



**TOWARD  
ZERO EXPOSURE**  
Clean Electronics Production Network



**2023/24**  
Third Annual Report

**A COMMITMENT PROGRAM TO PROTECT WORKERS  
FROM CHEMICAL HAZARDS IN THE ELECTRONICS SUPPLY CHAIN**



# Contents

- 1** Welcome
  - 2** Overview of TZE
  - 3** Signatory Leadership
  - 4** Our Signatories
  - 5** Our Signatories
  - 6** Our Signatories
  - 7** Our Signatories
  - 8** Looking Forward
  - 9** Join the Journey
- 

# Welcome

For three years, the Clean Electronics Production Network's (CEPN) Toward Zero Exposure (TZE) program has been supporting industry leaders in their efforts to protect workers from exposure to hazardous chemicals in the electronics supply chain.

Our initial Founding Signatories, Apple, Dell, and HP, have been with us from the beginning. Each year of their participation has come with increased commitments and reporting requirements with their progression through the program. As they complete their third year, we thank them for paving the way. We look forward to continuing our collaboration to advance the program goals.

Fairphone, also a Founding Signatory, completed year 2 of their program and has already turned their focus towards CEPN's 2nd Round of Priority Chemicals, earning the designation of 2nd Round Signatory.

The TZE program itself continues to evolve as well. After last year's revision process, TZE V2.0 has gone into full effect, providing a streamlined and strengthened experience for our current and future Signatories.

Meanwhile, CEPN has continued to build tools and resources such as the new Chemical Safety Trainings which will ultimately be available to support the entire global electronics industry.

**With a newly streamlined TZE program and a growing number of resources available to Signatories, now is the perfect time to join the effort to proactively move the electronics industry to a safer supply chain.**



Apple, Dell, and HP have completed Year 3 of the Toward Zero Exposure (TZE) Program.

## **FAIRPHONE**

Fairphone is the first to begin working on eliminating CEPN's 2nd Round of Priority Chemicals.



CEPN's new Chemical Safety Trainings support TZE Signatories as well as the entire electronics industry.

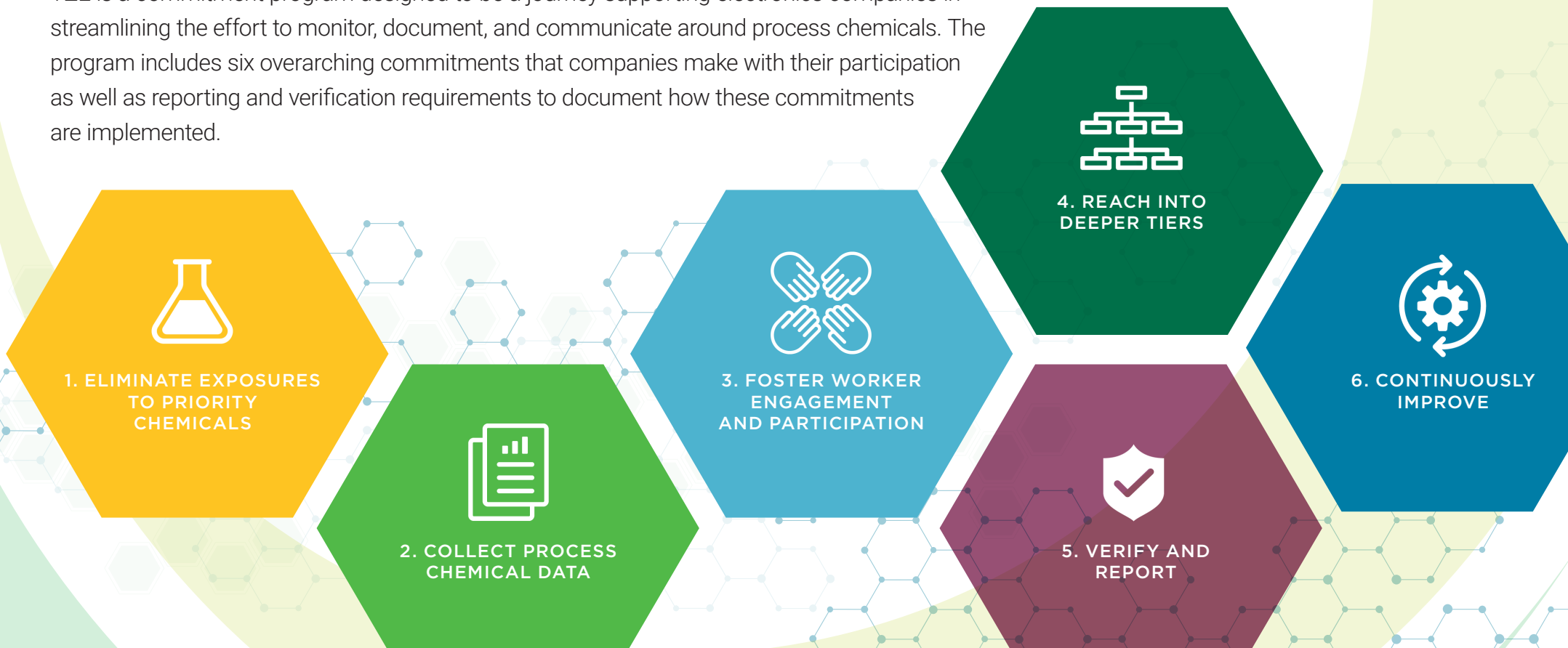
# Overview of TZE

## A safe, healthy work environment is a basic human right.

CEPN, a multi-stakeholder innovation network launched in 2016, unites diverse stakeholders to understand, address, and eliminate workers' exposure to toxic chemicals in the electronics supply chain.

CEPN members launched the TZE program in August 2021 to integrate and accelerate the work being done by leaders in the electronics industry with the tools and resources developed by Network members.

TZE is a commitment program designed to be a journey supporting electronics companies in streamlining the effort to monitor, document, and communicate around process chemicals. The program includes six overarching commitments that companies make with their participation as well as reporting and verification requirements to document how these commitments are implemented.



# Signatory Leadership and Impact Continues to Grow

Electronics manufacturing involves the hard work of hundreds of thousands of individuals across the globe. The ongoing efforts undertaken by our TZE Signatories, and their influence on their suppliers and peers, continue to improve chemical safety practices for many of these workers.

# Signatory and program influence extends to facilities in at least 30 countries around the world



**Over 800 facilities in the Signatories' manufacturing supply chains** are estimated to have already substituted the 1st Round of Priority Chemicals. **Well over 100,000 employees** work in production in those facilities.

The number of distinct supplier companies that have been influenced to improve worker chemical safety by TZE Signatories also continues to **exceed 200 companies**.

**Signatories included nearly 1 million workers** in employee engagement & participation initiatives such as Joint Chemical Safety Committees or grievance hotline awareness, **a significant increase over last year**.

**Over 1,000 facilities in the Signatories' manufacturing supply chains have collected data on process chemical use** with the Process Chemical Data Collection Tool (or equivalent), remaining consistent with last year's impact.

**2nd Round Signatory**

**1st Round Signatories**

**FAIRPHONE**



# Our Signatories

**Our four founding TZE Signatories, Apple, Dell, Fairphone, and HP are industry leaders dedicated to continually enhancing chemical management practices throughout the global electronics sector.**

All TZE Signatories pledge to work to minimize workers' exposure to hazardous chemicals by substituting and/or eliminating Priority Chemicals as identified by CEPN. Signatories choose when to commit to eliminating or substituting CEPN Priority Chemicals with safer alternatives within three years, starting with the 1st Round and progressing through subsequent rounds of Priority Chemicals. Currently, there are two rounds of CEPN Priority Chemicals. Each Signatory is identified here by the highest round of Priority Chemical they are currently implementing, reflecting their progress in the program.

# TZE Signatories' Sustainability and Social Responsibility Reporting

Credibility and reporting are foundational to the TZE program. In addition to reporting on program metrics to CEPN, all Signatories continue demonstrating their leadership through public reporting, which incorporates their efforts in the Towards Zero Exposure Program, the Clean Electronics Production Network, and much more.

## Apple

### Environmental Progress Report Covering fiscal year 2023

"Our efforts to use safer cleaners in our supply chain have been central to our advocacy for greater industry collaboration and instrumental to our participation as a founding signatory of the Toward Zero Exposure program led by the Clean Electronics Production Network (CEPN)." (p65)

### People and Environment in our Supply Chain 2024

"In 2023, we ...concluded our third year of participation in the Clean Electronics Production Network's (CEPN) Toward Zero Exposure (TZE) program, a public platform for companies across the electronics industry to commit to and report on their efforts to eliminate workers' exposure to hazardous chemicals in manufacturing". (p26)



Environmental Progress Report  
Covering fiscal year 2023

People and Environment  
in our Supply Chain, 2024

## Dell

### Dell Technologies FY24 ESG Report

"Dell followed the Clean Electronics Production network (CEPN) process where hazardous chemicals are identified and systematically removed from production through elimination or substitution with a less hazardous chemical." (p27)

"Dell also collaborates with the Clean Electronics Production Network (CEPN) to advance IT industry efforts to protect supply chain workers from potentially harmful process chemicals... Our ongoing involvement with CEPN includes active participation in the Worker Engagement and Process Chemical Reporting workgroups, and Dell is a founding signatory and one of four companies to commit to the Toward Zero Exposure program." (p64)



Dell Technologies  
ESG Report, FY24





HP Inc. Sustainable Impact Report, 2023



Fairphone Impact Report, 2023

## HP

### HP Sustainable Impact Report 2023

“HP actively influences and contributes to standards, emerging legislation, and improved approaches to use of materials in the IT sector. In 2021, we became a Founding Signatory of the Toward Zero Exposure program by Green America’s Clean Electronics Production Network, to protect workers from chemical hazards in the electronics supply chain.” (p50)

“In early 2021, we committed to taking collective action to protect workers in our global supply chain from exposure to hazardous process chemicals as one of the four Founding Signatories of CEPN’s Toward Zero Exposure program... In 2023, progress included directly removing exposure to certain hazardous chemicals and impacting how global organizations measure, track, and communicate about process chemicals.” (p112)

## Fairphone

### Fairphone’s Impact 2023

“We set a high requirement for social compliance for the final assembly of our smartphones (SA8000 or RBA Silver Recognition), and implement Clean Electronics Production Network’s PCDC tool for safe chemical use at final assembly and strategic component suppliers.” (p44)

“Fairphone is a founding signatory of the Toward Zero Exposure (TZE) Commitment Program, which aims to protect workers from chemical hazards in the electronics supply chain. We’re making good progress on our commitments:

- Eliminate exposure to priority chemicals: None of the priority chemicals are used at the final assembly factories of the Fairphone 4, Fairphone 5, Fairbuds and Fairbuds XL.
- Data collection: The data collected on priority chemicals using the Process Chemicals Data Collection (PCDC)-tool represents over 80% of our supply chain spend and involves two suppliers. Going beyond the TZE requirement, we have also requested strategic component suppliers to complete the PCDC-tool.
- Verification & reporting: The process chemical data and documents of our suppliers were reviewed by Fairphone.” (p49)

# Looking Forward

**A safe, healthy work environment is a basic human right.**



**TZE has concluded its third year with continued growth on the horizon.** As recognition of the program has increased, initiatives from our partners and peers have been developed in alignment with TZE's principles, reflecting a shared commitment to the importance of efforts to improve worker chemical safety.

**The Global Electronics Council's [EPEAT Chemicals of Concern Updated Criteria](#)** will be published in early 2025 and contains two optional criteria that directly reference TZE Commitments #1 and #2. Once published, these criteria will provide the opportunity for electronics manufacturers around the world to demonstrate leadership and support safer chemical manufacturing processes.



At the same time, CEPN continually works to develop tools and resources to support TZE Signatories in their efforts to achieve program commitments. After launching a new project to develop a **chemical safety training program** for both workers and managers in facilities in the supply chain last fall, progress has moved fast. Beta testing of the training modules in Vietnam and Malaysia has begun and they will soon be ready for use by TZE Signatories as well as the entire electronics industry.

**With new resources, growing recognition, and increasing momentum around the importance of the effort to protect workers from exposure to toxic chemicals, the TZE program's capacity to support Signatories continues to grow in increasingly impactful ways.**

# Join the Journey

TZE helps align, integrate, and support companies in their work to improve worker chemical safety. Since its 2021 founding, momentum for the program continues to grow with participation in TZE receiving increasingly broad recognition across the electronics industry and chemical management sector.

CEPN invites all companies in the electronics industry who want to use the power of collaboration to protect workers, demonstrate their leadership, and do their part to create a safer and healthier electronics supply chain to join the journey and become a TZE Signatory.

TZE participation provides a forum to connect with peers and a structure to communicate and receive recognition for the effort companies make to protect workers from hazardous process chemicals.

As a CEPN program, benchmarks, milestones, and guidelines are supported through research-based tools and actions backed by the credibility of a multi-stakeholder innovation network of industry leaders, NGOs, labor advocates, and other experts.

**BY MAKING THE COMMITMENT TO JOIN TZE,**

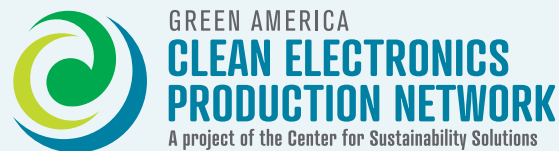
companies publicly indicate that  
they value worker safety.

**BY FOLLOWING THE TZE PROGRAM GUIDELINES,**

they demonstrate it.



**Companies interested in joining  
the effort to improve worker safety by  
becoming a TZE Signatory  
should contact  
[info@towardzeroexposure.org](mailto:info@towardzeroexposure.org)**



### **ABOUT THE CLEAN ELECTRONICS PRODUCTION NETWORK (CEPN)**

[The Clean Electronics Production Network](#) unites diverse stakeholders to understand, address, and eliminate workers' exposure to toxic chemicals in the electronics supply chain. The collaborative multi-stakeholder innovation network launched in 2016 as part of the Center for Sustainability Solutions at Green America. The Network addresses complex workplace health and safety challenges in the electronics supply chain, and developed the Toward Zero Exposure program to integrate and accelerate their work.

[More than 20 member organizations make up the network](#), including electronics brands and suppliers, environmental NGOs, labor and worker representatives, ecolabels and representatives from academia and government agencies.

CEPN members commit to working together in the service of a shared goal of moving toward zero exposure of workers to toxic process chemicals in electronics manufacturing.



### **ABOUT GREEN AMERICA'S CENTER FOR SUSTAINABILITY SOLUTIONS**

[Green America's Center for Sustainability Solutions](#), CEPN's parent organization, brings together diverse groups of stakeholders to solve the complex sustainability problems that no individual business, organization, or leader can solve alone. The Center's goal is to shift whole industries and sectors toward social, environmental and economic sustainability.



[towardzeroexposure.org](http://towardzeroexposure.org)



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Clean Electronics Production Network

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