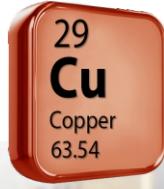
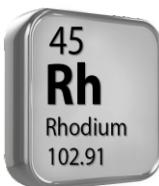
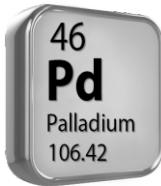
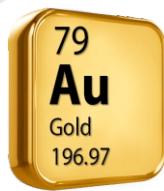




# IN E-WASTE ALL THAT GLITTERS IS **GOLD**



# CHAMPIONS OF CIRCULAR ECONOMY

Mr Alam Shah, the Director of the Company, has more than two decades of experience in the metal expertise and scrap trade. Mr Alam Shah has been a Director of the Company since its incorporation. He has a strong linkage with formal and informal actors of the metal trade PAN India.

He strongly believes in ethical business practices and has vast experience in large disposal of scrap dismantling and demolition projects under liquidation or relocation with a cent per cent client satisfaction. His consultative and collaborative specialized execution practices enable him in speeding up the disposal process as per the client's requirement and has completed numerous projects within cost and time frame. He has achieved high regard and fame in the scrap industry by sheer hard work and perseverance.



Mr Sagar Upadhyay, the Director of the Company, graduated with a Bachelor of Engineering (Electronics and Telecommunication) degree. He has over 6 Years of experience in E-waste Management and Recycling. He is passionate about integrating the informal supply chains of scrap trade into the formal recycling ecosystem and has worked tirelessly to achieve these goals. He has demonstrated successful work experience in E-waste Procurement, Marketing, Operations, Metal Recycling, Compliance & Reverse Logistics.

His strong academic knowledge in the electrical and electronic field combined with his experience in E-Waste Recycling domain helps him in driving digital transformation for informal enterprises and building a strong network with all actors in the recycling trade. He has demonstrated strong qualities to lead teams from grass root levels and with people from diverse backgrounds.



# URBAN MINE & ENVISIONED PROJECT

Alchemy Recyclers Private Limited is a company formed to recover and recycle precious metals Preliminary from electronic waste as well as from other precious metals bearing waste from multiple industries like Electronic Waste, Jewelry Industry waste, Spent Catalyst Waste, Plating Industry Waste, and Dental Waste.

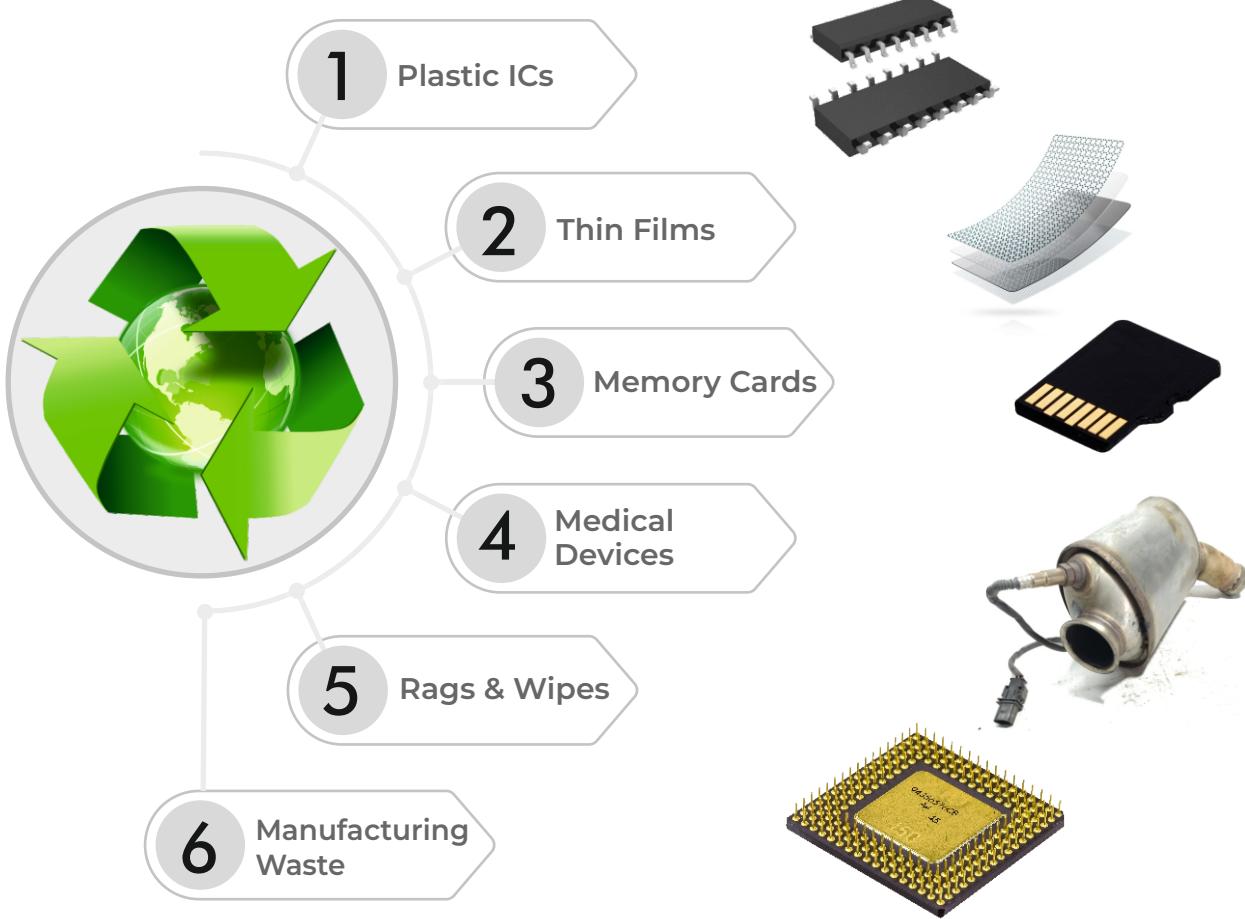
Electronic-Waste contains precious metal up to 40 to 50 times richer than ore extracted from mines. For example, one ton of gold ore yields about 5 grams of gold, but one ton of phone printed circuit boards yields about 150 grams, 30 times as much. Urban mining presents an opportunity to reclaim and recycle precious metals and Rare Earth Elements that are used in high-end mobile telephony and communication goods.



Recently, such trends are called "Urban Mine" as the concentration of metal in such scrap are many times more compared to one from primary mining of the earth's crust.

## TYPES OF RECYCLABLE PRODUCTS AND MATERIALS

Alchemy system is being developed to process these types of materials:



# GREEN TECHNOLOGY PROCESS & PEOPLE

Alchemy is formed by Techno commercial entrepreneurs who have more than 2 decades of experience in the scrap electronic and electrical industry. We are Electrical Engineers by profession having an experience of 20 years in scarp trade. We have adopted the technology for Indian raw materials and equipment sourcing from overseas. The technology uses solvent extraction for precious metal recovery for surface plated items and thermal reduction and solvent extraction for embedded electronic parts like processors and Integrated Chips.

Reclamation, Recovery & Refining of precious metals resource is at the heart of our project, precious metals like Gold, Silver, Palladium, Platinum and Rhodium are 5 major metals being generated from electronic and jewelers' waste alike. We have identified the thermal reduction process which can treat the low-quality heterogenous waste materials from the electronic and jewelry Industry. A unique strength of the project is identifying the key raw material, sorting and segregating various items into individual lots and treating them in batches as per the prudent waste recovery process. We have engineered our thermal reduction and pollution control systems to operate efficiently at even low volumes to meet the current and emerging needs of the waste processing industry. We have identified technology to recover and refine precious metals like Gold, Silver, Palladium, Platinum, Rhodium & Copper from electronic waste, jewelry industry waste, catalysts, Medical Devices, and plating solutions waste & manufacturing waste and debris. The design of our new plant makes it possible to process multiples metals even products with a low percentage of precious metals – while effectively controlling the emissions produced by today's complex materials.



Thermal reduction is the long-standing industry standard for recycling precious metals from materials with a predominantly organic content to produce a stable uniform powdered commodity. This process combines the most accurate method to determine precious metal contents with an efficient reclamation strategy. The first step in the process is to thermally reduce organics to carbonaceous ash. This facilitates subsequent processing since it reduces the overall volume of material while increasing the concentration of precious metal. The resulting ash material is comprised primarily of carbon and mixed metals. This material is then further processed by crushing, classifying by size, and blending in order to produce a homogenous, "well characterized" precious metal commodity.

# GREEN TECHNOLOGY ENVIRONMENTAL LEADERSHIP

Our recovery with a thermal reduction system uses a state-of-the-art pollution control process. It can efficiently recover precious metals from even low percentages of hazardous and non-hazardous materials converting them into marketable precious metals with minimal environmental impact.

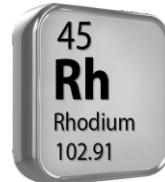
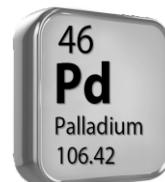
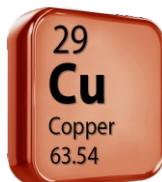
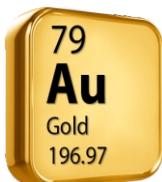
The pollution control process scrubs exhaust streams and prevents the formation of hazardous by-products in a multistage & comprehensive exhaust gas scrubbing system. The primary consideration when thermally reducing material is to control off-gas emissions. We re-burn the exhaust stream from the burn chamber in an afterburner. Temperatures are elevated to over 1100 °C with excess air to fully combust the exhaust emissions. The most efficient pollution control device for managing smoke particles in the stream is the wet scrubbing system – the variable-throat Venturi scrubber. The venturi's main purpose is to remove smoke particles formed in the process, which it can accomplish with high efficiency. Since water and liquid droplets have more mass-momentum than the gas, they get trapped, separating them from the air stream.

## GREEN TECHNOLOGY CIRCULAR ECONOMY

**World Economic Forum's Definition of Circular Economy :** A "Circular Economy" is an industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return of the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models.

There are many different ways precious metals touch our lives. Beyond jewelry, precious metals are found in smartphones and other electronics, as well as medical devices, industrial equipment, fuel cell catalysts and robotics. Because precious metals are finite resources, relatively rare and strategically important, recycling is critical. Envisioned Project adapts to the circular economy concept in total. The project is very strategic as it offers to recover and reclaim precious and rare earth metals which are not renewable. Plus India is a net importer of gold and will help to conserve foreign exchanges reserves if recovered locally.

## METALS WE RECOVER:



# ALCHEMY GREEN PLEDGE

## A PLEDGE

### TO OUR CHILDREN & FUTURE GENERATIONS

- To dutifully reduce my impact on the environment be it at work or home.
- To conserve water, electricity and fossil fuels, reduce, reuse and recycle my resources as much as possible.
- To collect, treat and dispose safely of all kinds of Hazardous waste not limited to electronic, industrial, chemical, refining residue, spent carbon or any Hazardous waste.
- To pledge to create a green and environmentally sustainable planet.
- To reduce my negative impact on nature and the environment and to support United Nations Sustainable Development Goals.
- To aid United Nation Sustainable Goals development as we touch 10 goals out of 17 goals.

### WE AID UNITED NATION SUSTAINABLE DEVELOPMENT GOALS



### GET IN TOUCH

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