Regenerative Technology Primer

Breakthrough tech innovation rooted in nature's wisdom

REGENERATIVE TECHNOLOGY
PROJECT

WHY NOW?

REIMAGINING TECHNOLOGY TO REGENERATE LIFE, RATHER THAN DEGENERATE IT, HAS NEVER BEEN MORE URGENT

Pervasive technology is amplifying harms to society and planet.

- Amplifies divisions
- Exacerbates mental health crises
- Increases material extraction, consumption
- Increases pollution, e-waste, landfill
- Accelerates power asymmetries
- Infringes on local empowerment

And this trajectory is poised to continue

10x
EVERY YEAR, AI USES 10X COMPUTATIONAL POWER TO TRAIN MODELS, DEMANDING EVER MORE ENERGY AND WATER RESOURCES

21%
DATA CENTERS WILL DEMAND 21% OF THE WORLD'S ELECTRICITY SUPPLY BY 2030 DUE TO AI, STREAMING, BLOCKCHAIN, AND MORE.
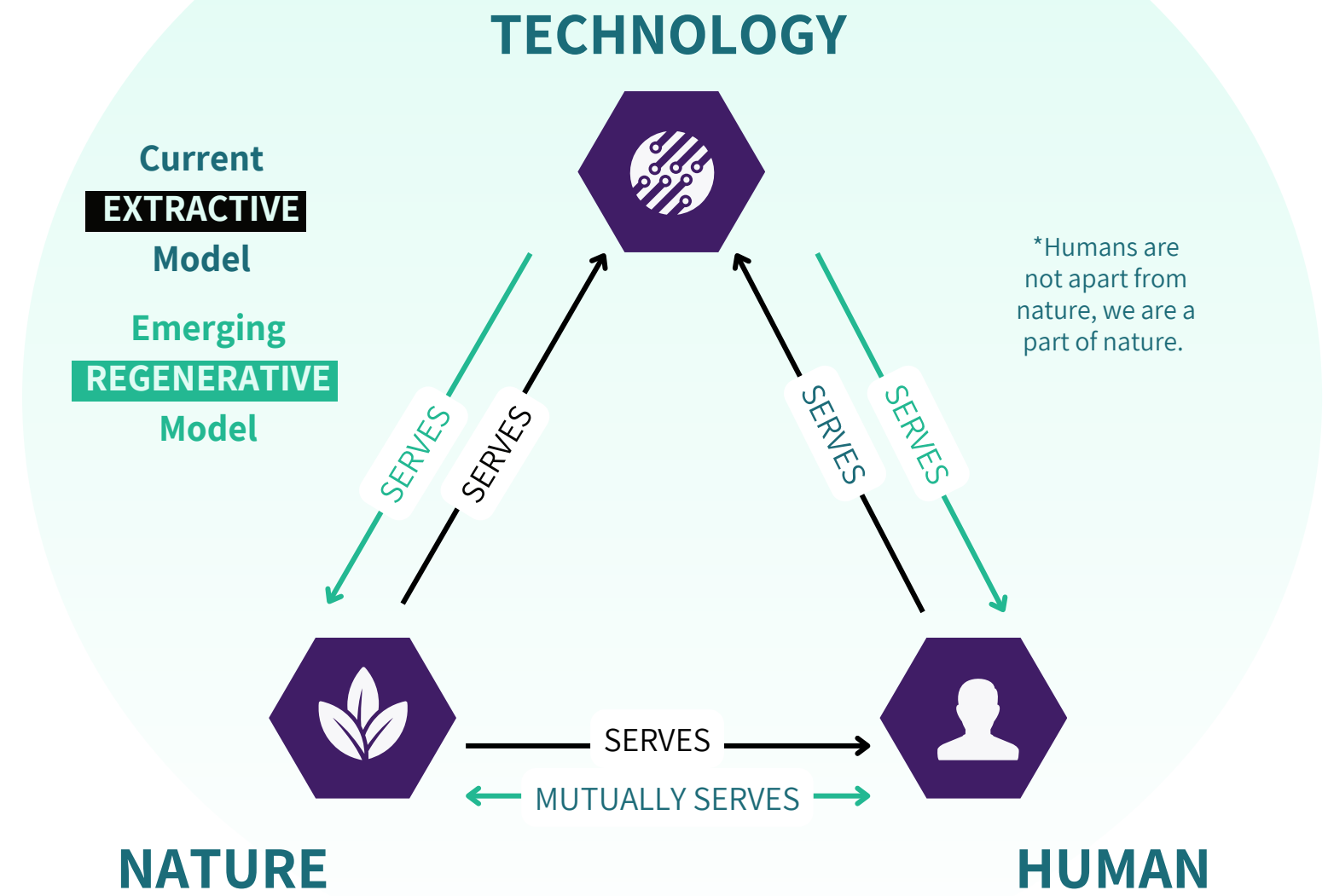
50M
TECH PRODUCES OVER 50 MILLION TONS OF E-WASTE IN LANDFILLS PER YEAR, GROWING TO 110 MILLION TON BY 2050

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What is Regenerative Technology?

Technology in service to life

An Emerging Regenerative Technology Model

TECHNOLOGY

Current **EXTRACTIVE** Model

Emerging **REGENERATIVE** Model

*Humans are not apart from nature, we are a part of nature.

SERVES SERVES

SERVES SERVES

SERVES

MUTUALLY SERVES

NATURE

HUMAN

Whereas today's technology is served by nature and humans, regenerative tech serves both people and planet, and enables mutual service between them.

Technology that serves health and living systems, relationships of justice and reciprocity, and overall care for the earth and community.

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What might it look like if we apply living systems principles in tech?

Place-Based
Life happens in place, and is influenced by specific local conditions, contexts.

Collaborative, Participatory
Elements work together, often in mutually beneficial relationships

Adaptive to Changing Conditions
Life adjusts and evolves in response to environmental changes

Resilience Through Diversity
Variety in components and strategies enhances system stability and survival

Interdependent, In Relationship
All life is interconnected with its environment and other systems

Circulatory Flows & Metabolism
Life relies on continuous exchange of energy, materials, and information

Self-Organizing, In Balance
Life maintains stability through constant adjustments and feedback loops.

Download the Whitepaper for examples of each

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Key Shifts Towards a Regenerative Technological Paradigm

SHIFTING FROM INDUSTRIAL TECHNOLOGIES, WHICH…

- Tech to accelerate domination, extraction, separation
- Optimized for profit, attention, scale, ignores "externalities"
- Designed for planned obsolescence, landfill
- Displaces local services/solutions, enriches few
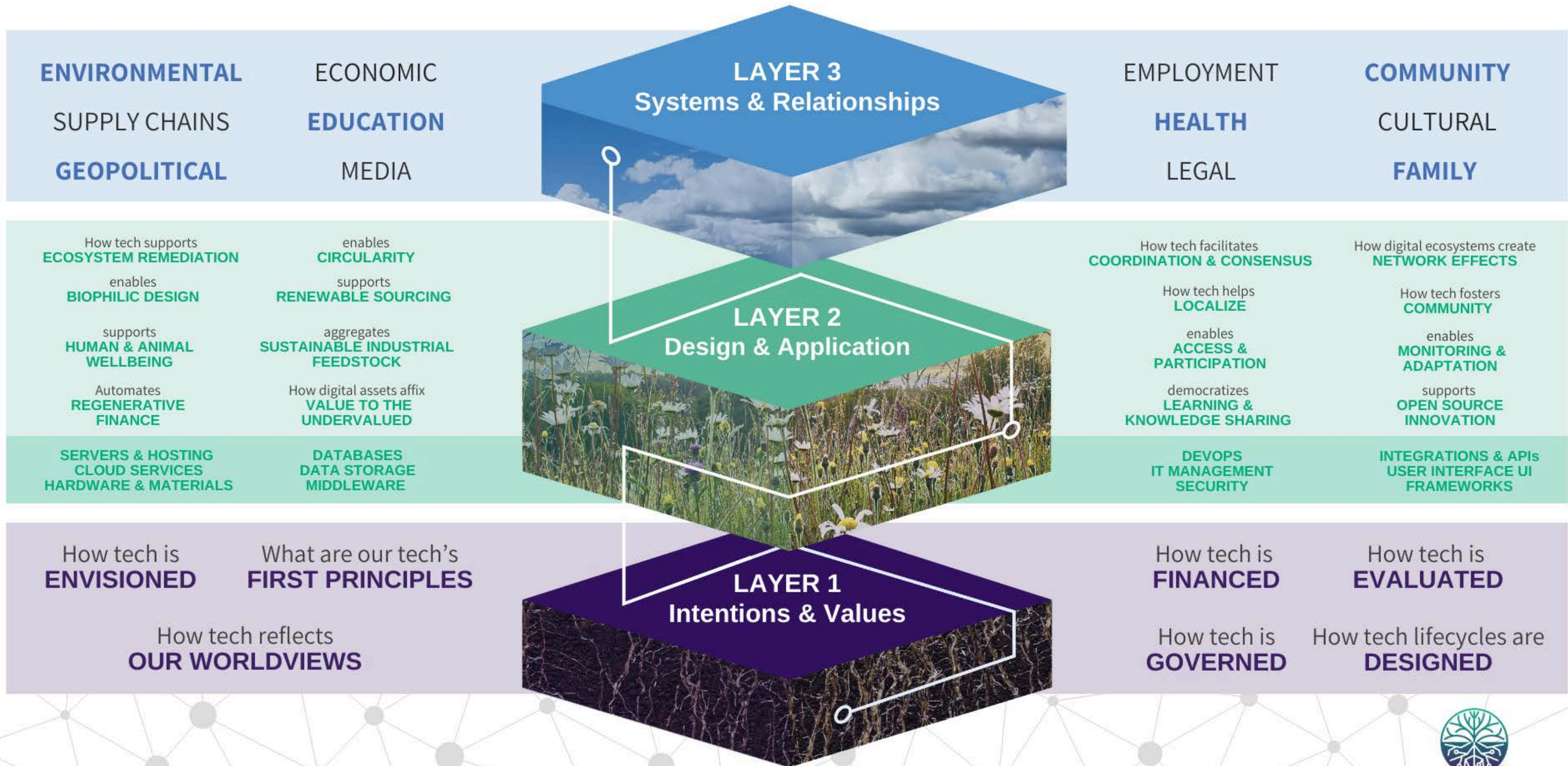- Proprietary, closed, competitive

TOWARDS REGENERATIVE TECHNOLOGIES, WHICH…

- Tech in service of life, health, potential
- Optimized to balance and integrate holistic metrics
- Designed for circularity, reuse, modularity
- Enables local services/solutions, empowers many
- Open source, commons, collaborative

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THE REGENERATIVE TECH STACK

LAYER 3
Systems & Relationships

ENVIRONMENTAL   ECONOMIC

SUPPLY CHAINS   **EDUCATION**

GEOPOLITICAL   MEDIA

EMPLOYMENT   **COMMUNITY**

HEALTH   CULTURAL

LEGAL   **FAMILY**

How tech supports
ECOSYSTEM REMEDIATION

enables
BIOPHILIC DESIGN

supports
HUMAN & ANIMAL WELLBEING

Automates
REGENERATIVE FINANCE

enables
CIRCULARITY

supports
RENEWABLE SOURCING

aggregates
SUSTAINABLE INDUSTRIAL FEEDSTOCK

How digital assets affix
VALUE TO THE UNDERVALUED

LAYER 2
Design & Application

How tech facilitates
COORDINATION & CONSENSUS

How tech helps
LOCALIZE

enables
ACCESS & PARTICIPATION

democratizes
LEARNING & KNOWLEDGE SHARING

How digital ecosystems create
NETWORK EFFECTS

How tech fosters
COMMUNITY

enables
MONITORING & ADAPTATION

supports
OPEN SOURCE INNOVATION

**SERVERS & HOSTING
CLOUD SERVICES
HARDWARE & MATERIALS**

**DATABASES
DATA STORAGE
MIDDLEWARE**

**DEVOPS
IT MANAGEMENT
SECURITY**

**INTEGRATIONS & APIs
USER INTERFACE UI
FRAMEWORKS**

How tech is
ENVISIONED

What are our tech's
FIRST PRINCIPLES

How tech reflects
OUR WORLDVIEWS

LAYER 1
Intentions & Values

How tech is
FINANCED

How tech is
EVALUATED

How tech is
GOVERNED

How tech lifecycles are
DESIGNED

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Examples of Regenerative Technologies

Company Profiled	Description	Market Opportunities
materiom	Platform for ecologically aligned biomaterial design	Chemicals, Material Science, Consumer Packaged Goods, Manufacturing
ECOSIA	Search engine that plants trees	Technology, Urban Design, Bioregional Projects
Oneka	Wave-powered autonomous desalination technology	Energy, Disaster Relief, Tourism
fairbnb	Community powered tourism platform	Tourism, Bioregional Projects, Small Businesses
empower.eco	Plastic circularity platform, incentivizing plastic uptake economies	Plastics, Chemicals, Consumer Packaged Goods, Manufacturing
REGEN NETWORK	Digital infrastructure for ecological credit accounting	Agriculture, Food, Conservation, Finance
ecovative	Technology and material science platform using mycelium for industrial design	Packaging, Construction, Material Science, Manufacturing
HowGood	Sustainability intelligence and regenerative benchmarking platform	Agriculture, Food/Beverage, Hospitality
GiVETH	Community-driven donations platform for regenerative and social impact projects	International Development, Nonprofits, Social Impact, Philanthropy
coralmaker	Generative design and robotics for coral restoration at scale	Ocean Conservation, Food Security

A new market category, supporting ecosystemic health across people, planet, and economy.

LET'S CULTIVATE THE SOIL FOR REGENERATIVE TECHNOLOGY!

An open call for ideas to support ecosystem building and category creation in regenerative tech.

JOIN THE REGEN TECH COMMUNITY

For: EVERYONE

We are developing an open and thriving community to help cultivate the mindsets, permission, and language to come together and drive change in how we build, use, and invest in Tech.

- Look for us on Capital Institute, RegenIntel, Global Regeneration Collaboratory (GRC), ReFiDAO, Collaborative Tech Alliance sites

BROWSE AND CONTRIBUTE TO THE REGEN TECH DIRECTORY

For: PRODUCT MANAGERS, DESIGNERS, LEADERS, INVESTORS

We are developing an online registry of real-world examples, to illustrate diverse forms of regenerative tech potential and peril. The mutual aid element means you can directly contribute to any initiative.

- The RegenTech platform seeks to cross pollinate these initiatives and the humans co-creating them, to weave a new regenerative tech ecosystem

PARTICIPATE IN OUR INNOVATION STATION

FOR: LEADERS, PRACTITIONERS, DESIGNERS, ENGINEERS, INVESTORS

Join us in co-creating, or leading, regenerative technologies, programs, events, curricula, and more, or submit your idea for funding.

- Join upcoming Workshops, Product Profiles, Heart/Hackathons, Bonfires , Working Groups, and more

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