IT Asset Disposition Services

IT Circular Economy

1. Remove-IT
2. Refurbish +
3. Recover Value +
4. Recycle
5. Remanufacture

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Introduction

Who am I ? Background

- Lifelong Interest – 4th Generation Ferrous, Non-Ferrous, Electronics Recycler
- Wisetek Head of Global BD, Board Seat / Director
- Co-Chair Global Resource Efficiency Task Force – US Chamber of Commerce

Why am I here ?

- Interest in Global Economy, Resource Efficiency
- Expert in IT Equipment Circular Economy
- The time for change is NOW

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E-Waste Statistics

- 2016 – 44.7 million metric tonnes of e-waste generated – Equivalent of nearly 4,500 Eiffel Towers
- Expected to increase to 52.2 million metric tonnes by 2021
- Asia – largest by continent, Africa smallest by continent – both in in total and per inhabitant
- 55 Billion Euros of raw materials represented in 2016 e-waste # - a small fraction of the value if the materials were reused vs. recycled
- ICT (mobile devices/computers) Uptake and Shorter refresh/replacement cycles causing e-waste growth

Global E-Waste Monitor

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Circular Economy Statistics

- Linear Economy Model used for150 years, changes in resource requirements and regulatory environments causing change
- 2010 – 65 Billion tons of raw materials used- expected growth to 82 Billion tons by 2030 – NOT SUSTAINABLE
- 2015 – Global demand for resources 1.5x Earth can support annually
- 2002 – 2010 Commodity Prices rise 150% - wiped out 100 years of price declines from efficiencies and technology
- 3 Billion new middle class consumers by 2030
- 2025 – Circular Economy can meet new demand – generate $1 Trillion annual and prevent 100 million tons of waste!!

Mckinsey Data

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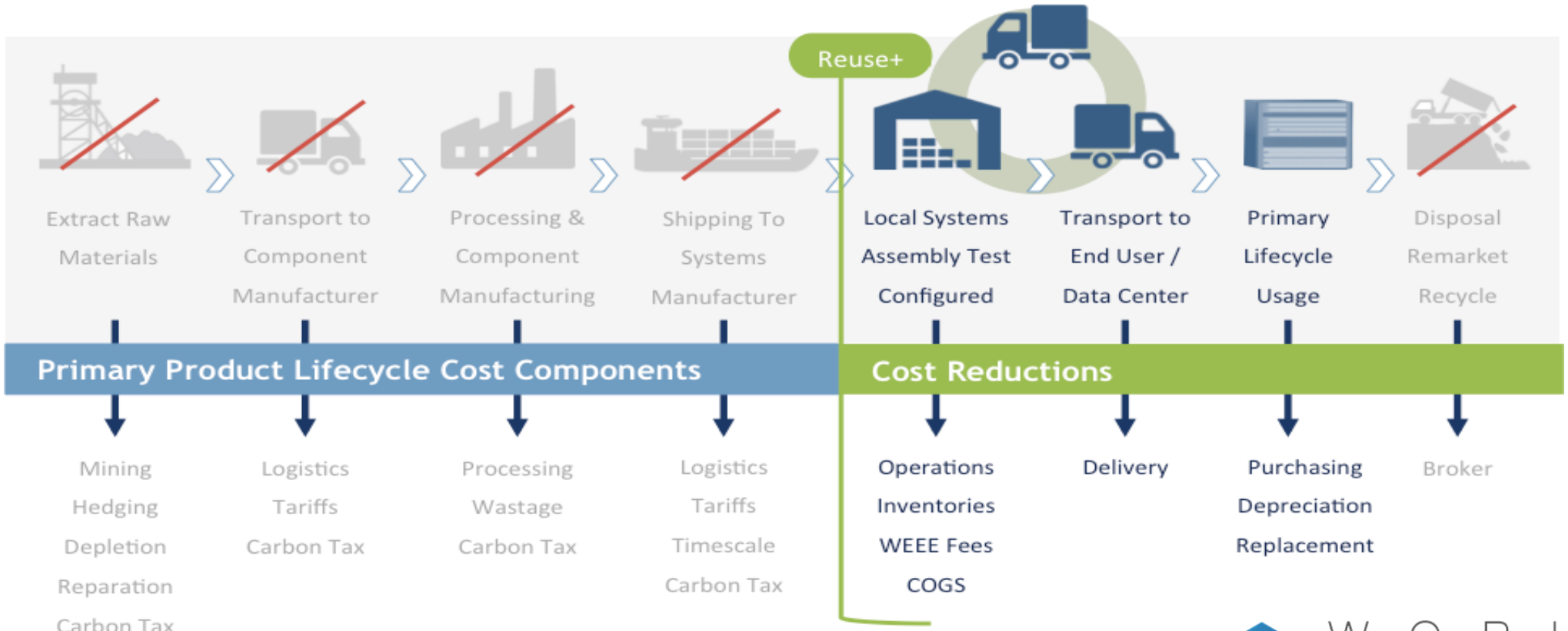
Linear VS Circular Economy Cost Elimination



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Locations – lean six sigma manufacturing

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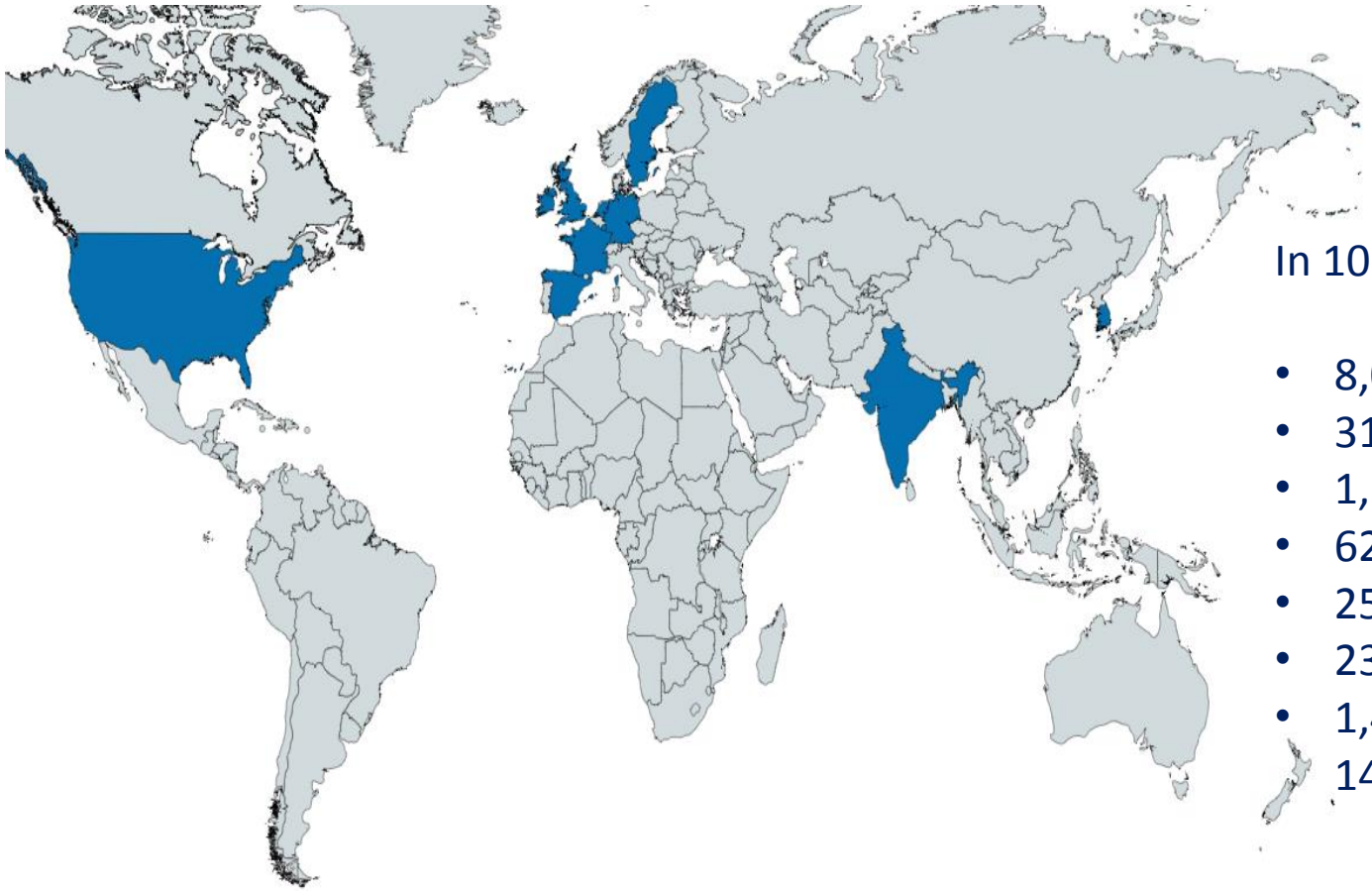
Current Project (Client name removed) Business 2017- Date



In 10 Countries across 3 regions we have processed,

- 8,070 Racks decommissioned.
- 314,730 Servers disassembled for component harvesting.
- 1,258,920 pieces of RAM tested and resold
- 629,460 CPUs tested and resold
- 256,102 raid cards tested and resold
- 236,566 SSDs Securely destroyed and recycled
- 1,432,859.2 lbs of HDD securely destroyed and recycled,
- 148,221.19 lbs of E-waste collected and recycled

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Major Global OEM – Global Takeback Management Case Study

We process approx. $180M worth of inventory through the OEM reverse logistics (R-LO) program annually.

- We process approx. 1m pieces of equipment per year through this program, last year it was 972K pieces.

Through this R-LO process, approx. $45M worth of equipment annually goes back into the OEM supply chain.

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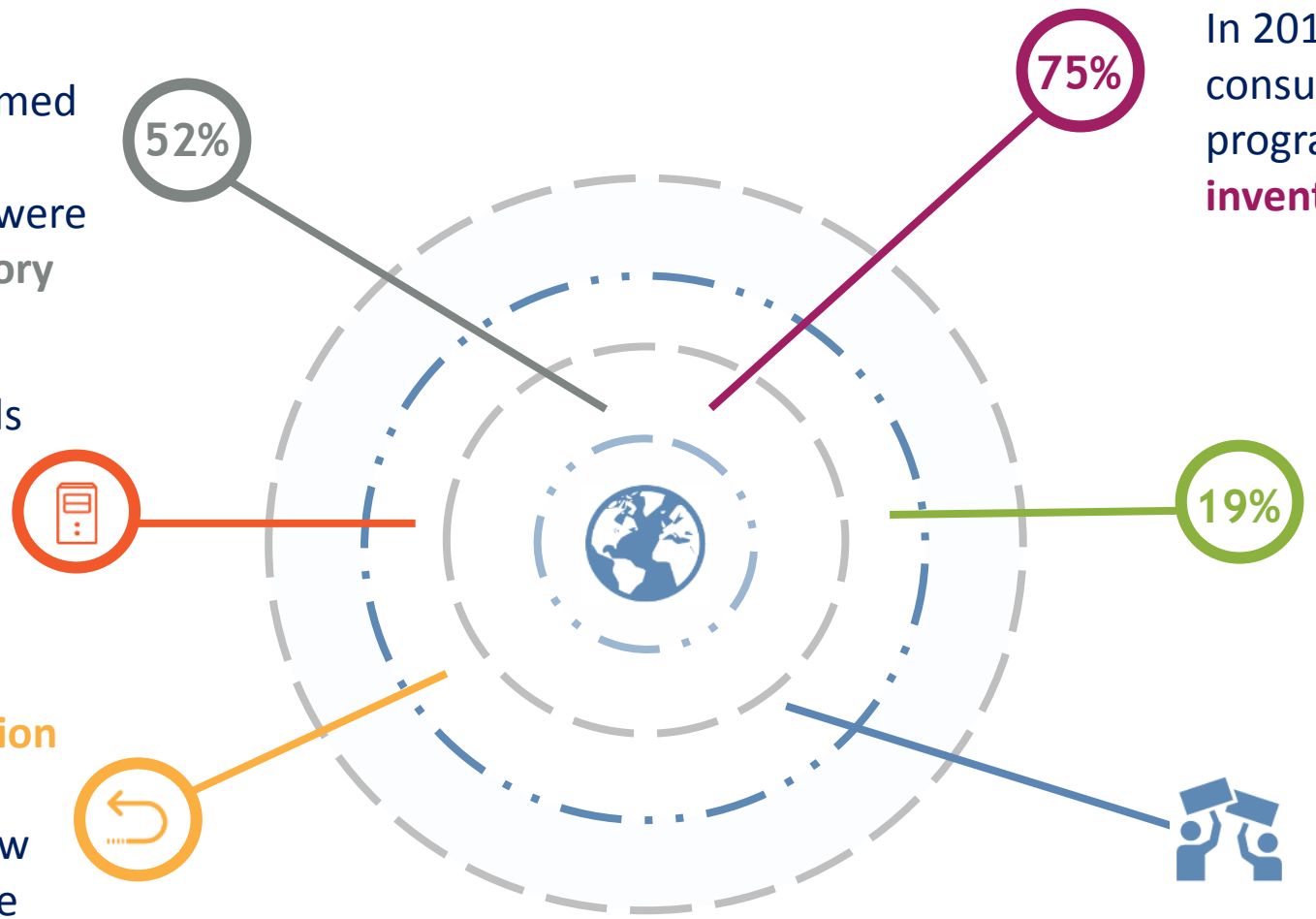
Google Circular Economy Published Benchmark

In 2015, **52%** of components consumed in the machine upgrades program were **refurbished inventory**

In 2015, **75%** of components consumed in the Google spares program were **refurbished inventory**



Google custom builds its own servers for data centers using **refurbished parts**

In 2015, **19%** of servers Google deployed were **remanufactured machines**

There is **no distinction** made between **refurbished** and new inventory – both are considered equivalent

In 2015, Google **remarketed** nearly **2 million units** into the secondary market for reuse

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Obstacles and Benefits of Changing to Circular Model

Obstacles

- Reverse Logistics – Operational hurdle to get product returned through a robust logistics network
- Regulatory – returning products/components across country boundaries requires unnecessary documentation, regulation

Benefits

- Cost Reduction – Material Savings, Reduced Price Volatility, Value Added Activity
- Revenue Additions – Secondary Sales, Increased Services, Closer Customer Interaction, Consumer Opinion of Brand

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