



Eco serv
للإستدامة البيئية

NGO (MOI Reg. no. 595)



Mission

Create the **Sustainable Social Impact (SSI)** behavior change through a national awareness program on various channels and mediums.



Goal

The promotion of good environmental practices among the Lebanese communities as a fundamental commitment to sound development.



Strategy

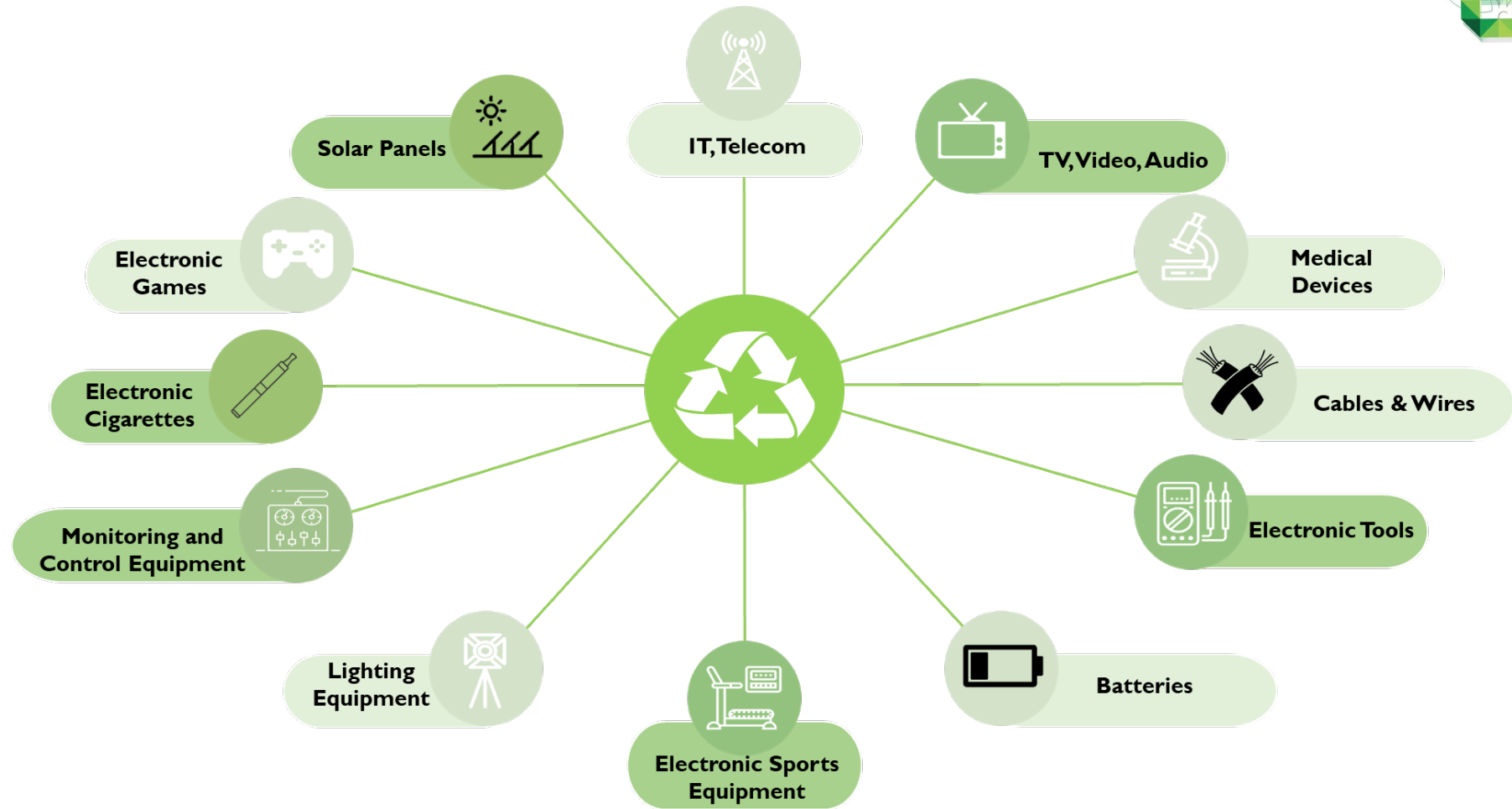
Increase E-waste contribution to the circular economy by increasing rate of material recovery



Vision

Create a communal Eco Environment with controlled proper hazardous waste disposal

SURROUNDED BY ELECTRONIC EQUIPMENT..





TOXIC MATERIALS FOUND IN E-WASTE

<p>Arsenic 33 As 74.922</p>	<p>Microwaves, Electronic Circuit Boards, Switches, Relays</p>	<p>Disruption of cell growth, cardiovascular diseases, cancer, diabetes</p>
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<p>Nickel 28 Ni 58.693</p>	<p>Rechargeable Batteries</p>	<p>Sinuses, Cancerogenic in large doses</p>
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<p>Cadmium 48 Cd 112.41</p>	<p>Batteries, Cellular Phones</p>	<p>Loss of calcium in bones, lung damage and respiratory problems</p>
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<p>Silver 47 Ag 107.87</p>	<p>Cellular Phones</p>	<p>Risk of Argyria</p>
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<p>Chromium 24 Cr 51.996</p>	<p>Plastic Hardeners, Pigment Dye, Metal Coating</p>	<p>Skin Irritation and rashes, potentially cancerogenic</p>
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<p>Beryllium 4 Be 9.0122</p>	<p>Motherboards, Connectors</p>	<p>Cancerogenic, permanent lung scarring</p>
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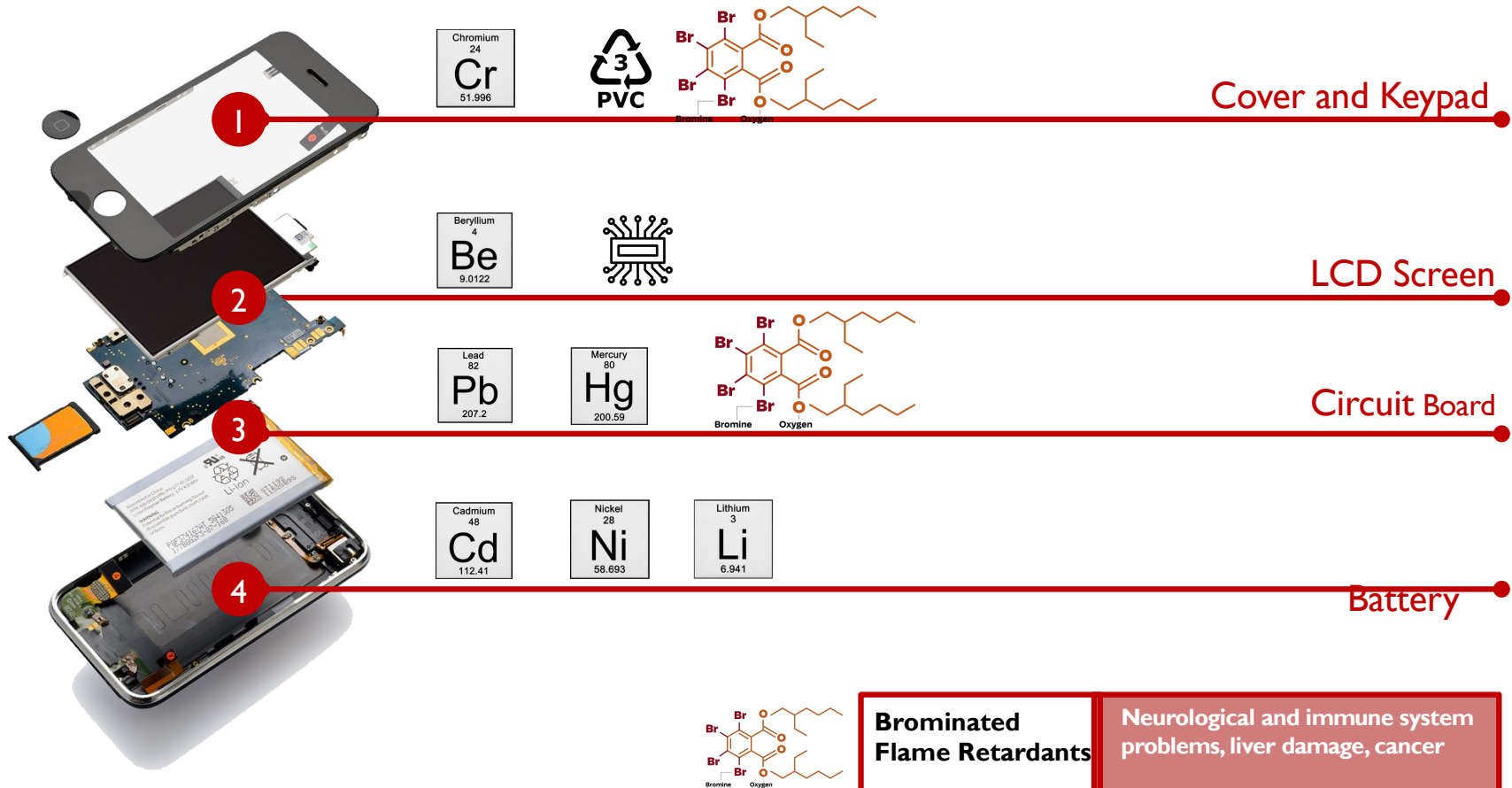
<p>Copper 29 Cu 63.546</p>	<p>Copper Wires, Printed Circuit Board Tracks</p>	<p>Throat and lung irritation, liver and kidney damage</p>
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<p>Mercury 80 Hg 200.59</p>	<p>Batteries, Flat Screens, Switches</p>	<p>Short Term: Lung damage, diarrhea, vomiting. Long Term: brain and kidney damage, skin discoloration</p>
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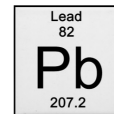
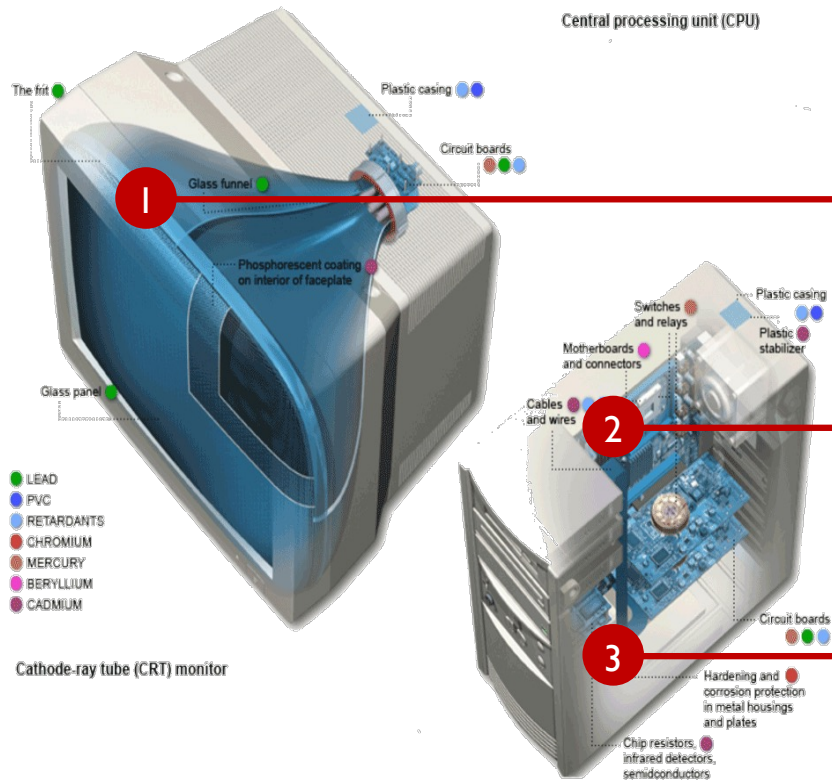
<p>Lead 82 Pb 207.2</p>	<p>Computer and TV Monitors, Batteries</p>	<p>Impairment of cognitive and verbal activity, paralysis, immune and vascular system, coma and death</p>
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	<p>Screens, Keyboards, Mouse, Laptops, Flash Memories...</p>	<p>Harms immune system and causes cancer</p>
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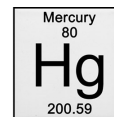
A Closer Look: Mobile phone Hazardous Components



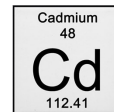
A Closer Look: Desktop Hazardous Components



Cathode Ray Tube, Glass of Monitor, Circuit Board of CPU



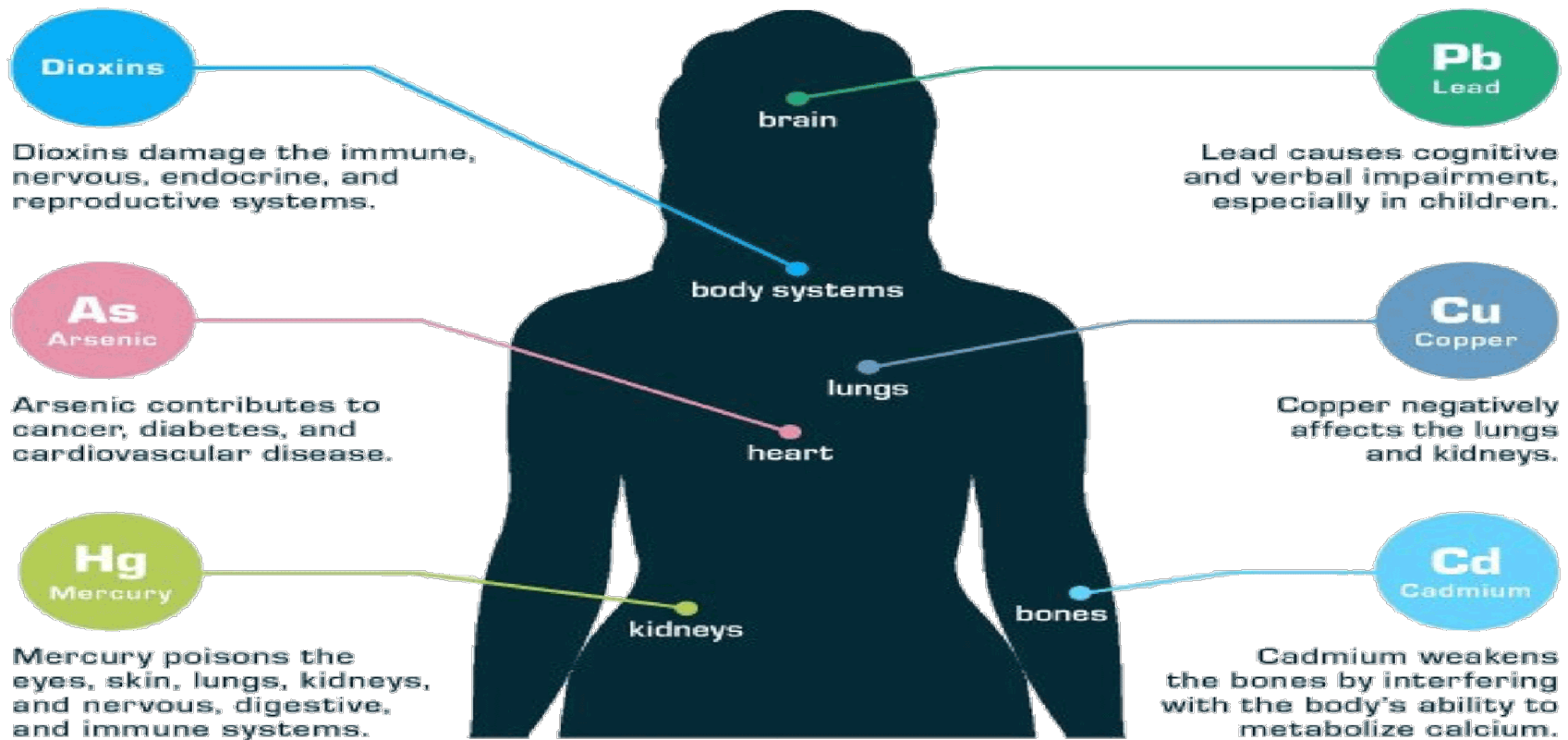
Circuit Boards and Internal Switches



Monitor Glass Coating, Batteries, Chip Resistors and Cables



A Closer Look: Examples of impact on human health



E-Waste Reality

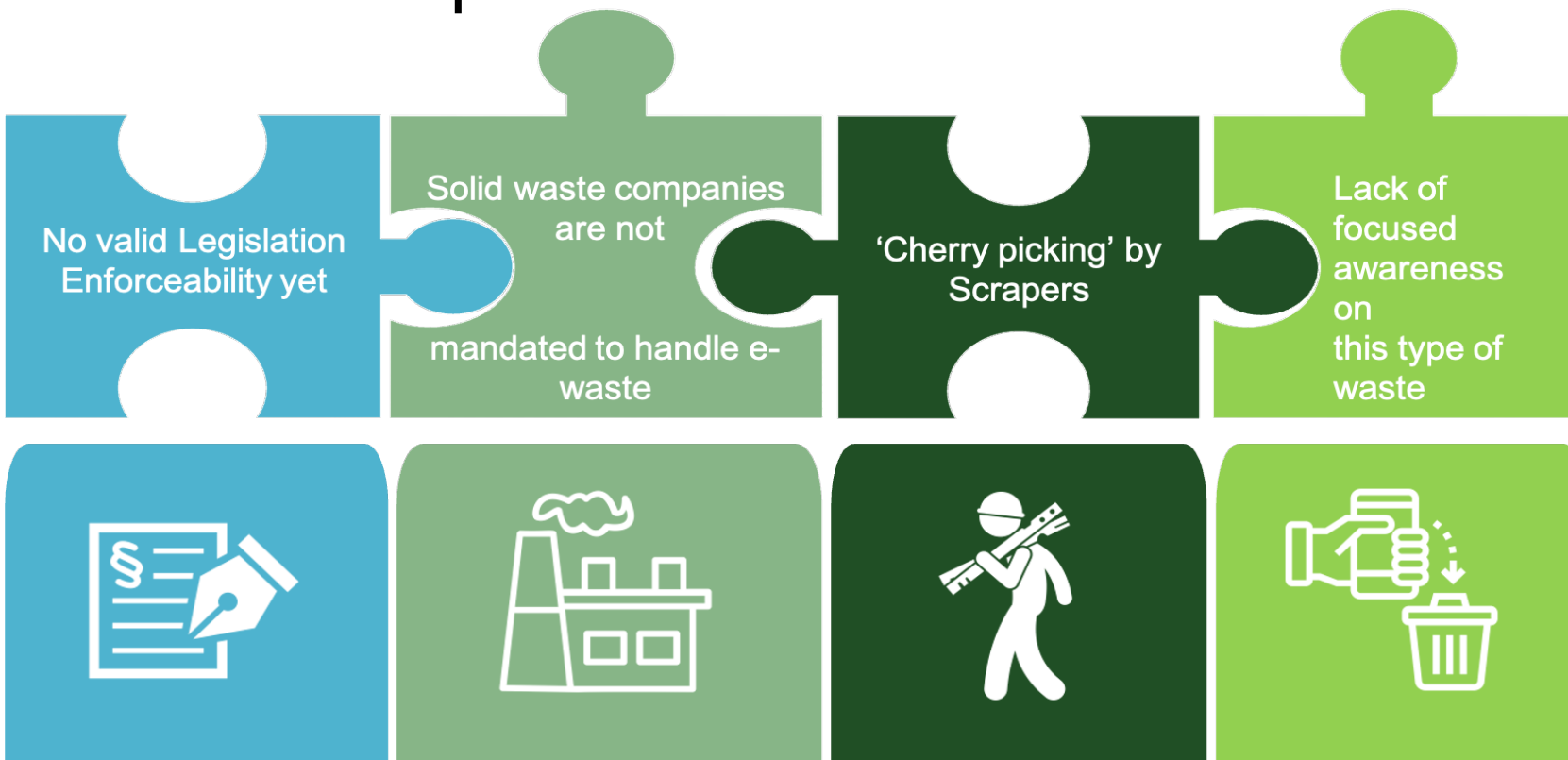


Major volume goes to Landfills, open dumpsites and haphazard handling by scrappers

2021	Worldwide	MENA	Lebanon
E-waste generated	55M MT	3.72M MT	47K MT
Estimated at	\$ 70 B	\$ 4.7 B	\$ 59 M
Proper disposal/recycling	20%	5%	1.5%
Growth per annum	4 to 5%	6%	1.8%



E-Waste Disposal in Lebanon is Ineffective!



Ecoserv Premises

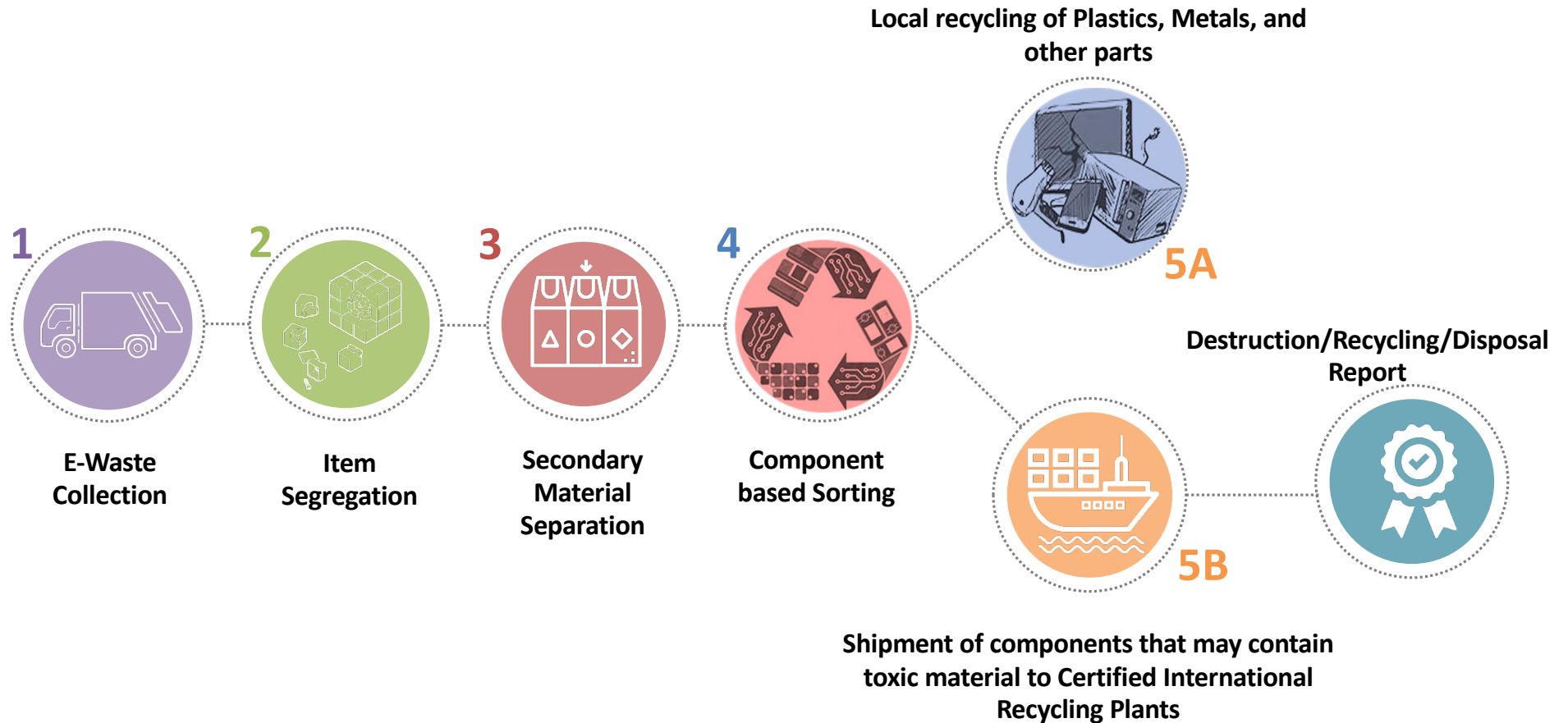


1,500sqm
Solar powered plant





Current Ecoserv Local Operation



Planned Ecoserv Local Operation for 2024-2025

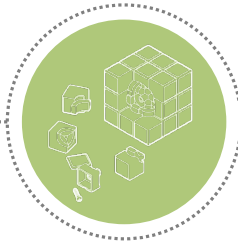


Currently 120 Dropzones for Households/ Communities Supported by Mobile App. + Ambassadorship program



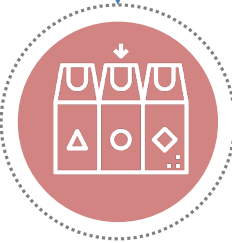
E-Waste Collection

Public & Private Institutions



Item Segregation

E-Plastics debromination and extraction of hi-grade virgin polymers

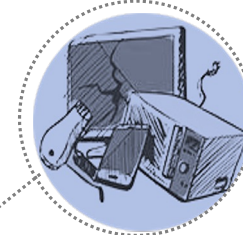


Secondary Material Separation and Recovery



Primary Material component based Sorting

Local recycling of Plastics, Metals, and other **Primary Material**



E-Boards
Batteries



Maximize e-waste Contribution to local circular economy

Production of high quality exportable products

Sustainable Creation of Green jobs



Shipment of components that may contain toxic material to Certified International Recycling Plants



1a- E-Waste Collection



Ecoserv Drop Zone Bins



OFFICIAL ECOSERV DROPZONES TOGETHER FOR A GREENER LEBANON AS AT JANUARY 2021



BEIRUT

- ACHRAFIEH**
 - VIATEK
 - LAU MEDICAL CENTER
 - JOE CELL
 - ITG, ABC ACHRAFIEH - MACSHOP L1
 - LEO BURNETT
- ADLIEH**
 - BERYTECH
- BADARO**
 - COMPU LIFE
- DOWNTOWN**
 - BDD
 - BERYTECH
 - SPEED
 - STRATEGY&
- HAMRA**
 - MICROCITY
 - MICROTECH
- JNAH**
 - MICROCITY
 - THE SUBMARINE
 - SADC0 SAMI DANDAN & CO.
- MAR MIKHAEL**
 - FACULTE DE MEDICINE USJ
 - RESTORAT USJ
- MAZRAA**
 - SIA COMPUTERS
- NAHR**
 - ITG
- SAIFI VILLAGE**
 - THE CIRCULAR HUB, ECOCONSULTING

MOUNT LEBANON

- ADMA**
 - PAROISSE NOTRE DAME DE DONNS
- AIN EL ROUMANEH**
 - EIO COMPUTERS (ECA)
 - VOIX DE LA FEMME LIBANAISE
- ALEY**
 - STAR COMPUTER
- BAABDA**
 - COLLEGE DES PERES ANTONINS
 - COMPUOM
- BATLOUN**
 - BATLOUN MUNICIPALITY
- BEIT MISK**
 - BEIT MISK
- BICKFAYA**
 - BICLEAN
 - MUNICIPALITY OF BICKFAYA
- BSALIM**
 - TECHNOLOGY REPAIR CENTER
- CHHIM**
 - BIG BOYS GADGETS, BBG
- CHOUF**
 - FEDERATION OF CHOUF MUNICIPALITIES
- DAMOUR**
 - COLLEGE DU CARMEL SAINT JOSEPH
 - COLLEGE DES SOEURS DES SAINTS COEURS
- GHAZIR**
 - THE KESERWAN MEDICAL CENTER (KMC)
- GHADIR**
 - SCOUTS DU LIBAN

- JBEIL**
 - PRO COM
 - JBEIL SUPERMARKET
 - HOPITAL NOTRE DAME DES SECOURS
- JDEIDEH**
 - CR COMPUTERS
- JOUNEH**
 - ATCL
- KASLIK**
 - USEK
- KFARNABRAKH**
 - SUSTAINABLE COMMUNITY ASSOCIATION
- KHALDEH**
 - YOGA CLASS
- MAJDEL BANA**
 - MUNICIPALITY OF MAJDEL BANA
- MANSOURIEH**
 - TECHSHELD
 - DOMTECH
 - COLLEGE DES SOEURS DES SAINTS COEURS
 - AIN NAJEM
 - HITEK PRO
- MZARAET YASHOUH**
 - SAADCH COMPUTERS
- MECHREF**
 - RAFIC HARRIRI UNIVERSITY
 - MECHREF MUNICIPALITY
- MKALLES**
 - ITG, MPS SERVICE DEPARTMENT
 - BERYTECH
- NACCACHE**
 - ZERO4 / KASSER/LEBANON

NORTH LEBANON

- NAHR IBRAHIM**
 - LYCEE FRANCO-LIBANAIS NAHR IBRAHIM
- NAAMEH**
 - ABEJ CELL
- RABWEH**
 - CROSS TALK
- RAYFOUN**
 - RAIFUN MUNICIPALITY
- ROUMIEH**
 - PR CLUB-LEBANESE UNIVERSITY
 - FACULTY OF ENGINEERING
- SAHEL ALMA**
 - ELECTROKASSIS
- SED EL BAOUCHRIEH**
 - ARAB PRINTING PRESS
- SERJBEL**
 - O WASTE COMMUNITY
- SIN EL FIL**
 - I CENTER
 - ITG, ALCS SERVICE DEPARTMENT
- ZALKA**
 - FAHEJ SUPERVALUE

SOUTH LEBANON

- BATROUN**
 - ACE COMPUTERS
- BCHAALEH**
 - BCHAALEH MUNICIPALITY
- DER EL AHMAR**
 - WADA
- EHDEN**
 - EHDEN MUNICIPALITY
- HAMAT**
 - HAMAT MUNICIPALITY
- KOURA**
 - BALAMAND UNIVERSITY
- RAS MASQA**
 - HOPITAL ALBERT HAYKEL
 - LEBANESE UNIVERSITY FACULTY OF SCIENCES
- SIR EL DENNIEH**
 - HOPITAL ASSOUN
- TYRE**
 - HILAL COMPUTERS
 - NOVO

- TRIPOLI**
 - NINI HOSPITAL
 - EUROTRADE (ELEMENTS MULTIMEDIA)
 - NAR COMPUTER
 - QABASS COMPUTERS
 - TECHSHELD
 - ZAHED COMPUTERS
- ZGHARTA**
 - CENTRE HOSPITALIER DU NORD (CHN)
 - ZGHARTA MUNICIPALITY
 - PUBLIC LIBRARY ZGHARTA EHDEN



BEKAA

- BAALBEK**
 - COMPLUSUN
- FERZOL**
 - MICHEL DAHER SOCIAL FOUNDATION
- WEST BEKAA**
 - AL BUHARRA UNION OF MUNICIPALITIES
- ZAHLE**
 - COMPU TOP
 - COMPUTRONICS

... AND GROWING

Ecoserv Mobile Application

(for IOS and Android)



Main Features

- ✓ Ecoserv Dropzones Guide
- ✓ 'Near Me' options
- ✓ Request Collection
- ✓ Register in Ecoserv Programs
- ✓ Join Ecoserv Network



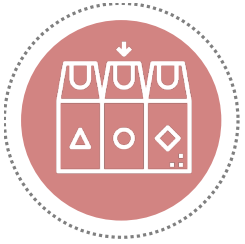
1b- Reception & Decontamination





2-Item Segregation



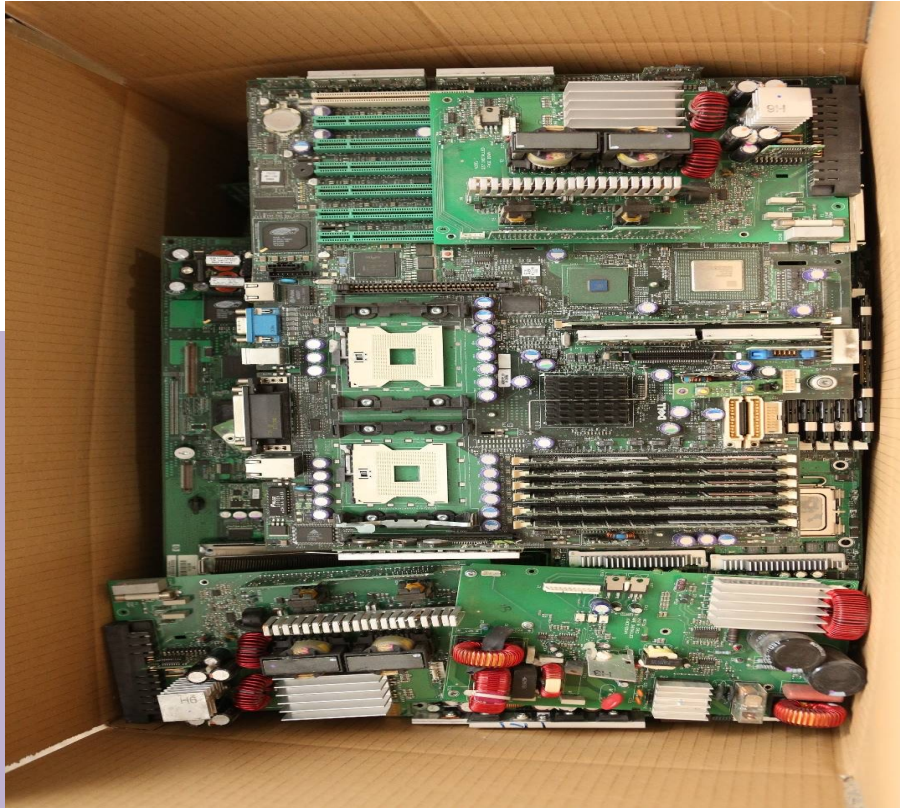


3- Material Separation & Destruction





4- Component Based Sorting



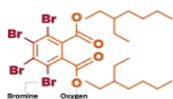


E-PLASTICS TREATMENT

40% of e-waste

composed of high-grade plastics mixed with BFR

18,400 MT of E-plastics



**Brominated
Flame Retardants**

**Neurological and immune system
problems, liver damage, cancer**

BFR Neutralization

Turning unsellable E-Plastics to valuable RM

Innovative Green Process Techniques

Eliminate Environmental and Health Hazard





INSULATED BATTERY STORAGE / TREATMENT UNIT



ReFit Project financed by the EU



Ecoserv Ambassador Program..



Recommend
Regional Events



Promote
Proper
Ecologic
E-Waste
Disposal



Liaise with
Municipalities,
Academia, and Other
Regional Institutions

Dropzone
Management



Organize Regional
Workshops

..Influence Change



Key Partnerships



Banks

Private Companies



Municipalities



Educational Institutions



NGOs



We Spread Awareness Together!





SAVE THE ENVIRONMENT

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