



# **Excel Industries Limited**

**The Courage to dream. Together**

## **Excel's Initiatives**

**on**

## **Capacity Development Program in Environment Management**

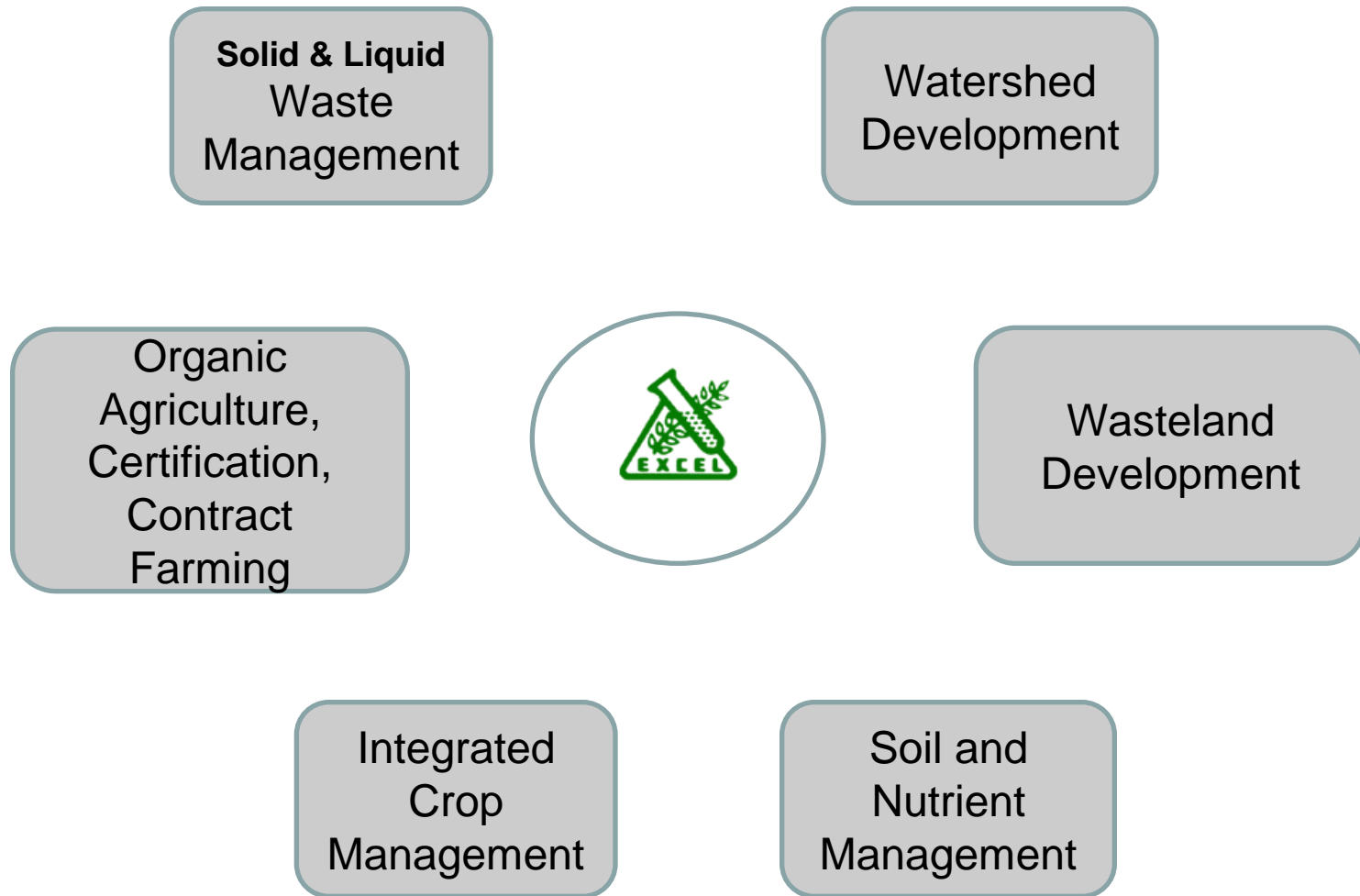
K.J Somaiya College of Science & Commerce, Vidyavihar

Date: 9.02.2017

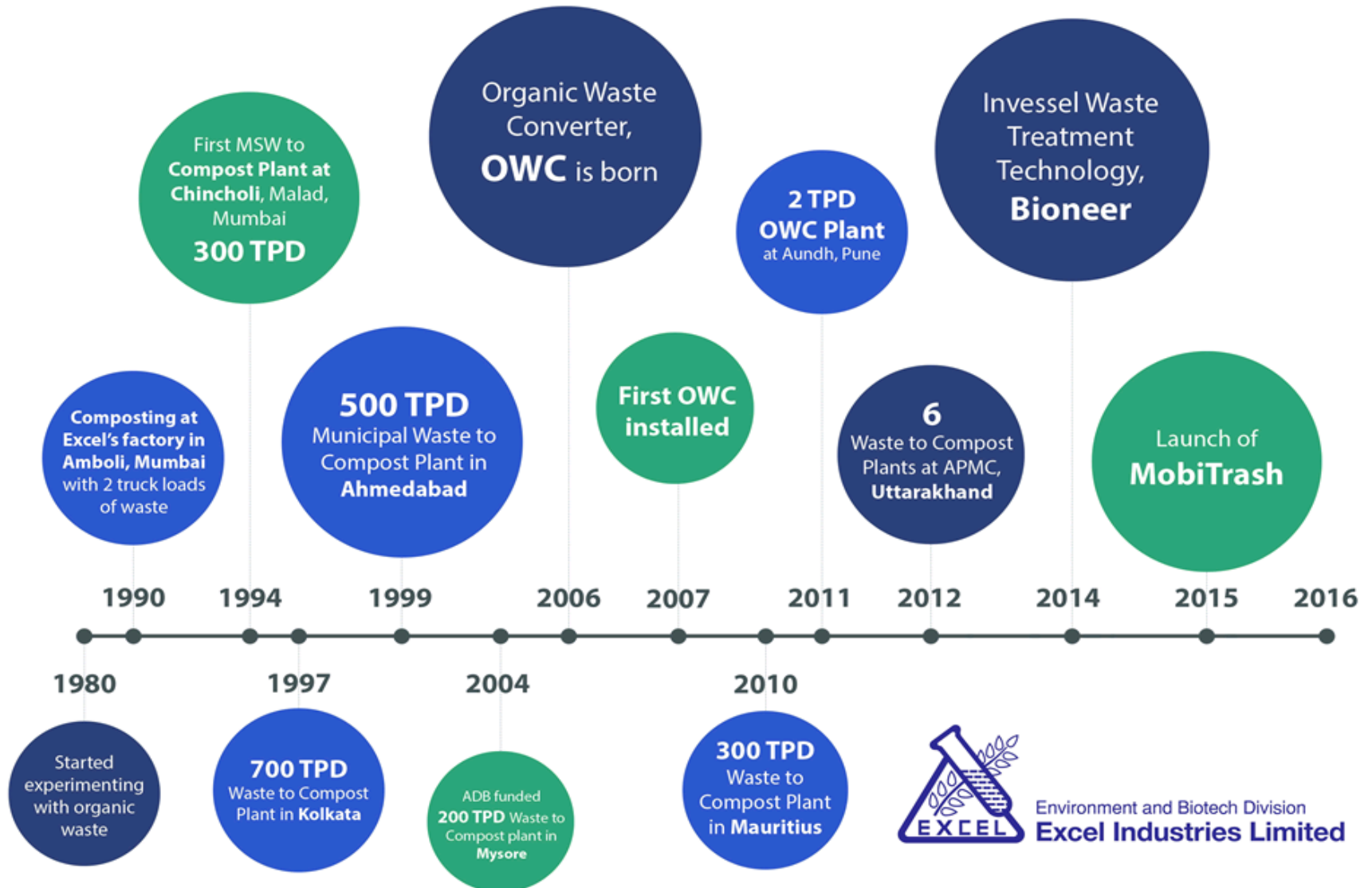
# Excel's Journey of 25 Years in Solid Waste Management

- Committed to the cause of Municipal Solid Waste Management for over 25 years in India
- Pioneers of Centralized and de-centralized MSW Composting
- Provided Composting Technology for over 12 plants across India and Mauritius of capacities between 300 TPD to 700 TPD
- Developed the concept of de-centralized Solid Waste Management in India
- Now providing de-centralized Solid Waste Management solutions using Organic Waste Converters to around 1,500 Bulk Waste Generators
- Also providing de-centralized Waste Water Treatment solution using Bio Filter developed by its sister company Transchem Agritech.
- We are the first to launch a comprehensive mobile waste treatment service, MobiTrash, in India. It treats the organic segregated waste on your own site.

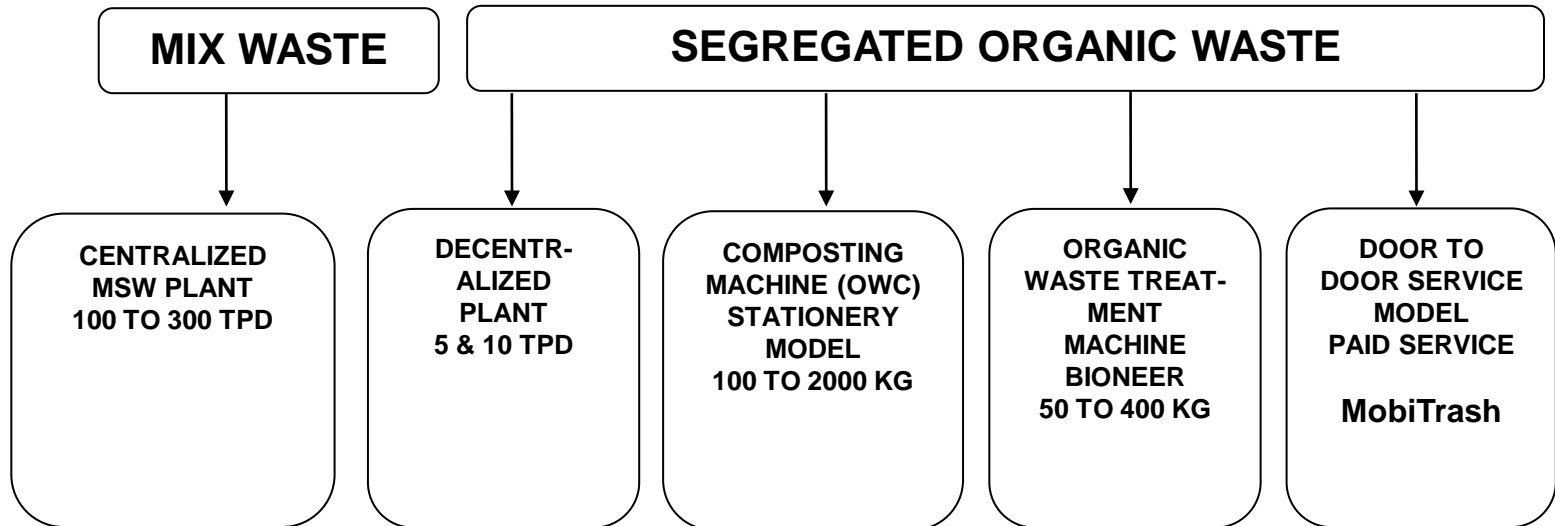
# Commitment to Sustainable Development



# Excel's Journey – Providing Waste Management Solutions



# MUNICIPAL SOLID WASTE



## A) Details of Centralized Plant

Converting Municipal Solid Waste (input) into Compost (Output) by the process of aerobic decomposition using Microbial Culture.

### **300 TPD MSW - COMPOSTING PLANT**

Land : Around 10 Acres

Total CAPEX excluding land cost : Rs. 25.00 Cr



Excel Industries Limited

# Centralised Waste Management Plant

## Centralised Municipal Solid Waste Treatment & Processing Plant Schematic Process Flow



Municipal Solid Waste (Input)

Windrow Preparation, Spraying of Bio-culture, 7 days holding



Leachate Collection

Windrow Turning I



Temperature + Moisture check

Windrow Turning II



Temperature + Moisture check

Windrow Turning III



Temperature + Moisture check

Drying on Platform Fermented Material



Quality check, Hold point

Feeder Conveyor to Trommel

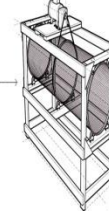


Trommel 50mm



Reject above 50 mm

Trommel 16mm



Reject above 16 mm

Semi-finished Material



Trommel 4mm



Reject above 4 mm, post grinding

Finish Loose Material (Output)



Quality check

Packaging, Storage and Despatch





# Excel's Centralized Plant at Ahmedabad





# Centralized MSW Treatment – Excel's Ahmedabad CompostPlant



## **OPTION – (A) 5 & 10 TPD SEGREGATED WASTE TREATMENT PLANT**

### **Total CAPEX for 5 TPD Plant:**

Land requirement	:	1000 Sq. Mtr.
CAPEX	:	Rs. 1.5 Cr.
OPEX	:	Rs. 2,500/- per ton per day

### **Total CAPEX for 10 TPD Plant:**

Land requirement	:	1800 Sq. Mtr.
CAPEX	:	Rs. 2.8 Cr.
OPEX	:	Rs. 2,000/- per ton per day

# APMC MARKET – MODEL (5 & 10 MT/DAY)



Excel Industries Ltd.

Environment & Biotech Division

Presenting,  
**West Treatment Plant - 5 Tonnes per day**







[www.excelind.co.in](http://www.excelind.co.in)





# Composting Plant at the vegetable market, Thrissur



4TPD Capacity





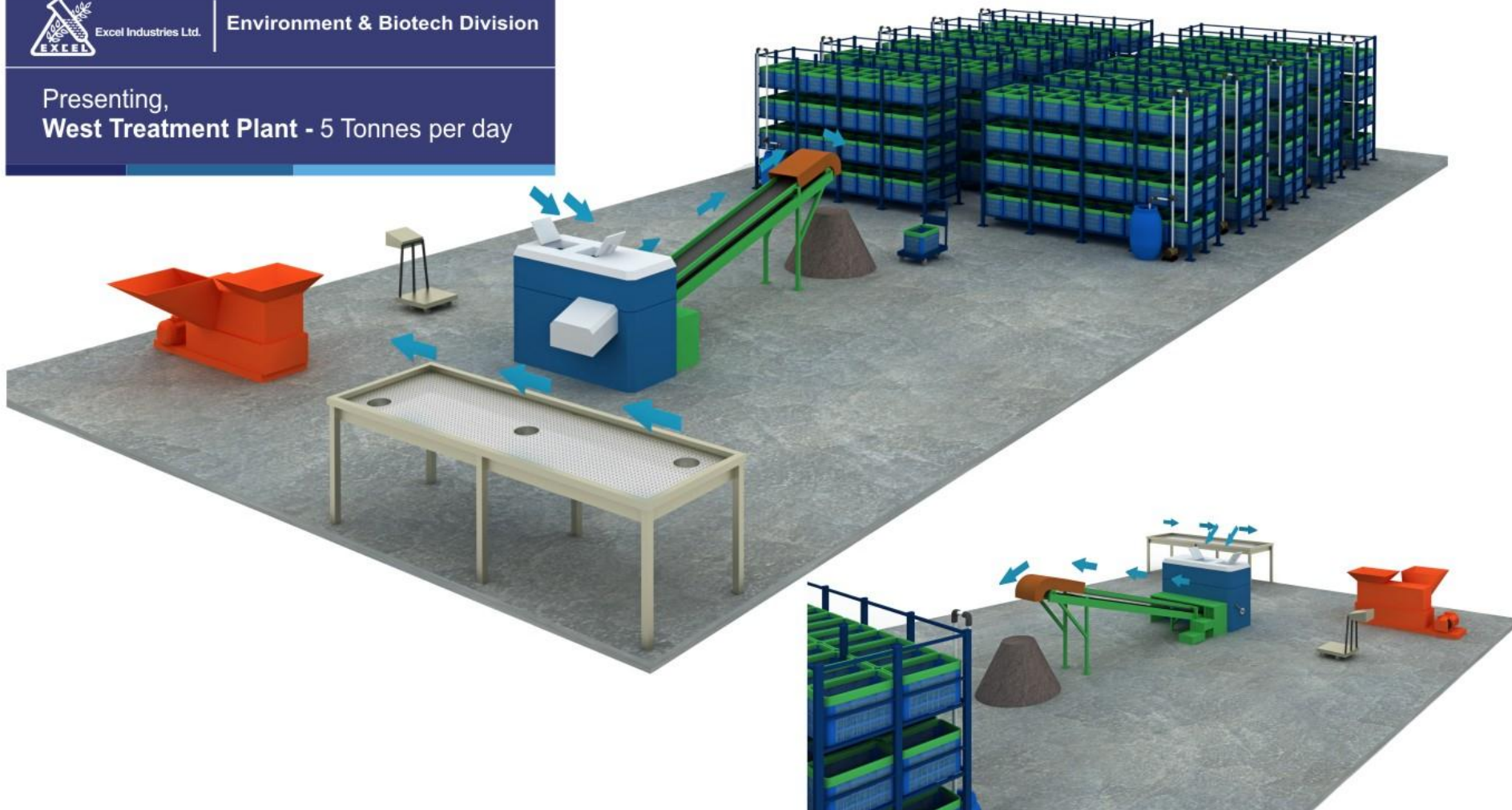
# COMMUNITY MODEL (ULBs) FOR 1-2 MT/DAY



Excel Industries Ltd.

Environment & Biotech Division

Presenting,  
**West Treatment Plant - 5 Tonnes per day**





# De-centralized Model for ULBs – Municipal Ward, Aundh, Pune



# De-centralized Model for ULBs – Municipal Ward, Mapusa, Goa





# De-centralized Model for ULBs – Municipal Ward, Kakinada, A.P.





## **Option – B Organic Waste Converter Stationery Model**

Using OWC system for treatment of Organic Waste by Bulk Waste Generators and converted into Compost:

### **Various Models of OWC:**

1) For 100-3000 Kg per day OWC machines of 5 different models:

- OWC 30 – 100-200 kgs/day (MS & SS Models)
- OWC 60 – 250-400 kgs/day (MS & SS Models)
- OWC 130 – 500-800 kgs/day (MS & SS Models)
- OWC 300 – 1000-1500 kgs/day (SS Model)
- OWC 500 – 1600-3000 kgs/day (SS Model)



2) Curing Systems:

- Single Curing System (100 kg/day Capacity)
- Double Curing System (200 kg/day Capacity)

3) Shredders:

- Portable Garden Shredder (50 kg/hr)
- High Speed Garden Shredder (100 kg/hr)
- Double Shredder (50 kg/hr)

4) Other Products:

- Segregation Table
- Conveyor Belt
- Manure Trolley



# ORGANIC WASTE CONVERTER IN OPERATION



## Option - C    Organic Waste Treatment Machine - Bioneer

Treatment of Organic Waste with the help of Bioneer to give quick solution to the bulk waste generators:

### **Various Models:**

50–400 Kg per day In-vessel Treatment Systems of 5 different models.

- Bioneer 50 (50 kg/day)
- Bioneer 100 (100 kgs/day)
- Bioneer 200 (200 kgs/day)
- Bioneer 300 (300 kgs/day)
- Bioneer 400 (400 kgs/day)





# OWC Installations

Green Initiatives / CSR Activities by Responsible Corporate Citizens



# OWC Installations

Green Initiatives / CSR Activities by Responsible Corporate Citizens



Microsoft





## SECTORWISE SUPPLY DATA

SECTOR	QUANTITY
REALTY-NEW RESIDENTIAL /COMMERCIAL PROJECTS	540
HOTEL/TOURISM	270
APMCs	45
DEFENCE	10
MUNICIPALITY/COMMUNITY MODEL	50
INDUSTRIAL CANTEEN	260
CORPORATE OFFICES/GOVT. ORGANIZATIONS	132
TEMPLES	24
EDUCATIONAL INSTITUTIONS	58
SHOPPING MALLs	40
OTHERS	51
TOTAL	1480

## TERRITORYWISE INSTALLATION

TERRITORY	UNITS
MUMBAI & REST OF MAHARASHTRA	260
PUNE	230
BANGALORE (KARNATAKA)	350
DELHI, NCR, NORTH-EAST	140
GUJARAT - RAJASTHAN	125
GOA	95
HYDERABAD (A.P)	56
CHENNAI (T.N)	44
KERALA	55
OTHER TOWNS	125
<b>TOTAL</b>	<b>1480</b>



Nirman Bhawan, New Delhi.  
Dated: 23rd October, 2007

Office Memorandum

Sub: Organic Waste Converter System.

The undersigned is directed to say that the Solid Waste Management is an obligatory function of Urban Local Bodies in India. The Municipal Solid Waste(Management & Handling) Rules 2000 notified by the Environment & Forest Department of Government of India made the Urban Local Bodies responsible for segregation, collection, storage, transportation, scientific treatment & sanitary landfill of Municipal Solid Waste.

2. The Ministry of Urban Development has also taken initiatives to facilitate the State Governments/ULBs for effective solid waste management and brought out Manual on Municipal Solid Waste Management, Technology Advisory Group's Report and Report on Integrated Plant Nutrient Management.

3. To supplement the efforts of State Government & ULBs, this Ministry has launched JNNURM & UIDSSMT for creating urban infrastructure facilities including solid waste management. It has been observed that the ULBs are facing constraint in getting adequate land in the urban areas for creating centralized integrated solid waste management facility, traffic congestion enroute to the centralized landfill site and increased transportation cost of waste. In order to address the issues of land constraint, and other related issues in centralized solid waste management system it is necessary to promote decentralized waste management system in cities/towns by ULBs which will not only encourage community participation for efficient recycling at source of generation but also simplify the waste management process and ensure sustainability.

4. It is felt that decentralized solid waste management solution should be incorporated while planning solid waste system for the cities and towns in the country.

5. The decentralized waste management with bio-mechanical " organic waste converter" developed by M/s. Excel Industries Ltd. , Mumbai has been presented in the Ministry and functioning in some places at Mumbai, Pune, Bangalore, Surat, Ahmadabad, etc. A copy of the " Organic Waste Converter" catalogue is enclosed for reference.

6. It is suggested to adopt such systems, if deemed fit, which not only promotes decentralized waste management solution but also facilitates waste minimization & efficient recycling process with community participation thereby reduce long term requirement for landfill sites in cities & towns.

(Savitur Prasad)  
Director

To  
Commissioners  
All 63 cities covered under JNNURM(List attached).



PHONE - 091-020-25501214  
FAX - 091-020-25501201  
PUNE MUNICIPAL CORPORATION  
Shivajinagar, Pune. - 411 005.  
Dy. Medical Officer of Health  
Health Department  
Out ward No. H0/3677  
Date : 17/11/2006

TO WHOMSOEVER IT MAY CONCERN

Sub :- Organic Waste Management using Organic  
Waste converter system developed by Excel  
Industries Limited, Mumbai.

Dear sir,

Pune Municipal Corporation is suggesting various scientific methods of waste treatment & disposal as per the directives of Hon'ble Supreme Court and Govt. of India Gazette Extra Ordinary dt. 3/10/2000 & Ministry of Environment and Forests notification dt. 25/09/2000 and provisions of Environment (Protection) Act 1986 & Municipal Solid Waste (Management & Handling) Rules 2000 to all the residential & commercial property builders & their association. This organic waste management using organic waste converter system developed by Excel Industries Limited, Mumbai is technically at par with other methods of scientific waste treatment & disposal such as vermiculture, bio sanitizer & biomethanation. This system also comply MSW Bylaws & rules of all categories of MSW. We recommend this method for organic waste treatment & disposal.

Thanking you,

Dy. Medical Officer of Health  
(Solid Waste Management) &  
Nodal Officer  
Pune Municipal Corporation

# Department of Environment

## Govt. of NCT of Delhi

Level 6<sup>th</sup>, Wing C, Delhi Secretariat, IP Estate, New Delhi-02

Telefax: 23392029

No.F.8 (261)/EA/ENV/07

Dated: 02-11-2007

To,

Mr. Harshad Gandhi,  
Excel Industries Ltd.,  
184/87, S V Road,  
Jogeshwari (w), Mumbai-400 102.

Sub: Showcase OWC System at IITF event in Pragati Maidan from 14<sup>th</sup> to 27<sup>th</sup> November, 2007.

Ref: Discussion during the meeting on 25<sup>th</sup> October, 2007

Dear Sir,

The Department of Environment & Forests, Govt. of Delhi & Delhi Pollution Control Committee has decided to participate at IITF event in Pragati Maidan from 14<sup>th</sup> to 27<sup>th</sup> November, 2007 to showcase Green Initiatives of Delhi Govt.

For the decentralized organic waste management solution, you have demonstrated the functional utility of OWC System and OWC is being demonstrated since 22<sup>nd</sup> August, 2007 at Delhi Secretariat.

In view of functional utility & operational ease of OWC System at community & bulk waste generator level for organic Municipal Solid Waste (MSW) treatment, we have decided to showcase your OWC System in Delhi Pavilion stall at IITF event during 14<sup>th</sup> to 27<sup>th</sup> November, 2007. It is intended to make community aware about clean, neat & eco-friendly ways to deal with organic waste generated by hotels, hospitals, hostels, APMC, commercial kitchens serving daily meals to community/commercial houses, etc. It is further perceived that progressive Resident Welfare Associations (RWA) would come forward to set up OWC System in their neighbourhoods, which would help Govt. to reduce requirement of land for scientific waste disposal & make city cleaner, greener & healthier with participation of all stakeholders in waste chain.

We request you to provide one OWC System along with staff to operate and explain the process, for 14 days to showcase at IITF during 14<sup>th</sup> to 27<sup>th</sup> November, 2007. We will provide you space in this Department's stall in Delhi Pavilion at IITF event and extend all assistance to showcase OWC System as a part Green initiatives support program of Govt. of Delhi.

Please Confirm.

Thanking you,

Yours Faithfully,

  
(Dr. Anil Kumar)

Senior Scientific Officer (Env.)

By R. P. A. D.

**MUNICIPAL CORPORATION OF GREATER MUMBAI**  
**SOLID WASTE MANAGEMENT DEPARTMENT**  
No. CHE/12832/SWM/Gen-1597 of 06.12.2006

Office of the  
Chief Engineer (SWM),  
4<sup>th</sup> floor,  
Shree Chhatrapati Shivaji  
Maharaj Market Bldg.,  
Palton Road,  
Mumbai - 400 001.

To,

M/s.Excel Industries Limited,  
184-87, Swami Vivekanand Road,  
Jogeshwari (West),  
Mumbai - 400 012.

Kind Attention: Shri Harshad Gandhi.

Sub:- Community based initiative for organic waste disposal by using Organic Waste Converter (OWC System).

Ref:- Your letter dated 27<sup>th</sup>, September, 2006.

Gentleman,

The "Organic Waste Converter" developed by M/s.Excel Industries were technically examined in detailed and found to be eco-friendly with beneficial impact to improve hygiene, minimize health hazards and convert organic waste into useful enriched material within shortest time. It also facilitates processing of biodegradable waste in compliance of M.S.W. (M&H) Rules-2000.

The "OWC" will be useful to large Societies, Housing Complexes, Eating Houses, Restaurants to dispose of their organic waste in eco-friendly manner. The Excel Industries will render their services of installation of such "OWC" to the users and with full back-up system to use these machines effectively.

Yours faithfully,

  
(R.R. Markandeya)  
Chief Engineer (SWM)/DMC (Env. & W.M.)





**S.R. Rao, IAS**  
Principal Secretary

D.O.No. M23/102005/1619/4  
Health & Family Welfare Department,  
Government of Gujarat,  
7/7, Sardar Patel Bhavan, Sachivalaya,  
Gandhinagar-382010  
Tel.: 33251401 Fax: 079-23254653  
E-mail: sechfwd@gujarat.gov.in  
Date : 12-7-2005.

Dear

Enclosed please find a copy of the letter of Shri Mahendra Trivedi, Hon'ble M.L.A. Bhavnagar, regarding "SANITR/ATE AND BIO-QUELLEM" developed by Excel Industries

This bio-culture has been used effectively across Gujarat in the last three years during the time of floods with very encouraging results.

It would be worthwhile if you could consider using this BIO-QUELLEM for on going sanitation operations in the towns and villages.

With warm regards,

Yours sincerely,

*(S.R. Rao)*

**Dr. Varesh Sinha, IAS,**  
Principal Secretary to Govt.,  
Panchayats, Rural Housing &  
Rural Development Department,  
Sachivalaya, Gandhinagar.

**Shri K. Kailashnath, IAS,**  
Secretary to Govt.  
Urban Development & Urban Housing Deptt.,  
Sachivalaya, Gandhinagar.

Copy to Shri Mahendra Trivedi, Hon'ble M.L.A. Bhavnagar, MIG-2549, Gayatri Nagar, Bhavnagar.



**महाराष्ट्र आर्थिक विकास मंडळ**  
**MAHARASHTRA ECONOMIC**  
**DEVELOPMENT COUNCIL**

Y.B. Chavan Centre,  
Nariman Point, Mumbai - 400 021.  
Tel.: 2281 8198, 2284 6288, 2284 2202/03  
Fax : 2284 6394  
E-mail : medcbom@bom3.vsnl.net.in  
Website : www.medcindia.org

**Shri M. N. Chaini**  
President

**Shri Nandkishor Kagiwal**  
Vice-President

**Shri Deepak Ghaisas**  
Vice-President

**Shri C. N. Sadadekar**  
Regional Director, Konkan

**Cdr. (Retd.) Deepak D. Naik**  
Regional Director,  
Western Maharashtra

**Shri Prakash Patil**  
Regional Director, Nashik

**Dr. C. S. Deshpande**  
Executive Director

**Shri Anil Deshpande**  
Chief Executive Officer

**Past Presidents**

**Dr. D. R. Gadgil**

**Shri Pratapsinh Mathuradas**

**Shri N. M. Wagle**

**Shri Laichand Hirachand**

**Shri S. L. Kirloskar**

**Shri. B. D. Garware**

**Shri. P. A. Narielwala**

**Shri Y. A. Fazalbhoy**

**Shri Keshub Mahindra**

**Shri V. G. Rajadhyaksha**

**Shri M. L. Apte**

**Dr. B. V. Bhoota**

**Shri N. A. Paikhiwala**

**Shri Harish Mahindra**

**Shri M. H. Mody**

**Shri J. G. Bodhe**

**Shri R. N. Mafatlal**

**Shri J. N. Guzder**

**Shri B. R. Sule**

**Shri Vinod L. Doshi**

**Shri Adi Godrej**

**Dr. N. M. Dhuldhoya**

**Shri Subhash Dandekar**

**Shri P. S. Deodhar**

**Shri V. S. Palekar**

**Shri Sharad Kulkarni**

January 6, 2005

**Shri Harshad Gandhi**  
Business Consultant  
Excel Industries Ltd.  
184-87, Swami Vivekanand Road,  
Jogeshwari, Mumbai- 400 102

Dear Shri Gandhi,

Please refer to the visit of MEDC and VJTI team to your office on December 23, 2005. We thank you very much for the time spent by you and Mr. Javdekar for a detailed discussion on various methods of management of biodegradable waste at source.

We feel that the technology developed by Excel Industries can be of great help to establishments like big restaurants, clubs and special events where large number of meals served (such as conventions of political parties, exhibitions in MMRDA complex as well as major weddings etc) and also major housing complexes which generate substantial quantities of food waste.

Since the space requirement for the machine as well as the drying space for the output of the machine is very less, your equipment can offer an ideal solution for the above class of waste generators and hence should be vigorously promoted. We would like to recommend to the MCGM that any establishment /location which generates waste for more than 500 meals a day must have an equipment/system similar to yours. It could even be a vermin compost pit at the site but if there is no space for a vermi compost pit, then portable equipment must be used. Solid waste rules for such establishments must provide satisfactory arrangement for at site segregation and recycling of food waste for a volume over 100 kg per day. Trade refuse fee as well as fines need to be related to this.

With kind regards

Yours sincerely

*(Signature)*  
Ashok Datar Vinda Wagh



## **Option - D Door to Door Service Model – MobiTrash**

**Door to Door Collection and treatment of organic waste using OWC technology (Paid service).**

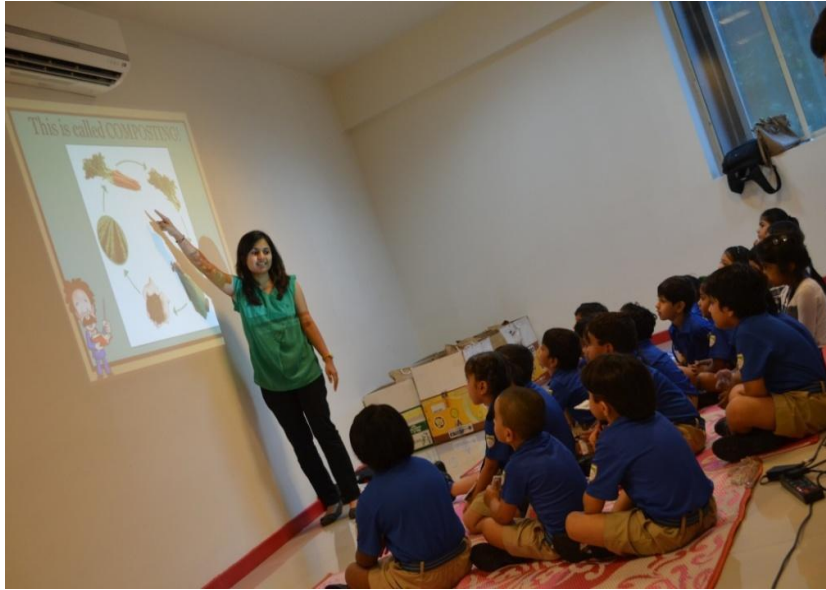
### **Benefits:**

- No need of transfer station
- Minimum transportation cost
- No dumping yard required
- Opportunity to self employment (micro entrepreneurship).

### **Salient Features:**

- Door to Door service
- No space required
- No capital cost to waste generators

# Excel's Initiatives Awareness & Education

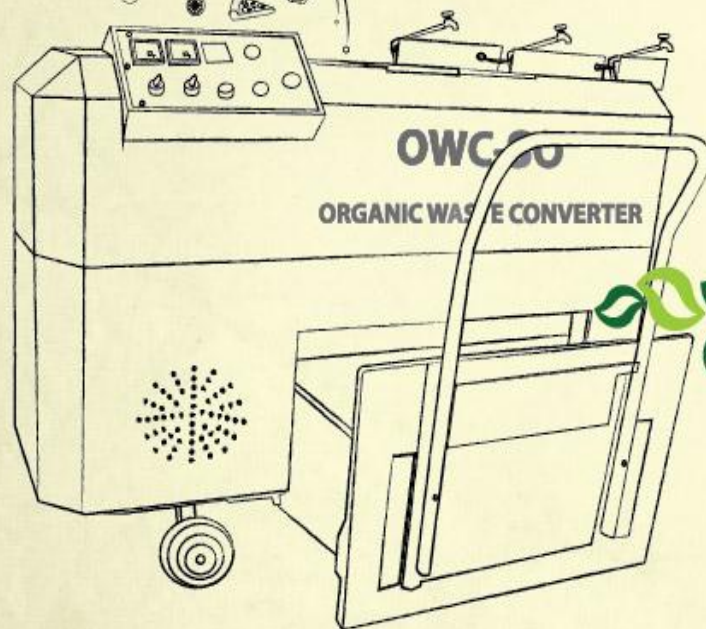






Excel Industries Ltd.

# WHAT COLOUR IS YOUR GARBAGE? TOGETHER WE CAN TURN IT GREEN.



## PRESENTING THE ORGANIC WASTE CONVERTER FROM EXCEL.

Want to enhance your Green Quotient? We can show you how. Our Organic Waste Converter (OWC) transforms organic waste into odour-free flowable, homogenised raw compost in 15 to 20 minutes. When this is cured further, it gives nutrient-rich, soil enhancing compost which can be used to create terrace gardens, organic kitchen gardens and landscaping-- right in the heart of the city! Together, we can create a cleaner, greener, healthier environment. That's what responsible corporate citizens do.

Waste Processing  
Capacity: 10/25/50/125/  
170 kg per batch

OWC handles Food  
Waste, Garden Waste  
& Market Waste.

**OWC**  
COMPOSTING MACHINE

DESIGNED TO INCREASE YOUR  
COMPANY'S **GREEN** QUOTIENT

Excel Industries Ltd.

Ph.: 022 66464200 | Email: [owc@excellind.com](mailto:owc@excellind.com) | <http://www.excellind.co.in>



Thank You