



## Testimony of Charles Pellicane, Executive Vice President of Human-I-T

### U.S. Senate Environment and Public Works Committee Hearing: *Improving Capacity for Critical Mineral Recovery through Electronic Waste Recycling and Reuse*

July 26, 2023

Thank you Chairman Carper, Ranking Member Capito, and the distinguished members of this committee for this opportunity to testify before you today. As well, thank you for addressing this critical topic before us today: *Improving Capacity for Critical Mineral Recovery through Electronic Waste Recycling and Reuse*.

My name is Charles Pellicane and I'm the Executive Vice President of Business Development at Human-I-T. Human-I-T is the country's largest digital equity organization, with 175 employees and interns in 10 states, primarily in California and Michigan. We are also an active member of the National Digital Inclusion Alliance, a AAA-certified vendor with the National Association for Information Destruction, and a member of AFTRR, the Alliance for Technology Refurbishing and Reuse.

While promoting digital equity is our *primary* focus, we sustain ourselves by providing IT Asset Disposition (ITAD) services to businesses and organizations. Thus, we solve two problems with one solution:

- We solve the problem of e-waste by partnering with corporations, government agencies, community groups, and other organizations to collect and process unwanted technology.

- We use refurbished technology and the revenues from that service supply free and low-cost computers and monthly internet plans for students, seniors, and families

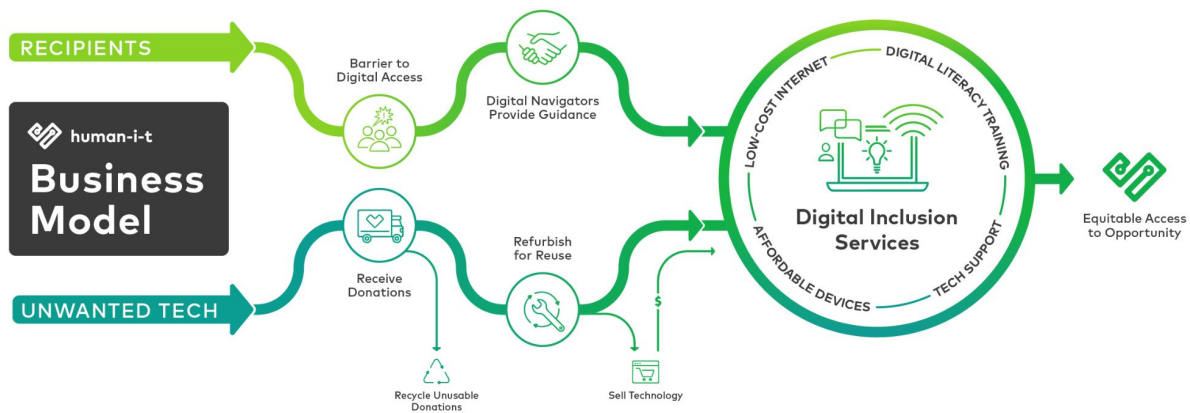


Figure 1.

Because our model promotes reuse over recycling, we not only keep e-waste out of landfills but we also create positive social impact in underserved communities.

We hire from within the communities that we serve and in doing so we create unique, future-proofed job opportunities. Our entry-level employees receive hands-on training in technology repair, IT, tech support, and e-commerce, complete with full benefits, health insurance, paid time off, and a 403(b) retirement savings plan. Half of our team are in their early career, meaning they're 30 years old or younger; 80% are people of color; and, more than a third are women working in a typically male-dominated field.

So in many ways, Human-I-T is a working example of how conscious capitalism can create equitable opportunities, develop workforce skills, and reduce environmental impact, all at the same time. Every day, we work to empower people and protect the planet.



Today, I am asking you to:

- Address market's failures in recovering aging consumer electronics;
- Advocate for reuse and circular economy policies; and,
- Support the Secure E-Waste Export and Recycling Act, known as SEERA, and implement the Computers for Veterans and Students Act of 2022, also called the COVS Act.

Currently in the United States of America, no single e-waste refurbisher or recycler can achieve significant market share due to a patchwork of state and local policies and the high costs associated with recovering, transporting, and processing electronics products.<sup>1</sup> There is little-to-no extended producer responsibility, which puts the responsibility for recycling onto individual consumers instead of manufacturers. Nearly every city and state has a different approach. Many do not even consider electronics within their recycling goals and simply point consumers to hazardous waste facilities instead of a safe and easy collection site.

At this time, it is not viable for Human-I-T to scale our public-facing collection services because the value of household consumer technology depreciates quickly and because of other factors like planned obsolescence, restrictive design features such as 'glues and screws,' and the absence of a right to repair.<sup>2</sup>

As a result, as much as 65% of consumer electronics are not even recycled, let alone reused.<sup>3</sup>

Unfortunately, this lack of recycling and reuse puts the United States of America in a troubling position. We are heavily reliant on imports of many minerals, such as cobalt and lithium, which are essential for manufacturing advanced technologies. Supply chains for many of these minerals are also vulnerable to

various risks, such as foreign government actions.<sup>4</sup> According to the International Energy Agency:

For lithium, cobalt and rare earth elements, the world's top three producing nations control well over three-quarters of global output. In some cases, a single country is responsible for around half of worldwide production. The Democratic Republic of the Congo (DRC) and People's Republic of China (China) were responsible for some 70% and 60% of global production of cobalt and rare earth elements respectively in 2019. The level of concentration is even higher for processing operations, where China has a strong presence across the board. China's share of refining is around 35% for nickel, 50-70% for lithium and cobalt, and nearly 90% for rare earth elements. Chinese companies have also made substantial investment in overseas assets in Australia, Chile, the DRC and Indonesia. High levels of concentration, compounded by complex supply chains, increase the risks that could arise from physical disruption, trade restrictions or other developments in major producing countries.<sup>5</sup>

We can reduce our dependence on foreign supply chains by first reusing and then recycling our electronics domestically. E-waste contains a significant amount of valuable metals, and also hazardous substances. Therefore, it is considered both as an economically sound secondary resource and an environmentally problematic one.<sup>6</sup>

When we think of electronics within a circular economy (see Figure 2), it is imperative to think of the inner loops of the circle (maintain/prolong; reuse/redistribute; refurbish/remanufacture), not just the outermost loop of recycling. It is twenty five (25) times more beneficial environmentally to extend the life of electronic devices than to recycle them at three to five years of age.<sup>7</sup> While at the same time, reusing first and then recycling relieves the pressure and our reliance on the primary supply. Therefore, the proper recycling and processing of electronic waste presents an opportunity to stabilize the market of critical materials and provide proper disposal and treatment of a hazardous waste stream.<sup>8</sup> In doing so, we will assure sufficient resources to meet today's needs and those of the future.<sup>9</sup>



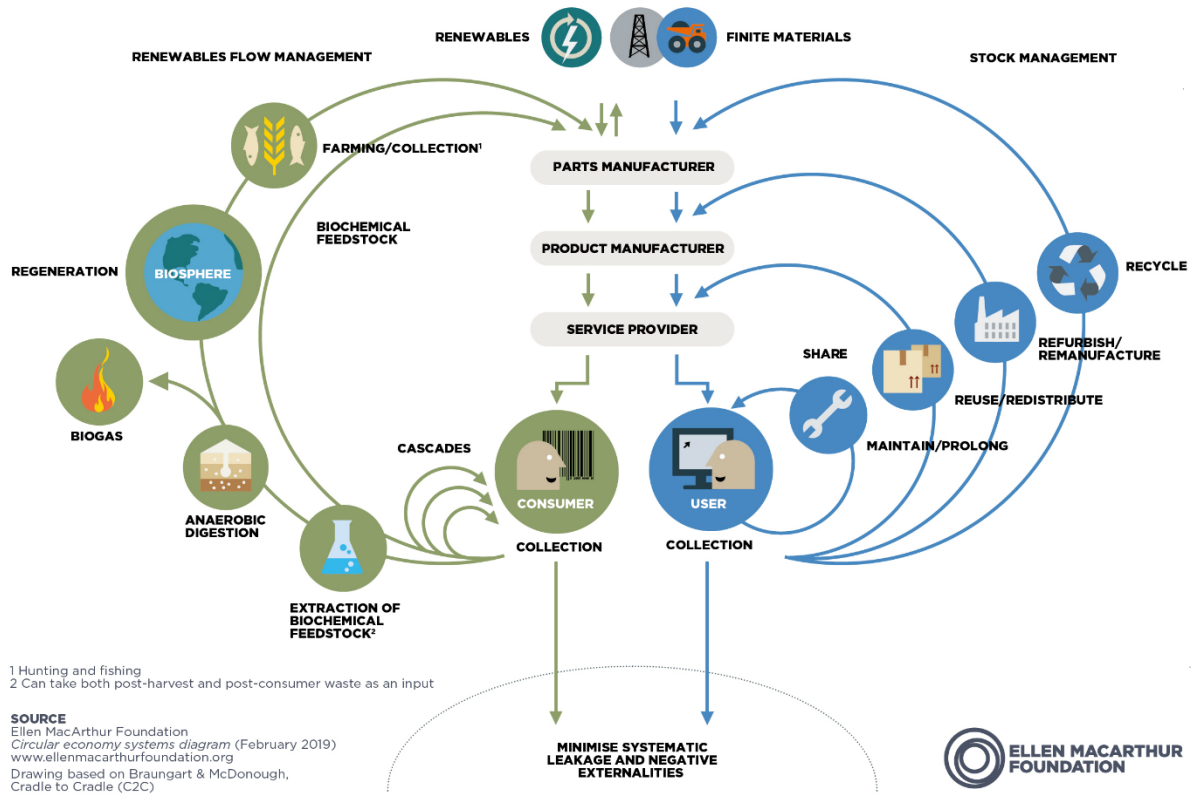


Figure 2.

You can help nonprofit refurbishers like Human-I-T by funding public education to raise awareness on the importance of reducing e-waste, passing policies to create a more circular economy such as Extended Producer Responsibility (EPR) and the Right to Repair, supporting the creation of producer responsibility organizations, and supporting domestic markets by keeping resources local by implementing legislation like SEERA and the COVS Act.

Additional information is included in my written testimony and I'm available to answer questions during this hearing or afterward. Thank you for your leadership in moving this important conversation forward. Together we can create a circular economy that strengthens our country and communities.

## Sources

- 1 - United States Government Accountability Office (GAO), [Recycling: Building On Existing Federal Efforts Could Help Address Cross-Cutting](#). GAO-21-87. Washington, D.C.: Dec. 18, 2020.
- 2 - United States Environmental Protection Agency (EPA), [National Framework for Advancing the U.S. Recycling System](#). 520-F-19-008. November, 2019.
- 3 - United States Government Accountability Office (GAO), [Science & Tech Spotlight: Consumer Electronics Recycling](#). GAO-20-712SP. Washington, D.C.: Aug. 31, 2020.
- 4 - United States Government Accountability Office (GAO), [Critical Minerals: Building on Federal Efforts to Advance Recovery and Substitution Could Help Address Supply Risks](#). GAO-22-104824. Washington, D.C.: Jun 16, 2022.
- 5 - International Energy Agency (IEA), [The Role of Critical Minerals in Clean Energy Transitions](#), IEA, Paris. Published 2021. Accessed on July 20, 2023.
- 6 - Tesfaye, Fiseha; Lindberg, Daniel; Hamuyuni, Joseph; Taskinen, Pekka; and Hupa, Leena. [Improving urban mining practices for optimal recovery of resources from e-waste](#). Minerals Engineering, Volume 111, 2017, Pages 209-221, ISSN 0892-6875, <https://doi.org/10.1016/j.mineng.2017.06.018>.
- 7 - Lynch, Jim. [The Rise of Refurb](#). E-ScrapNews. June 22, 2020. Accessed on July 20, 2023.
- 8 - Lister, T.E; Diaz, L.A; Clark, G.G; and Keller, P. [Process Development for the Recovery of Critical Materials From Electronic Waste](#). U.S. Department of Energy, Idaho National Laboratory. September 2016.
- 9 - United States Environmental Protection Agency (EPA), [Basic Information about Electronics Stewardship](#). Accessed July 20, 2023.