MADIWALA

Transforming Madiwala Market: Implementing the **G-Star Model**

The **Madiwala Market,** a bustling, vibrant hub in Bengaluru, has been the backbone of livelihoods for hundreds of vendors and farmers for nearly four decades. Every day, tons of vegetables, fruits, and flowers change hands here and for years, so did tons of unmanaged waste.
For the longest time, waste was dumped right where it was generated. Vendors left unsold produce at their stalls, stray cattle roamed freely feeding on the waste, and pourakarmikas struggled to clean up mountains of decomposing garbage. Despite daily truckloads of waste being lifted, filth and black spots persisted, and the market reeked of decay.

Before Vedan's G-STAR model was implemented at Madiwala Market, an average of 6 tonnes of mixed waste per day was being transported to landfills. This waste, dominated by organic matter, would decompose anaerobically, releasing methane, a greenhouse gas over 25 times more potent than carbon dioxide. In addition, landfill leachate from decomposing wet waste risked contaminating soil and groundwater, creating long-term environmental and public health hazards.

By redesigning the system at source, the G-STAR model delivers climate benefits in four critical ways:

1. Methane Emissions Avoided

Segregation at source and diversion of wet waste ensures organic material never reaches landfills, preventing methane generation at scale. With 6 tonnes per day diverted, Madiwala alone prevents thousands of tonnes of CO_2-equivalent emissions annually.

2. Leachate Prevention & Soil Protection

By eliminating mixed waste dumping and black spots, the model drastically reduces toxic leachate formation—protecting groundwater, urban soil health, and nearby water bodies.

3. Reduced Transport & Fuel Emissions

Decentralised handling—human nourishment, animal feed recovery and composting—cuts down long-distance hauling of waste, directly reducing diesel consumption and transport-related emissions.

4. Circular Economy & Resource Substitution

Vegetable waste feeding livestock replaces commercial feed, compost substitutes chemical fertilisers—closing material loops instead of opening new carbon ones. In simple terms, what once emitted greenhouse gases, polluted land, and strained systems is now feeding animals, nourishing communities, supporting livelihoods, and restoring ecological balance.

The Challenge We Took On

Our goals at Madiwala were ambitious but essential: to establish a model that proved markets could be both profitable and pristine.

- **Establish a proper waste management system** tailored to the market's unique needs.
- Achieve **visual cleanliness** with no black spots.
- Ensure segregation at source (wet waste to livestock, dry waste to recycling).
- Stop mixed waste from reaching landfills and ban single-use paper cups.
- Build a culture of responsibility and pride among vendors and pourakarmikas

Understanding the Market

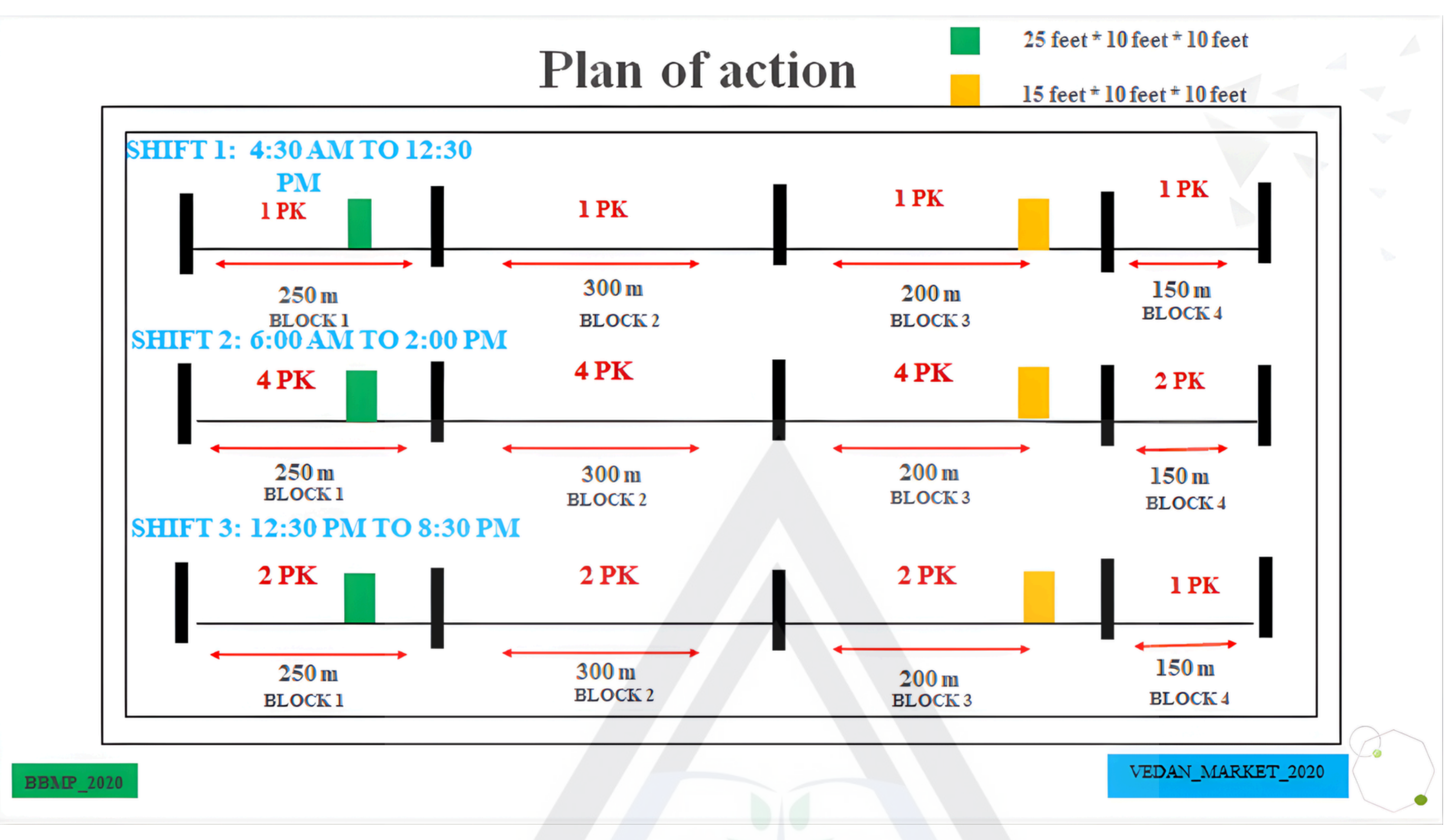
The first step was to understand the scale of the challenge.

Madiwala Market has 401 fixed shops predominately vegetable stalls — and 150+ farmers and small time vendors

- **Dry Waste:** 200–500 kg/day
- **Wet Waste (Peak Season):** A staggering 18–22 tonnes per day!

We quickly realized the core issue wasn't poor enforcement; it was the lack of a system designed for the market's long, continuous working hours.

Redesigning the System: The Hour-by-Hour Solution



We divided the market into four manageable blocks and conducted a time-motion study. This led to a major, structural shift in operations:

1. Overhauling the Work Shifts

The old single shift (6:00 am – 2:00 pm) could not cope with a market operating nearly 18 hours a day.

- **Solution:** We implemented three shifts (4:30 am – 8:30 pm) across the four blocks, drastically improving coverage, accountability, and morale.

This major restructuring was possible through the vision and support of then BBMP Special Commissioner (Animal Husbandry & Solid Waste Management) **Mr Randeep Dev**, with on-ground facilitation from then BBMP (South) Joint Commissioner **Mr Veerabhadra Swamy** and then Superintending Engineer **Mr Narasarama Rao.**

2. Building Infrastructure for G-STAR

To support source segregation and efficient resource recovery, we established two **Waste Aggregation Centers (WACs).**

- **Process:** Wet waste is collected in crates and trolleys directly from vendors and stored at the WACs.

- **Diversion:** Waste is then sorted and directed: suitable feed goes to cows, pigs, and sheep; remaining waste is compacted and sent to the compost plant.

The market association, led by **Presidents Pyare and Akmal,** showcased incredible commitment by offering their own office space for storage until BBMP completed the permanent sheds.

From Waste to Resource: The Circular Economy

The system now runs smoothly—pourakarmikas work proudly, vendors cooperate, and waste finds new life.

- **Motivation** : With MLA Ramalinga Reddy's support, Pourakarmikas even visited a goshaale to see the positive impact of their sorted waste—a powerful reminder that their effort truly nourishes life.
- **Landfill Diversion :** 6 tonnes per day mixed waste is diverted
- **Animal Feed :** minimum 1 – 2 tonnes of leafy greens and vegetables is now diverted daily to cows, pigs, and sheep, keeping it out of landfills.
- **Community Reuse :** A WhatsApp group is created with 6 NGOs, where Marshalls post the quantity of fresh unsold produce available daily for the NGO's to collect/recover. A daily average of 500+ kgs of fresh leafy greens and vegetables are distributed to the community.
  - Swabhimaan NGO provides to individuals in the community of Rajendra Nagar
  - Observation Home uses it in their community kitchens
  - Amogh NGO collects lemons to create bioenzymes, providing livelihoods for differently-abled children.

The entire process is now a sustainable cycle: waste moves directly to collection stations, and from there to biogas plants—completing the circle from waste to resource.

Challenges Remain

While the transformation has been remarkable, some challenges persist:

- **Paper cups** have crept back post-COVID despite earlier bans.
- A **black spot near the public toilet** remains, largely due to night-time dumping by nearby residents and pushcart vendors.
- Irregular waste collection from Siddhartha Colony contributes to recurring mess.

Yet, the Madiwala G-Star Model stands as a proven, scalable, and community-owned system. Vedan Trust, together with **BBMP and SVP India,** demonstrates that markets can be clean, sustainable, and humane—not by enforcing, but by engaging and designing a system that works for real-world conditions.

Delegates who visited the market.

Surendra Nath Tripathi, Director General, Indian Institute of Public Administration visited the market in 2021

Mrs Padmashree Balaram, Lead Partner SVP, in 2022 visited the goshalas that receive the veggies from the market. She was accompanied by other SVP members and the Pourakarmikas, to encourage them to follow the G-Star process, as it is their efforts that would help feed these animals.

Dr. Volker Wissing , then German Federal Minister for Digital and Transport visited the Madiwala market in 2023 to try out UPI payments. He could have gone anywhere, but chose Madiwala as it was clean, hygienic and approachable!

Sashi Rajamani, then SVP India Chair, visited Madiwala Market with other SVP members to see the impact achieved in 2025.