EFTS TECHNOLOGIES

Reinventing Air Purification

Technologies & Systems

EFTS TECHNOLOGIES INDIA PVT. LTD.

The Cost of Air pollution

Air Pollution affects India and the Global economy in more aspects than just health

There are other burdens associated with poor air quality

India

Economic Burden*	Crop Yield Reduction#	Solar Yield Reduction[4]	Premature Deaths*
$ 160 B (5.4% of GDP)	**$ 5 B** (Loss of 36%)	**$ 835 M** (29% lower)	**3,50,000**

Global

Economic Burden	Crop Yield reduction	Solar Yield Reduction	Premature Deaths
$ 2.9 Tn (3.3% of GDP	**$ 20 B (5 – 12%)**	**No Data**	**45,00,000**

REFERENCES
*: Greenpeace Southeast Asia and Centre for Research on Energy and Clean Air (CREA), 2020
#: https://sustainablefoodtrust.org/articles/the-impact-of-air-pollution-on-crops/, 2019
4: IIT Delhi

2023 World Air Quality Report – Most Polluted Cities in India ($PM_{2.5}$ Ratings) by IQAir

Air Pollution affects India and the Global economy in more aspects than just health There are other burdens associated with poor air quality

Rank	City	2023
1	Begusarai	118.9
2	Guwahati	105.4
3	Delhi	102.1
4	Siwan	90.6
5	Saharsa	89.4
6	Ghoshaigaon	89.3
7	Katihar	88.8
8	Greater Noida	88.6
9	Bettiah	85.7
10	Samastipur	85.3
11	Muzaffarnagar	85.0
12	Gurugram	84.0
13	Arrah	83.6
14	Dadri	83.6

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Efforts Ongoing ..to Control Air Pollution

At Source

- CNG for Vehicles
- Euro VI fuel
- Environmental Cess on LCV & HCV

- Relocation of thermal power & polluting industries
- Ban on coal in cities
- PNG instead of liquid fuel

- Greening of cities
- Pavement of central verges/road berms
- Spraying water on roads

- Ban on garbage and leaves burning
- Waste recycling
- Mechanized cleaning of roads

At Ambient

Smog Tower

Filter based system requires Land in densely populated Hotspots

Smog Gun

Uses of water for temporary relief

These efforts do curb pollution temporarily by transferring it to water and solid waste dump yards

Curbing pollution with *Filters & Water* is not sustainable .

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What is required?

Technology & Solutions

Sustainability is the most crucial

No Water & Land Dependency

No Usage of water and dependency on land to be eliminated

Low Capex and O&M

Technology that has lessor dependencies for rollout and later requires fewer site visits

Capacity & Capability

Capacity to address large volumes & capability to adapt to ambient variations for optimized operations

No Upstream or Downstream pollution & carbon footprint

Nil or Very less Energy requirements

Filters or Consumables must not be used

Result of a Joint efforts by Umeandus™ and IIT Delhi in 2019

The Technology

(3 patents filed by Umeandus™ & 1 filed jointly by Umeandus™ & SASTRA University, Thanjavur)

APS#

(Ambient Purification System)

System to capture and store PM (Particulate Matter)

- No filter or water
- No dependency on Land
- Low Operating Expenses
- Configurable Capacity
- Technology suitable for ambient variations

A-APS*

Capable of large volumes of PM 2.5 & PM 10 without Land and Electricity

P-APS*

Low cost system for ambient PM in Indoor & Outdoor setup with or without Electricity

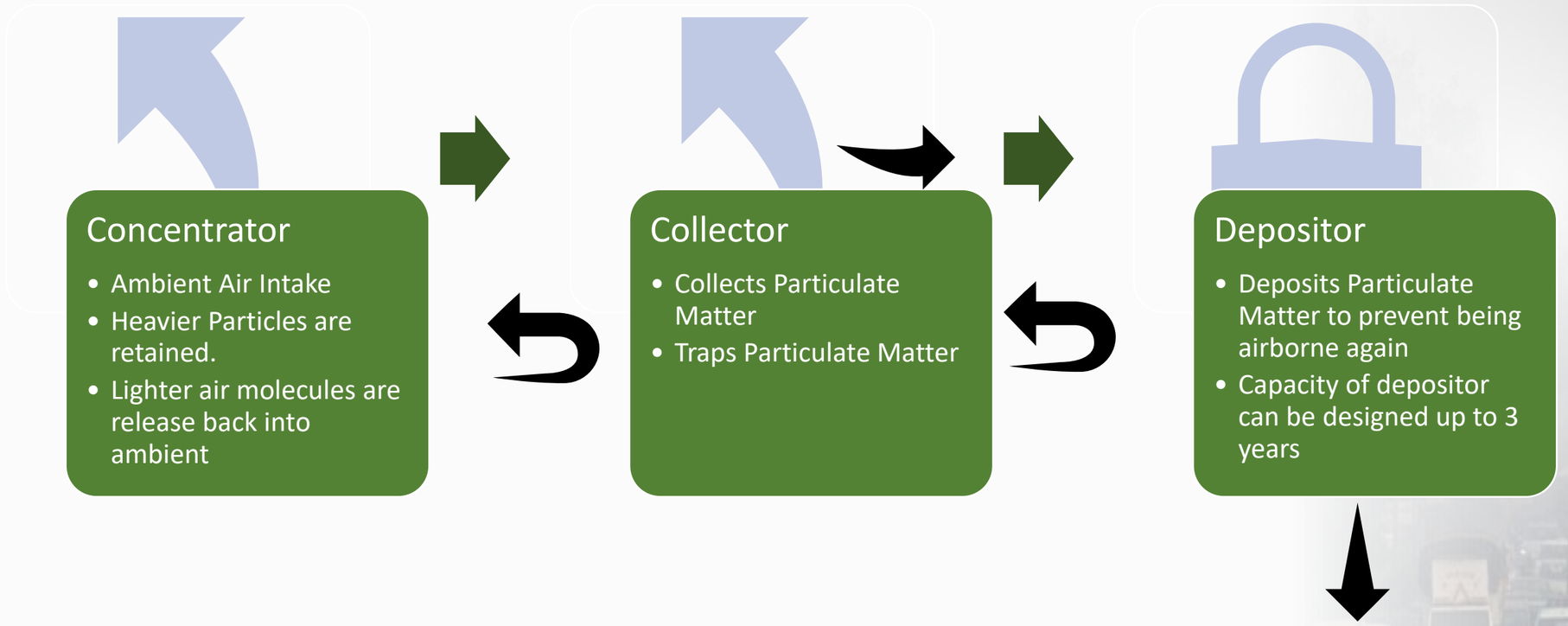
Developed at ABCDE Centre of Excellence set up by Umeandus™ and SASTRA deemed University at Thanjavur, Tamil Nadu

* Roadmap Technologies & Products

The Technologies

APS – Ambient Air Pollution Control System

- Patents filed by Umeandus™ Technologies and also Jointly by Umeandus™ & SASTRA



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The Disruptions

Capture and Store Particulate Matter including harmful and dangerous elements

Centralized & Distributed Deployments

No Degradation of Performance with Time

Usable for Bulk or Targeted control of PM

Low energy consumption

Solution for

Industrial & Pollution hotspots, Exposure reduction in Cities & Towns
Control and Reduction of harmful and dangerous elements

No Frequent Site Visits

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The Current Traction

Customers & Installations

1. Successfully completed project at ISBT - Anand Vihar for CAQM – GOI
2. Successfully running installation at NMB, New Delhi
3. Installed at Taj – Ambassador hotel New Delhi

Proposal to EIAA – UP and REUS – Lucknow for consultation and compliance

Partnerships

Academic Institutions

CoE at SASTRA

MoU with Umeandus, SASTRA Deemed University IIT Delhi, DRIIV, CSJMIF

Part of UNEP, APAF

NMS Works, FanAir, SRK Tele energy

MoU

MoUs with

1. DMRC
2. REIL – Jaipur
3. CSJMIF
4. NDMC
5. DTTDC

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Team

The Team

Advisors-UTIPL

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Thank you

Let’s connect...

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