

# Best Practices in Waste Pre-processing Facility

CII Waste Management Summit, November 2016



# Agenda

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1. Introduction to Geocycle

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2. Pre-processing Facility

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3. Best Practices

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4. Video

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# About Geocycle

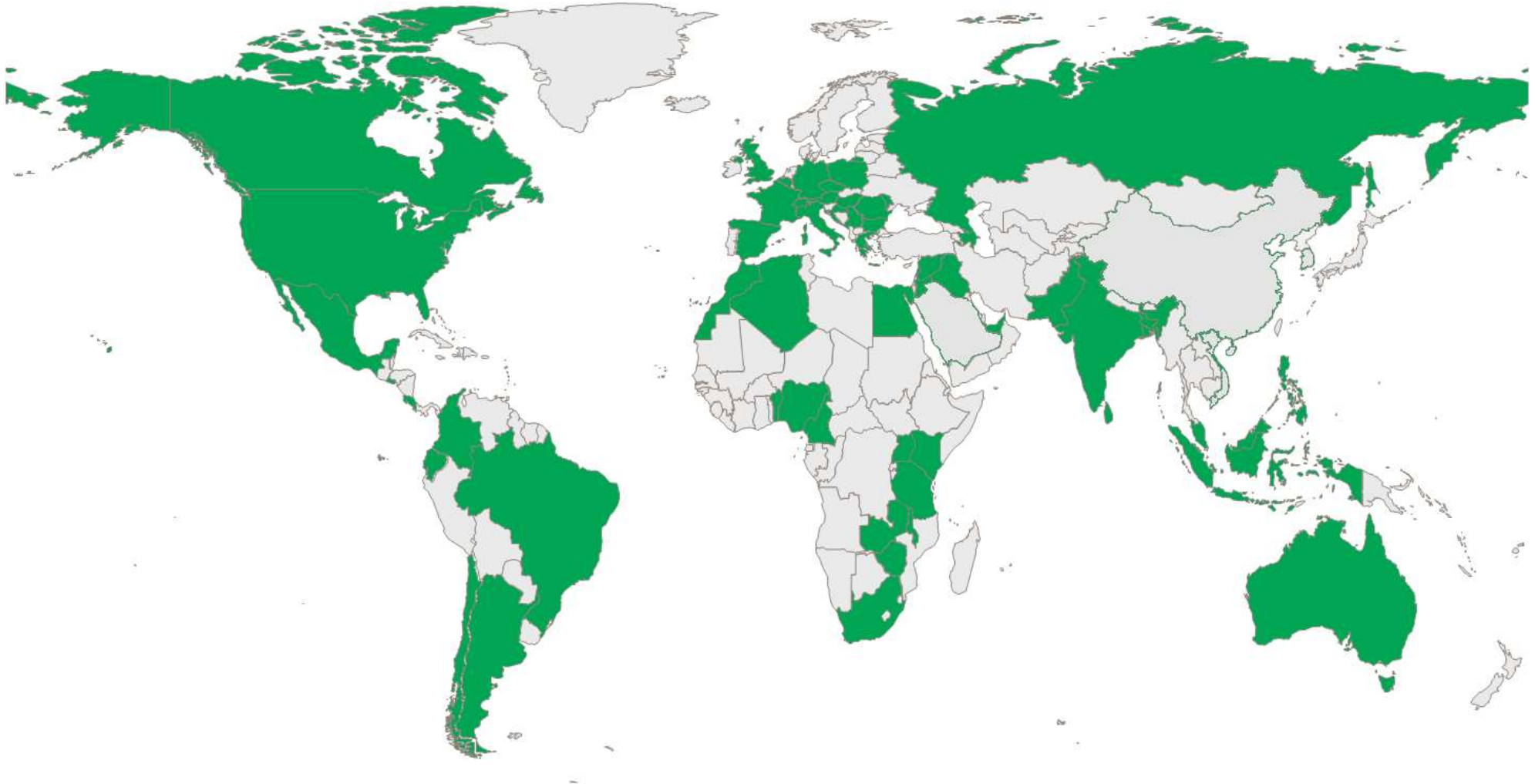
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- **Geocycle is a leading provider of waste management services worldwide.**
- Born of the pioneering activities of LafargeHolcim in the area of co-processing in the 1970s, Geocycle today is a trusted brand under the umbrella of the world's largest cement manufacturer.
- We provide services to industrial, agricultural and municipal sectors.
- We apply the highest health, environment and safety standards in all our operations complying to relevant regulation.

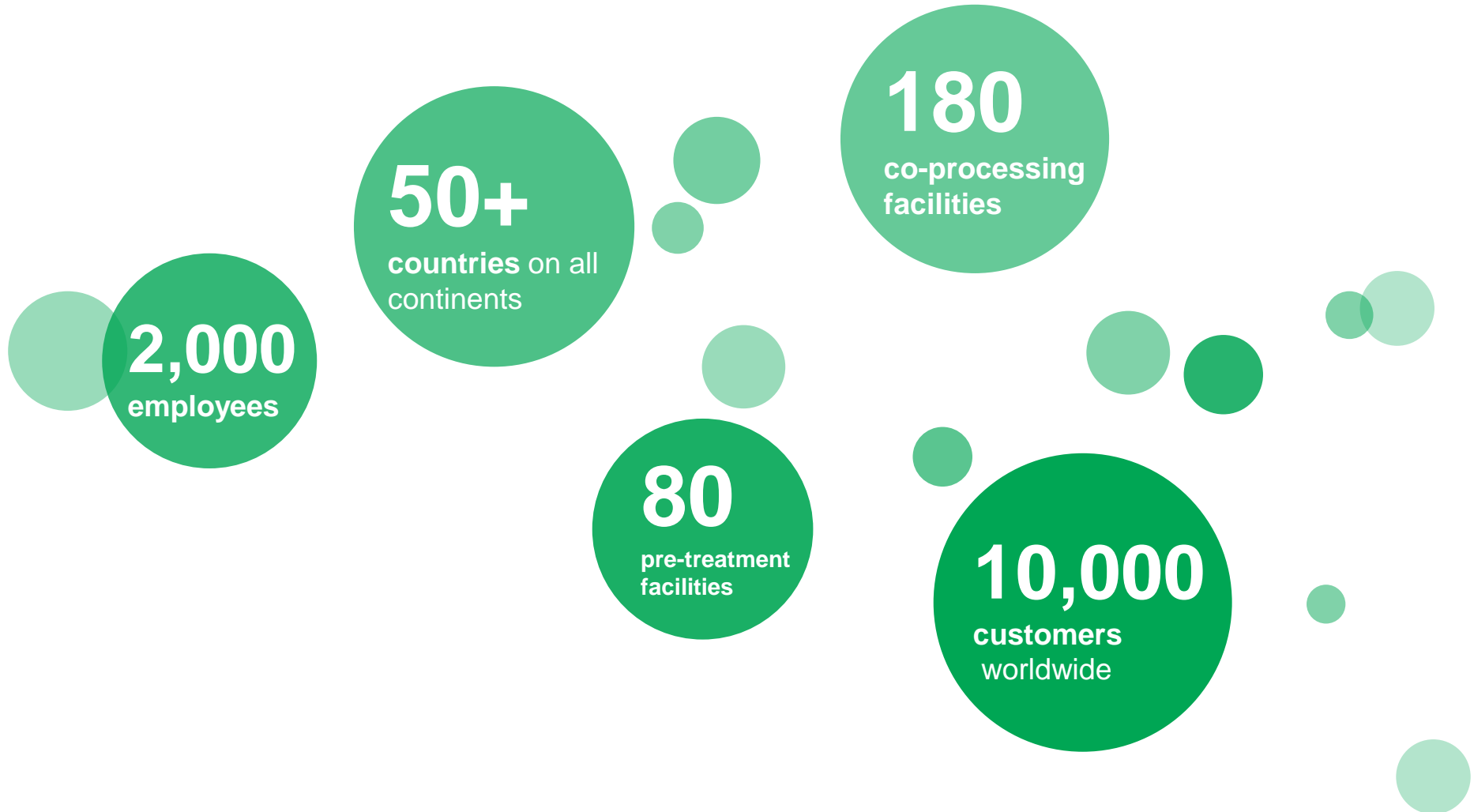
# Geocycle Worldwide

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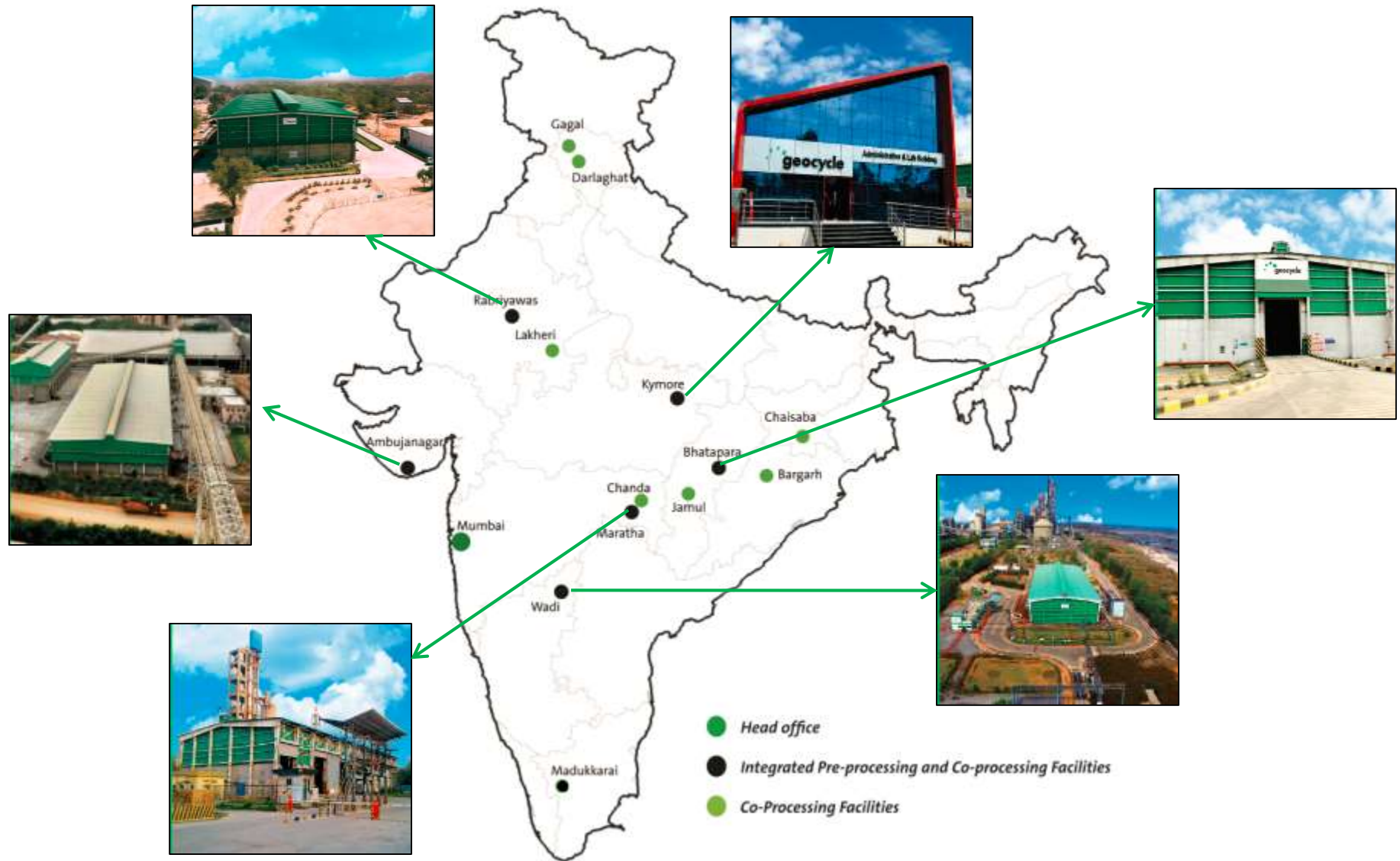
# Geocycle Worldwide: A Snapshot

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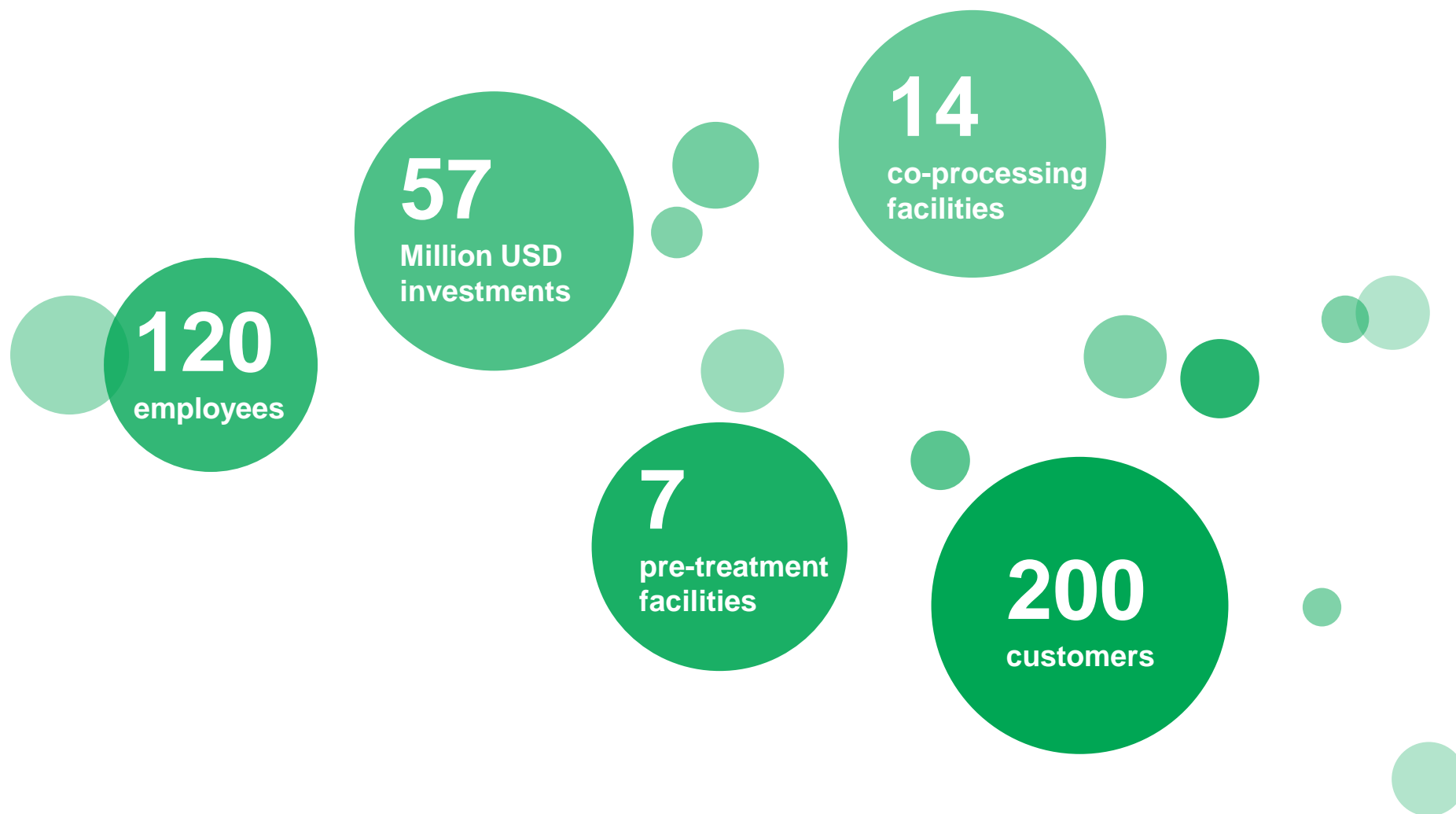


# Geocycle India



# Geocycle India: A Snapshot

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# The Geocycle Approach



1

## Waste assessment

We can provide a complete survey of your waste and a full assessment of its suitability for co-processing.



2

## Waste analysis

We offer dedicated laboratory testing to analyze your waste to ensure it is suitable. We at Geocycle are able to manage waste such as solids, sludge and liquids



3

## Waste transportation

We provide a seamless service – ensuring the waste is transported in appropriate packaging with required labelling and documentation. The waste is carried by operators with required skills, qualifications and permits.



4

## Pre-processing

Further analysis of waste is conducted in our laboratories if required. We have extensive facilities to blend liquids, shred solid materials and homogenize waste prior to its usage in kilns.



5

## Co-processing

Waste is then safely co-processed in cement kilns. Our cement kilns operate at temperatures of up to 2000°C – which leaves no residue or waste after co-processing is complete.



# Waste Pre-processing Facilities



- Geocycle India has 6 state of the art pre-processing facilities with a waste processing capacity of around 600 K TPA, the 7<sup>th</sup> one is under commissioning.
- Each facility typically consist of :
  - Storage & pre-processing shed
  - Blending, Impregnation, Shredding, Separation & Screening systems
  - Fire fighting system
  - State-of-the-art laboratory

# Salient Features of Pre-processing Facility

- Dedicated vehicle parking area
- Waste sampling station for characteristic evaluation
- Fully equipped laboratory with all safety features
- Storage and pre-processing shed is completely enclosed
- Segregated waste storage
- Geo-membrane and concrete floor for complete leachate control
- Odour control system
- Automatic fire detection & suppression system, mobile fire fighting equipments
- No effluent or by product is generated
- Compliant with national rules and guidelines



# Laboratory

- ASTM & USEPA protocols are followed for testing of waste samples.
- Each lab is fully equipped to evaluate & monitor the following parameters:
  - Moisture/Water content
  - Viscosity
  - Density
  - Bulk Density
  - Elemental Analysis - Carbon, Hydrogen, Nitrogen, Sulphur
  - Proximate Analysis – Volatile Matter, Fixed Carbon, Ash Content
  - pH
  - Calorific Value - Gross, Net
  - Flash Point
  - Main Oxides
  - Trace Elements
  - Halogens
  - Polychlorinated Biphenyl (PCB)





# Safe Practices



**Emergency Handling Training**



**Fire Fighting Pump House**



**First Aid Training**



**Foam tank for fire suppression**



**PPEs**



**Fire extinguishers**



**Infrared fire detector**

# Safe Practices (contd.)



Cut off switch for local isolation



Wheel Choke



Automatic mobile fire fighting system



Proper Stacking



Gas Analyzer



Electric shock & its first aid

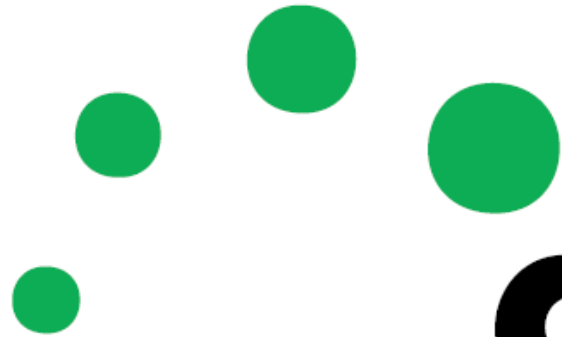


# Geocycle Video

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[Geocycle Video.mp4](#)



**geocycle**