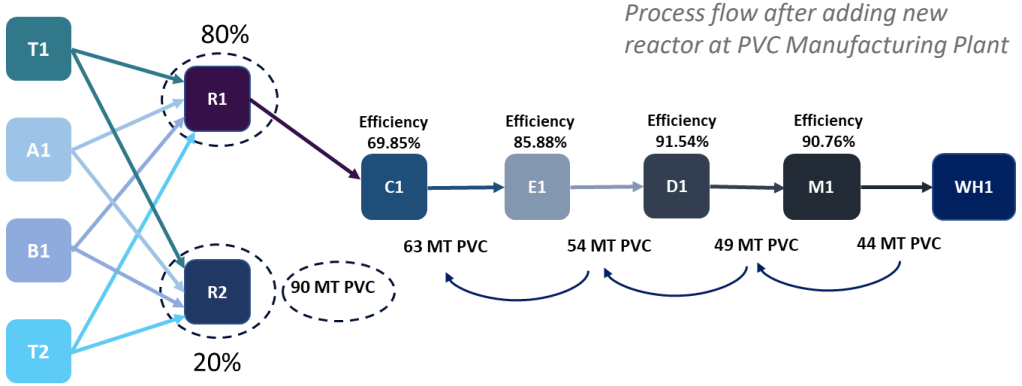
Equipment/ Time	12-12.30	12.30-1	1-1.30	1.30-2	2-2.30	2.30-3	3-3.30	3.30-4	4-4.30	4.30-5	5-5.30	5.30-6	6-6.30	6.30-7	7-7.30	7.30-8
R1																
C1																
E1																
D1																
M1																
Cycles	Cycle 1															

RECOMMENDATIONS

TO INCREASE THE REVENUE AND REDUCE THE COSTS FOR SIGMA TOYS

1 Installing Additional Reactor

Process flow after adding new reactor at PVC Manufacturing Plant



- Introduce a **new reactor R2**, which would help the company utilize the idle time of other equipment
- Since, Sigma Toys could **use maximum of 90% capacity of current reactor (R1)**, it would not be possible to meet the growing demands of toys as it could generate maximum of 196 MT PVC per cycle
- **44 MT PVC** is required at final stage from R2, by doing the backward calculation, company would require **90 MT PVC at the output of R2**
- This can be achieved by using 20% capacity utilization of R2. Further, capacity utilization of other equipment's would also **change**. For T1, A1, B1, T2 and WH1, capacity utilization would increase to **63%**

COST-BENEFIT ANALYSIS

Reactor Cost For PVC Manufacturing	Installation and Maintenance Cost	Additional Revenue generated	Additional Profit in Year 1 for Company	Break-even point for Sigma Toys
INR 4.5cr	INR 0.5cr	INR 118cr	INR 3.5cr	<2 years

2 GEP SMART™

Source: GEP Software

- The solution will help Sigma Toys manage their increased supply of **raw material efficiently**
- The seamless integration from **sourcing to contracting** to order would reduce burden on employees and **improve working conditions** for them
- This will help the company get real time visibility on **cost saving initiatives** and help improve bottom line
- **Gig workers** can be monitored through contract management such that peak demand season is met with **adequate supply**

3 New Scrappage Policy

- Segmenting toys into 4 categories – **Bronze, Silver, Gold & Silver**, the toys can be **sold at varied prices** according to the segments they belong to
- Toys which do not meet the quality standards but still of **good quality** can be categorized as **Platinum** while Toys of **very poor quality** can be categorized as **Bronze**

Platinum Scrappage can be sold online and to dealers **without** Sigma Toys Label at **80% of the MRP**, while **Bronze** can be sold at **INR 50**