Electronic Waste Management & Sustainability
Industry Background

- Greenscape Eco Management was incepted in late 2007 with an aim to formulate new value propositions and inject a fresh perspective in the ITAM & Green IT industry while ensuring maximum returns for its business allies.

- Rapid changes in technology, falling prices, and faster obsolescence resulted in a fast-growing surplus of used electronics around the globe.

- Double-digit growth: Indian IT sector, both services and related hardware spend continue to grow aggressively creating a need for an Indian centric integrated End of Life solutions provider.

- Indian IT asset recovery service industry is currently immature and is spread out between a number of players namely leasing companies, AMC providers, refurbishers and recyclers & scrap dealers.

- Greenscape identified a huge growth opportunity in total asset management of used/EOL IT equipment market in India & has been offering collection, reverse logistics, de manufacturing, component harvesting, repair & refurbishing, recycling, data security, asset recovery services in DTA (Domestic Tariff Area) & SEZ (Special Economic Zones).
Company Snapshot

- Greenscape Eco Management has now grown to 150+ employees located in multiple cities across India
- Global Presence in over 20 Countries through our & our partner facilities, enables Greenscape to participate in global tenders
- Signed & currently managing Pan India contracts with IT giants like TATA CONSULTANCY SERVICES, INFOSYS, IGATE, BIRLASOFT having over 427 locations across India
- Managing bonded IT equipments for clients like MPHASIS, CSC, Teradata, Genpact located in multiple SEZ/STPI/EOU locations across India
- Successfully completed a critical on-site & off-site data wiping & electronic waste recycling for business critical equipment on behalf of major BFSI
- Awarded as a top emerging scalable business model by India’s leading Business School, ISB (associate school of Kellogg & Wharton, University of Pennsylvania) in 2011 and honored by then Chief Minister of Andhra Pradesh
- Under process of migration onto Pan India SAP-ERP for infusing further efficiencies & reducing operational costs in Business Processes
Our Vision & Mission

**Vision**
Greenscape Eco Management strives to become the leading player of IT Asset Management services including disposition services in India.

**Mission**
Greenscape Eco Management's mission is to become the most trusted brand for environmental solutions for obsolete/surplus electronics.
Urban mine: Renewable metallic resources discarded by urban consumption, the concept was first proposed in 1997 by Professor Michio Nanjo at Tohoku University.

<table>
<thead>
<tr>
<th>Commodity needed</th>
<th>Mining source required</th>
<th>E Waste source required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 MT Steel</td>
<td>2 MT Refined ore</td>
<td>2 MT E Waste</td>
</tr>
<tr>
<td>1 MT Copper</td>
<td>200 MT Copper ore</td>
<td>14 MT E Waste</td>
</tr>
<tr>
<td>1 MT Gold</td>
<td>200,000 MT Ore</td>
<td>70,000 MT E Waste</td>
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</tbody>
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Our Services

- **Urban Mining**
  - Recycling of E-waste
  - Maximum Metal recovery
  - Peripherals/Components recovery
  - Resource efficiency via reuse
  - Efficient Reverse logistics management
  - Global Standards for Indian centric market

- **Brand Protection**
  - Secure Destruction
  - Data Erasure via degausser in accordance to **US department of Defense Standard (US DoD)**

- **Disposition of Custom Bonded IT equipment**
  - Unique Service for eliminating all financial/operational hassles associated with bonded equipments

- **Environmental Stewardship**
  - Ensuring commodities are recycled in environment friendly manner
  - Providing transparent reporting

- **End of Lease equipment**
  - Risk Mitigation against leased equipments
  - Financial safeguard
  - Cover Asset Disposition Risk
Data Sanitization

- To ensure the HDD is safe for reuse and no data is recoverable, we follow stringent process via software erasure & degausser
- Greenscape uses standard data overwrite process, including a 3-pass data wipe compliant with **US DoD 5220.22-M standard** followed by random sector verification
- Drives that even identify one bad sector or are non working are removed and degaussed
- Media device serial number, data wipe time, operator name are recorded in our system and are shared with clients on request
- Certificates of Data Destruction issued to all clients with **100% guarantee of complete data destruction**

**SV91M CESG UK & NATO security approved manual degausser**
Our presence & logistics optimization

**NORTH:** ALWAR (Rajasthan) & DELHI
**SOUTH:** BANGALORE (Karnataka)

- Material picked up across India is transferred to our warehouse facilities marked by ⭐️
- Thereafter material is transferred to one of our plants marked by ●
- Based on difference in distances and logistic optimization for recycling as per customer needs
As per the E-waste (Management & Handling Rules, 2011) law, Bulk consumers require to maintain the following documents:

**Form 2**
- Annual records for e-waste disposal (Can be audited by pollution board)

**COD**
- Certificate of Destruction for the material disposed (given by recycler)

**Responsible Recycler**
- Entry by client with their stamp in passbook issued by Pollution Board

Additionally, the recycler needs to maintain the following valid registration under state pollution board:

- Authorization & Registration
- Consent to Establish
- Consent To Operate (Air & Water Approval)
- Pollution Board Issued Pass book
Compliance Management in India

- R2 Certificate
- Central Pollution Control Board approval
- Rajasthan Pollution Control Board approval
- 60,000 MT/Annum capacity to recycle E-waste (Largest in India)
- Air & Water Consent
- ISO 9001:2008
- ISO 14001:2004
- OHSAS (Occupational Health & Safety)
- 100% Export-Oriented
- Export license – Ministry of Environment and Forests
Greenscape - R2 certified recycler

- It is recognized by Environment Protection Agency
- R2 recyclers send materials to licensed and permitted facilities
- Data destruction processes are reviewed and validated by an independent party periodically.
- R2 is Responsible Recycling Practices Standard certification
- It establishes a “reuse, recover, dispose” hierarchy chain of custody for material handling.
- Strict guidelines on how to manage materials that pose environmental concern and worker safety.
E-waste Recycling Process

- **Collection**
- **Dismantling**
- **Pre-processing**
- **Material recovery**

Processed At Greenscape Facility  
Processed At Partner Facility

- *Manual dismantling* is regarded as one of the best methods of pre-processing techniques
- Since E-waste is complex and has interlinked material, *mechanical separation is less selective*
- Use of machinery for pre-processing E-waste causes co-segregation of complex materials and loss of precious metals
- Greenscape specializes in optimizing its processes and ensuring maximum value recovery with minimum carbon footprint while utilizing Best Available Technology available in the world
Greenscape Edge

- **Established Reverse Logistics:** Efficient 3PL for efficient movement of material backed by hub and spoke model and our various warehouses across India.

- **Remanufacturing & Recycling capabilities:** Close Loop IT Asset Lifecycle by ensuring extended life of IT equipments by deploying pre-owned assets in domestic as well as international markets and properly managing the obsolete assets and thus contributing to sustainable development.

- **Bonded Equipments:** Greenscape provides the facility through it’s EOU of being able to take on the liability of any balance customs duties and take ownership of the bonded equipment from Special Economic Zones/ STPI’s and thereafter export the equipment. This enables our clients to abide by the statutory norms and unburden themselves from the hassles of custom duty and disposal of their used / EOL assets. This service has enabled Greenscape to have long term alliance with clients like **MPHASIS, TCS, Genpact & Teradata**

- **Audibility & Traceability:** With an efficient team of professionals, we provide lot vise reporting to our clients of their electronic assets.
Achievements

Greenscape received **export license** from Ministry of Environment and Forest for efficiently exporting the hazardous electronic components from our plant and thus ensuring reliable & top notch recycling services for our clients.

We are among few authorized recyclers for E-Waste management who were approved by the **Central Pollution Board Body** prior to the E-waste legislation in India. Greenscape is also the treasurer of Electronic Recyclers Association in India.

We are the only Indian company who is an active member of National Association for Information Destruction (**NAID**) - A global organization devoted to increasing the security and ethics of the information destruction industry.
Achievements

The ISO 9001:2008 is a standard for the "Quality Management System". This makes us to focus on our client's needs of quality, applicable legal & regulatory requirements and develop customer satisfaction.

We have in-place certifications for providing refurbished PCs preinstalled with genuine Microsoft software to personal users and businesses in various verticals. This means you can be assured that a credentialed product is provided to you in all aspects of its operations and is ready to hit the ground running.

We opted for OHSAS 18001:2007 certifications for ensuring health and safety of our employees. This certification serves as an integral part for occupational environmental management and thus making total sense to our core values.
We have achieved the official certification status for and BSI 14001:9001 standards. This is a certification for streamlining environmental management and guidelines to ensure environmental issues are considered within decision making practices.

Greenscape has Rajasthan State Pollution Control Board Approval and among the early achievers of this certification under the Enactment of the Environment (Protection) Act, 1986 for hazardous waste handling and management. We have earned the PCB certification in 2010 and have been the early entrant to the authorized E-waste industry in India.

We have procured Inter Unit Transfer from Director General of Foreign Trade (DGFT) for electronic products at our facility situated in Alwar. This plant is fully compliant with all the rules and regulations of the national environmental bodies and is particularly established to cater to the clients located in SEZ/STPI zones.
Greenscape Eco Management

Thank You