



# Pathways to Circular Economy

Mysuru – Case Study

**CHIDAMBAR BS**

Humverm Private Limited

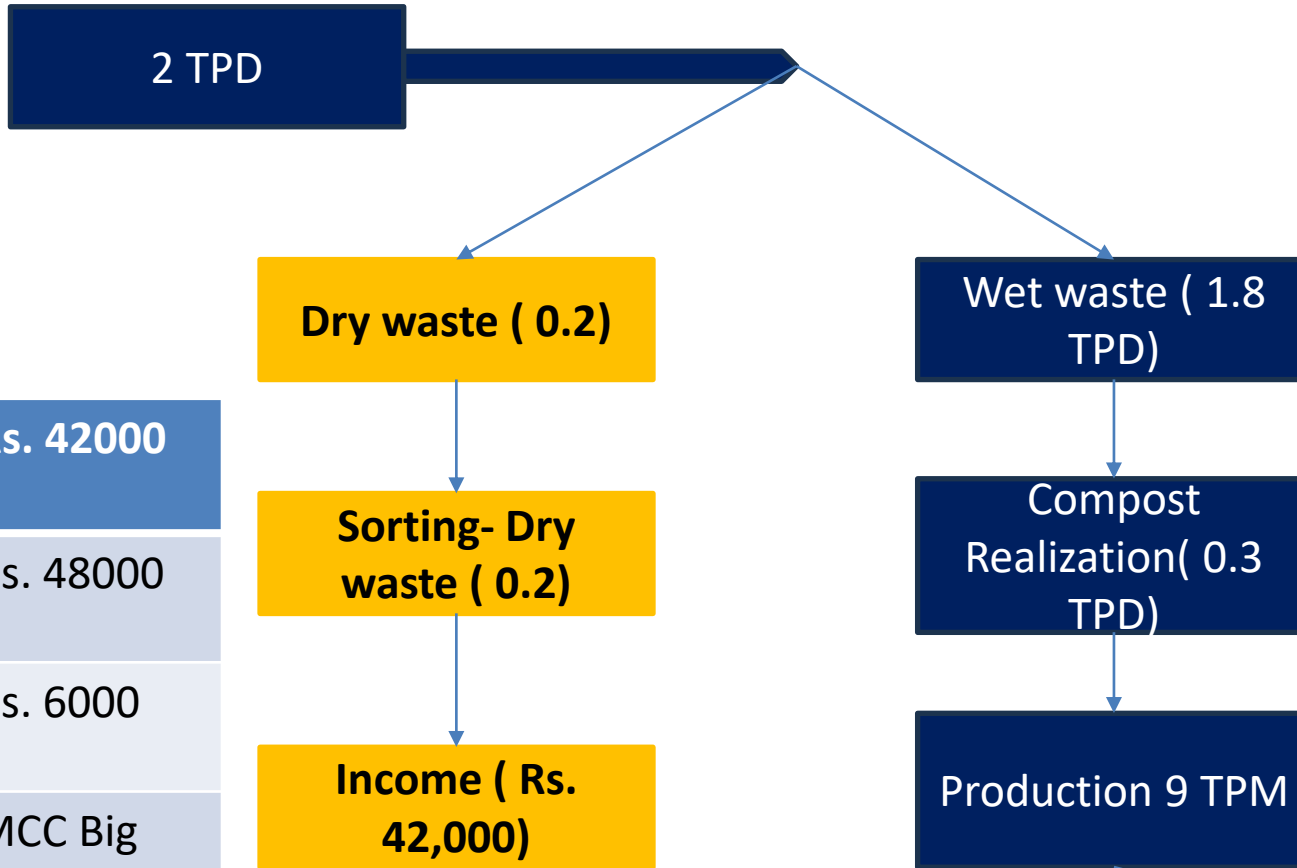
During 2008 as part of JnNurm Works, facilitated the development of 9 Zero waste management ( ZWM) Plants at Mysuru City



In 2014 I took up O&M of 2 ZWM plants at Mysuru City

# Previous Scenario - 2014

TPD - Tons per Day  
 TPM – Tons Per Month



7 TPM of Unsold compost leading to a loss of Rs. 14000



Sales – 2 TPM – ( Rs. 4000)

O & M Cost	Rs. 42000
Sales	Rs. 48000
Profit	Rs. 6000
ILFS	MCC Big Competitor

# Scenario – 2015



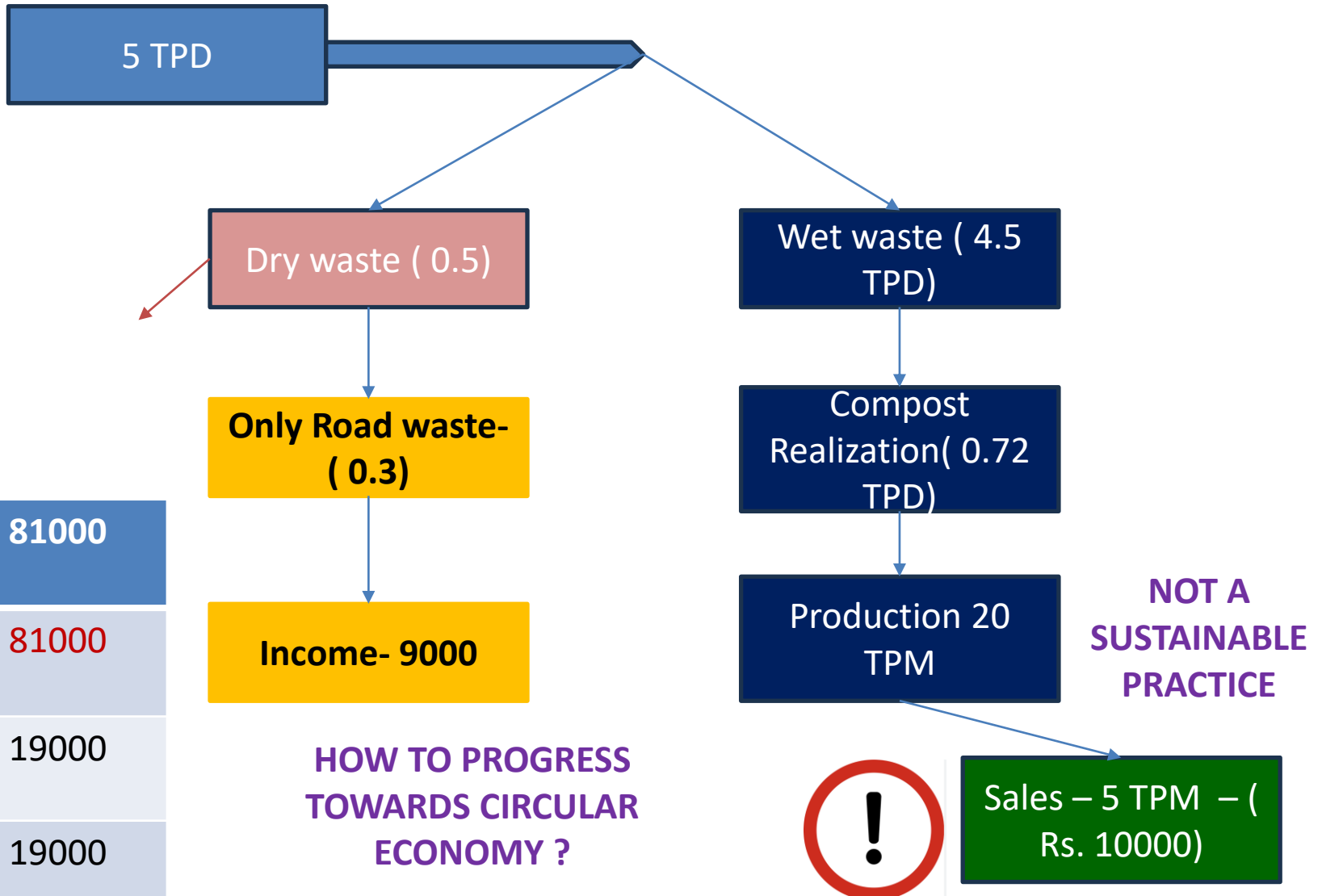
O & M Cost	42000
Sales	9000
Loss	33000



Sales – 4 TPM – ( Rs. 8000)

# Scenario – 2016

## Project Expansion from 2TPD to 5 TPD



O & M Cost	81000
MCC Support	81000
Sales	19000
Profit	19000

HOW TO PROGRESS TOWARDS CIRCULAR ECONOMY ?

NOT A SUSTAINABLE PRACTICE



Sales – 5 TPM – (Rs. 10000)

# ISSUES

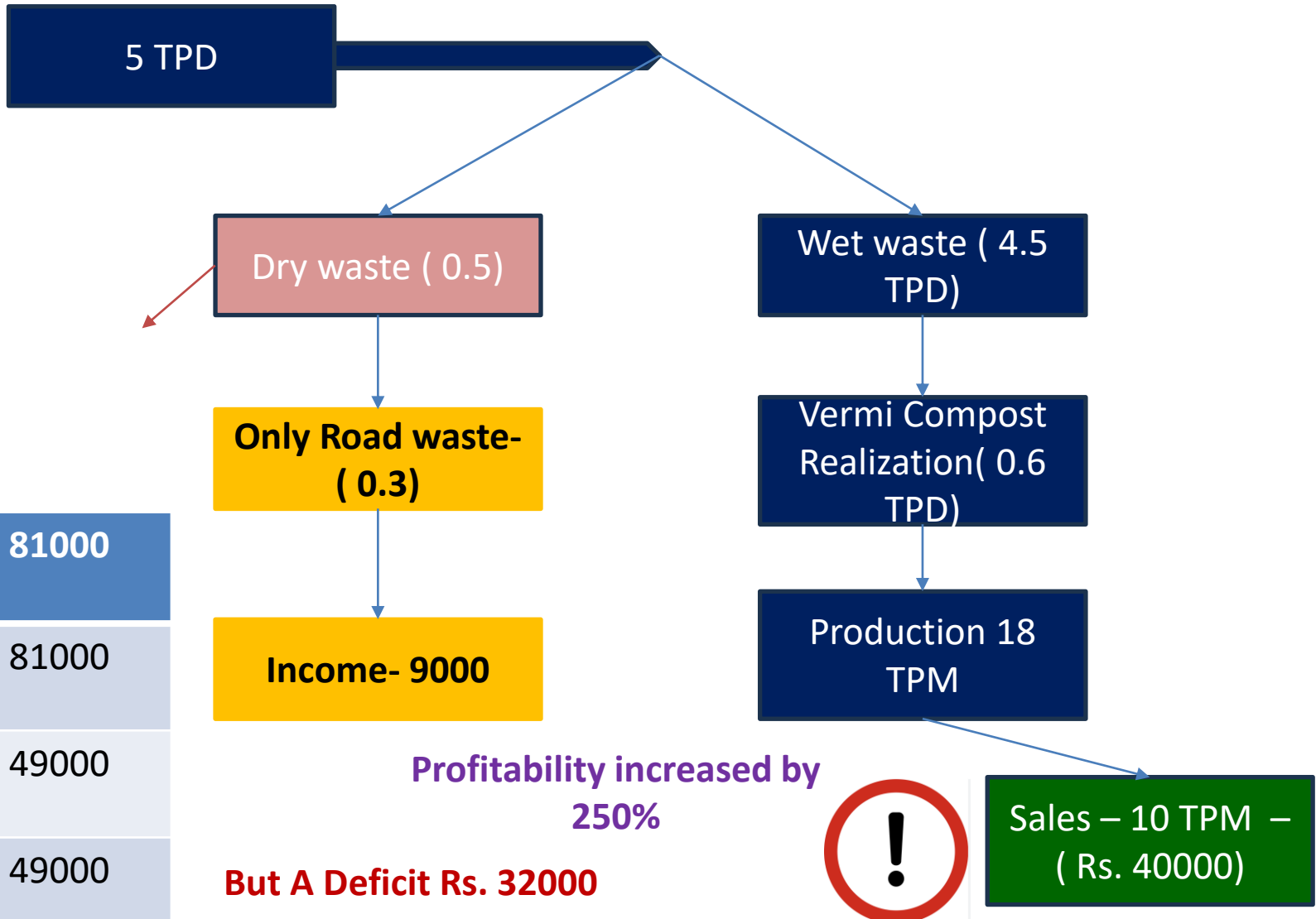
- Left with only wet waste & No buyers for city compost
- IL&FS was selling Compost at Rs. 2.20 / Kg is a big competitor
- ZWM compost out put 720 Kg / Day with negligible sales of 210 kg/day
- Workers became lethargic as they get fixed salary.
- Production came down.
- Quality of compost deteriorated causing loss of trust in buyers as plants died soon after application of compost.
- Everybody was enjoying a free meal with this unsuccessful/unsustainable plant.

# STRATEGY 2016

- Market study
  - Lack of vermi compost availability in the market
  - Customers not aware of vermicompost and its utilization.
- Switched over from Biocompost to Vermicompost Production
  - Process and infrastructure modifications

# Scenario – 2016

## Vermi compost



O & M Cost	81000
Support	81000
Sales	49000
Profit	49000

Profitability increased by 250%

**But A Deficit Rs. 32000**



Sales – 10 TPM – ( Rs. 40000)



# Lessons Learned

- We learnt how to market our products
- We achieved good sales in vermicompost
- We started giving credit period for our customers
- To self sustain we needed atleast 10 tons wet waste input, but the infrastructure was not adequate.

Bagged 12 TPD O&M from Agriculture  
Produce Marketing Committee (APMC)

2017 to 2018



MAINTAINED BY AMPC  
Cost to APMC @ Rs. 97,000 /Month

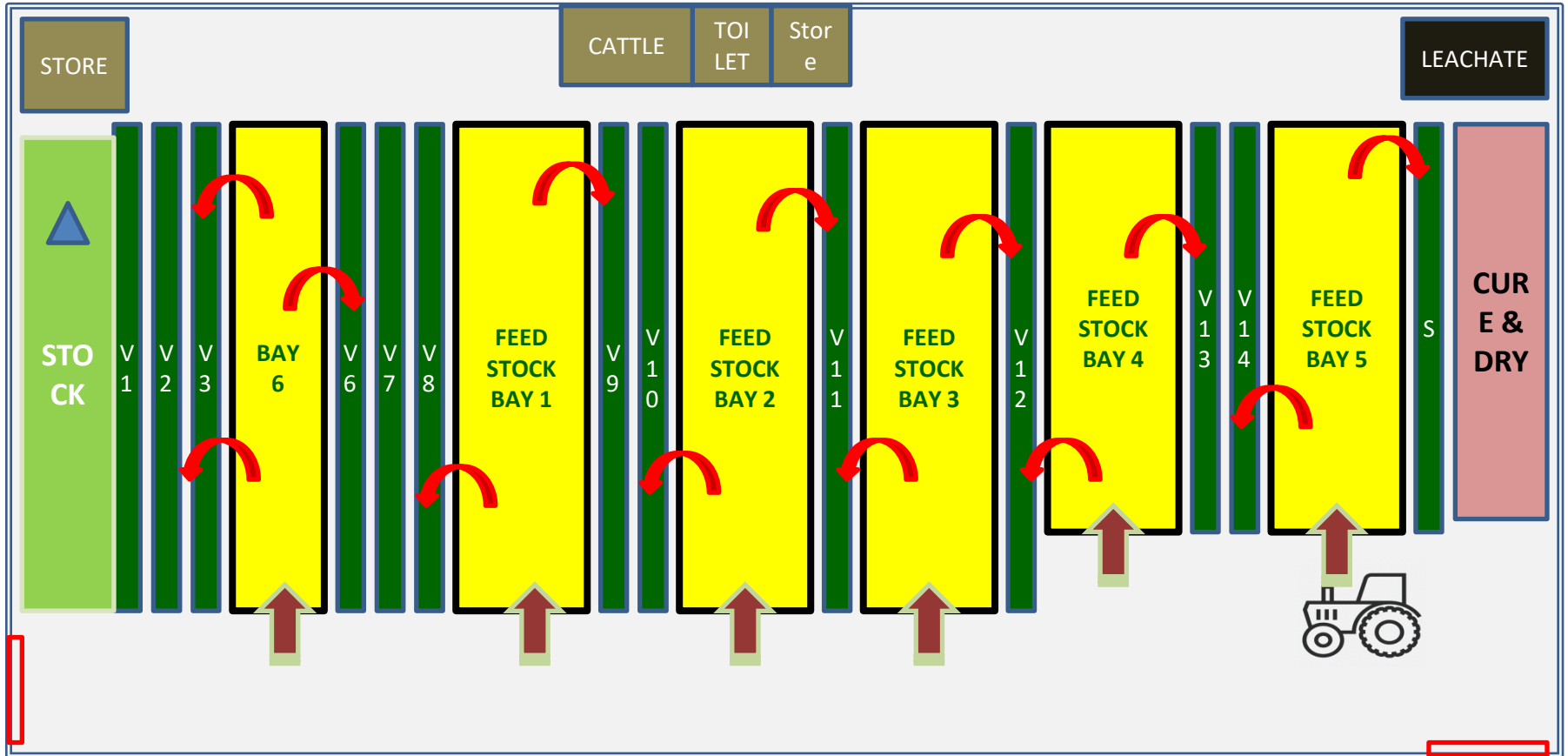
2018 -2023



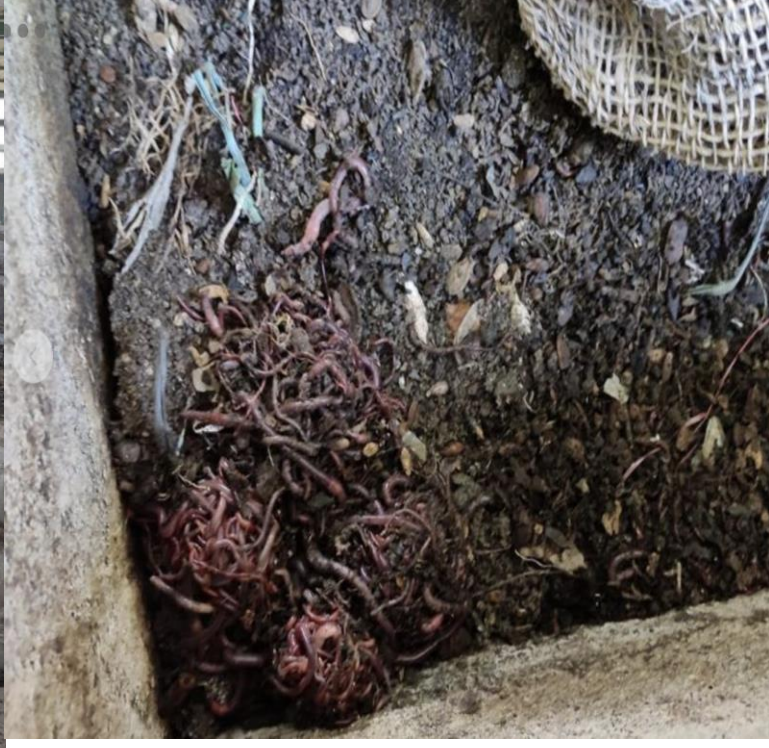
Savings to APMC  
Rs 11.64 Lakh Per Year



# SOLID WASTE MANAGEMENT AT APMC, MYSURU

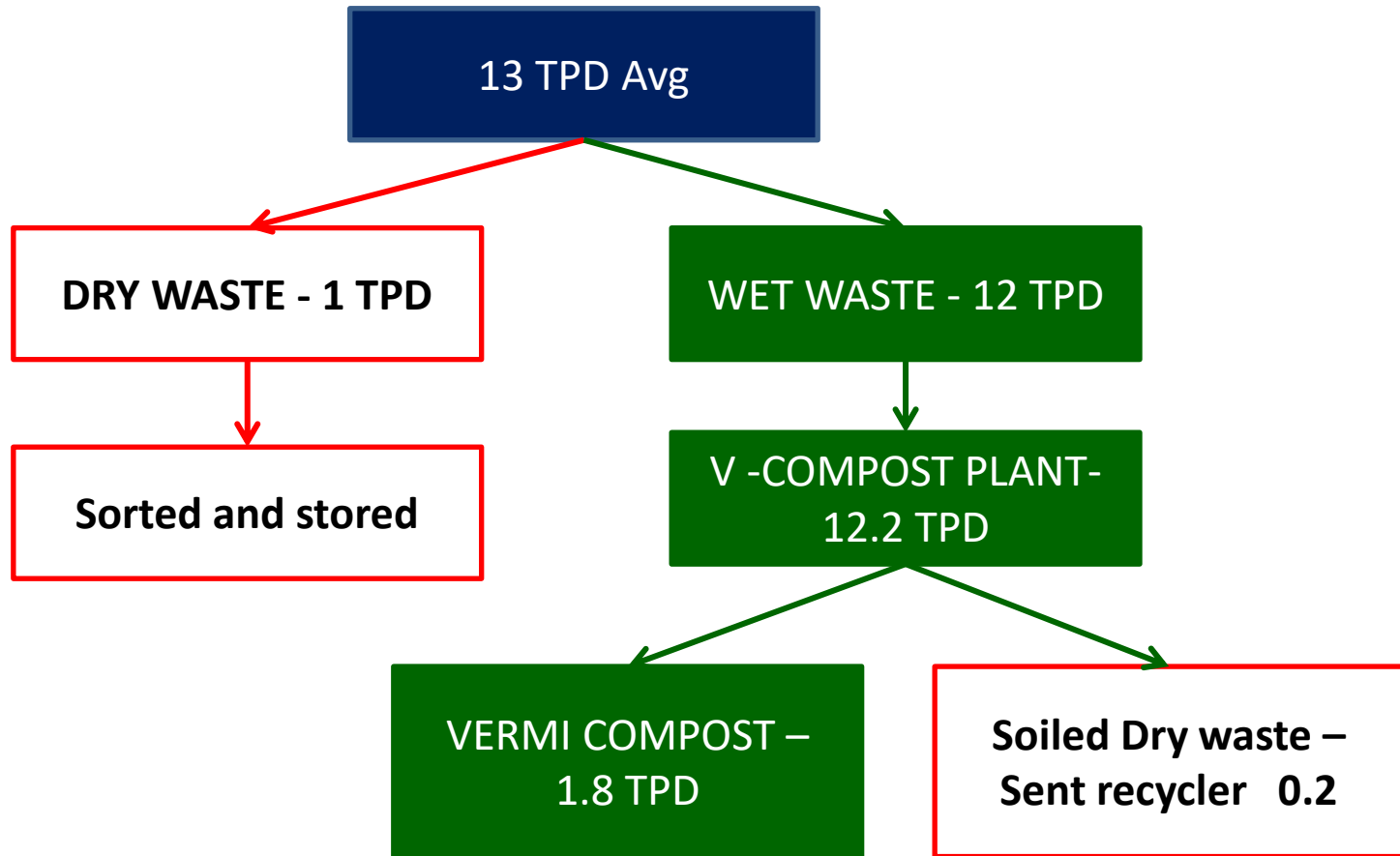








# Waste Generation at APMC



# WORK FLOW



2 Trips /Day

42 MT - 6Days



12 Trips (Friday)

40 MT (Friday)

82 MT Per Week  
( 12 TPD)

PRE SORTING

CHECK C/N

Feed Stock Bay

CURING (FAIL)

REFINING

DRYING

Vermicompost  
tanks

(FAIL) CURING

CHECK & PACK

# Stock & Transport





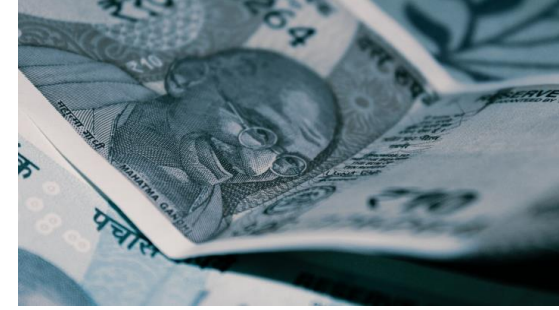
## **FOCUSING ON RESULTS – TARGET DRIVEN APPROACH**

– Measure Physical progress and financial progress daily

1. The workers have to produce a minimum of 2 tpd of vermicompost daily ( 4 male + 4 female)
2. The marketing team has to sell minimum of 30 tons



# Fact Check



	Input		
Year wise	Wet waste Per Day	Per Month	Per Year
2018-19	11.3	339	4068
2019-20	11.5	345	4140
2020-21	12	360	4320
2021-22	13	390	4680

Increase in production – 488 tons to 702 Tons Per Year

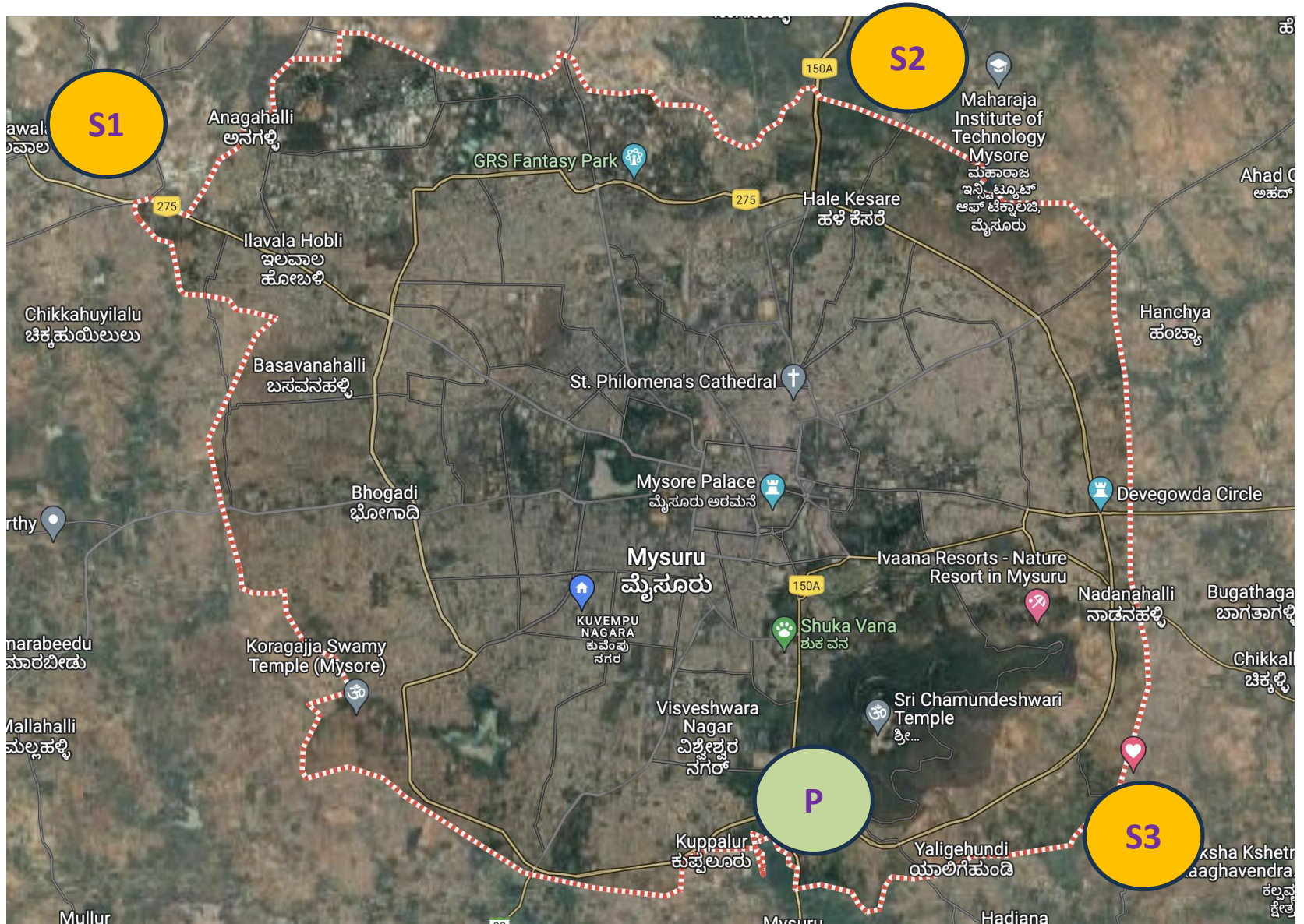
Increase in Sales from 195 tons per year to 702 Tons per Year

Loss of Rs. 1.03 Lakhs to a profit of Rs 20.6 Lakhs per Year

	OUT PUT			P/L			
Year wise	Per Day	Per Month	Production Per Year	Sales ( Tons)	Income (Rs)	Operation cost (Rs)	Profit Per Year (Rs)
2018-19	1.356	40.68	488.16	195.264	976320	1080000	-103680
2019-20	1.495	44.85	538.2	269.1	2691000	1440000	1251000
2020-21	1.68	50.4	604.8	362.88	3326400	1620000	1706400
2021-22	1.95	58.5	702	702	3861000	1800000	2061000

**A systematic approach by focusing on Process, Production, People & Profitability Leads to Circular Economy.**

# PROJECT EXPANSION

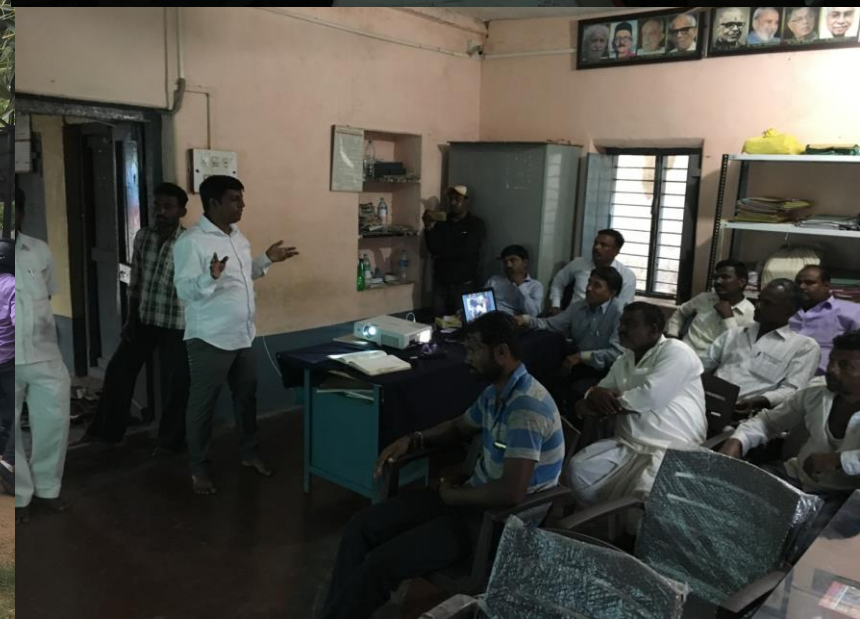
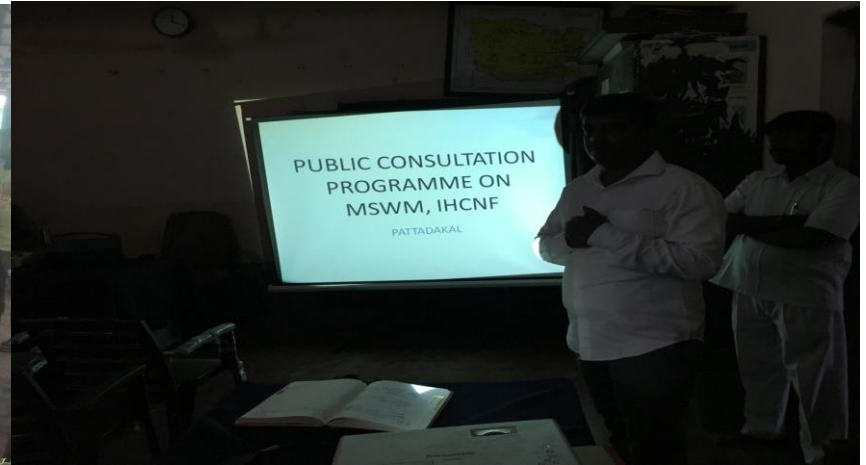


# Additional products

- Bio char
- Vermichar
- Panchagavya enriched vermicompost



# Training Programmes



- Thank You