A speculative design process mapping alternative futures of Web3 in Latam, focusing on sustainability and post-development.

Pluriversa

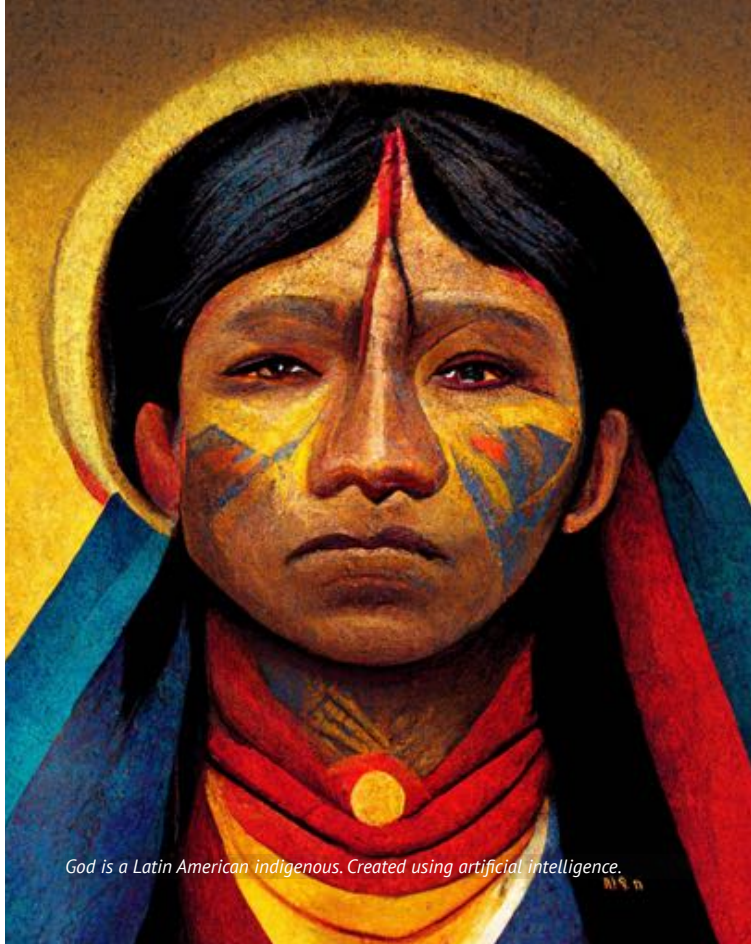
Web3 **Speculative** Futures Latam

September 2022

Introduction

After a thorough understanding of the current state of Web3 and the different forces of change shaping its potential use in Latin America, we set out to map possible futures being woven today. It will help us define a critical stance on high-impact regional issues.

We hope this effort will support readers and participating organisations in creating their strategies for collaboration and engagement towards the pluralistic development of Latin America, with its people, visions and extensive biodiversity at the centre of their considerations.



God is a Latin American indigenous. Created using artificial intelligence.

About this report

Speculating about the future requires both analytical and creative skills. On the one hand, method and discipline to understand and connect the signals correctly; on the other, intuition and magic to deal with ambiguity and be provocative.

This report is our final deliverable for the **Web3 for Development** project for the **Foreign, Commonwealth & Development Office of the Government of England**. It aims to provide different speculative scenarios, discuss their significant impacts, and make recommendations for public policy toward developing this technology for the region's welfare.

The scenarios presented in this opportunity are based on our foresight and speculative design process, including the findings of prior stages of this project. You can find previous reports on the following pages.

We hope you enjoy reading the five scenarios we have prepared and that they help you to rethink how to influence for good the development of Distributed Ledger Technologies known as Blockchain.

About Pluriversa

We focus on the transitions the Latin American society needs to respond to the structural inequity, the climate crisis, the technological revolution, and what we need to do today. Our identity emerges both physically and intellectually between the Global South and the Global North; thanks to this, we can understand the complex and deeply interconnected nature of ambiguous challenges in a unique way.

Our emerging design practice fuses innovative methods with solid ethical considerations for more democratic, distributed, and sustainable futures.

pluriversa.org

If you need help and advice, or have any questions about this report, please email ***Miguel Bello****, at hello@pluriversa.org.*

Pluriversa
Global South
pluriversa.org
2022

First report

Horizon Scanning Web3 Latam

Horizon Scanning is a vital component of Strategic Foresight, the process of looking for early warning signs of change in the strategic environment.

In this report, we explored the signals, the trends, and the emerging concerns on how these Web3 technologies impact the political, economic, social, technological, environmental, and legal levels in Latin America.

You can navigate a Miro version here:
https://bit.ly/HorizonScanningWeb3Latam

Second report

Web3 Futures El Salvador

For eight days, we were able to immerse ourselves in the reality of El Salvador, the first country in the world to accept and regulate Bitcoin as a legal tender.

Through conversations, observations and workshops, we could understand the future outlook of its people and their struggles concerning equity, democracy and environmental protection, where Web3 technologies definitely could help.

You can navigate a Miro version here:
https://bit.ly/Web3ResearchElSalvador

Our Team

Core team

Miguel Bello
Project Director
15+ years of consulting in diverse areas of innovation, design, sustainability, and technology allow him to tackle complex problems and imagine the transitions our societies need.

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Manuel Llano
Design for Transitions
With over 10+ years in strategic design consultancy, Manuel makes sense of complex contexts and envisions new ways of being and doing for new worlds to emerge.

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Contributors

Angélica Bello
Strategic Designer
Impact-driven and collaborative by nature. Angelica has worked across several sectors such as NGOs, Governments, and Financial services, among others. Grounded in service design often works in scenarios of high uncertainty; she fosters creativity and a "make it happen" mindset, bridging strategy and implementation.

Ricardo Lapeira
Foresight Philosopher
A generalist that makes the complex simple by bringing highly relevant philosophical topics into foresight exercises. Experience working with technology, strategy, and storytelling-related projects. Interested in sense-making and continuously learning new topics.

Jessica Villareal
International Business lawyer & Legal Designer
Over 10+ years in Business management and legal advisor in corporate, commercial, and labour law for national and international companies. Passionate about making the legal world more accessible, understandable, and easier by using a human-centred approach.

Index

1. Our Speculative Process

Research Question

What opportunities and challenges do Web3 technologies in Latam present to international development institutions?

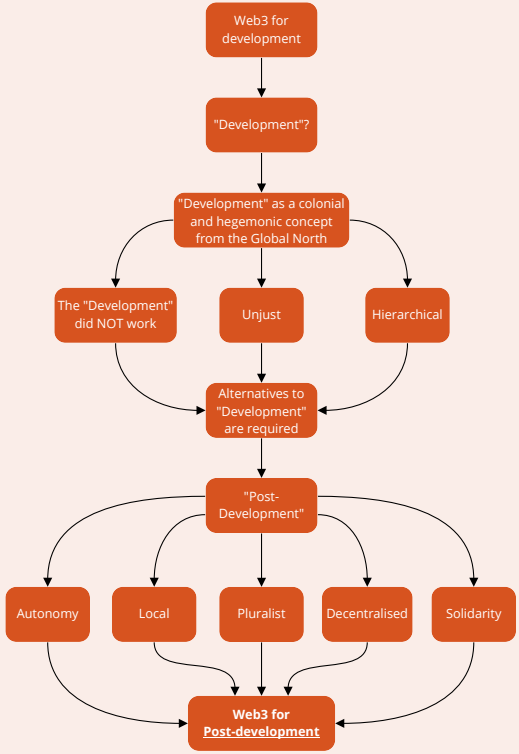
Beyond development

Over the past three decades, intellectuals and academics have challenged the concept of “development” and what it means for the Global South.

It may be an uncomfortable reflection, but it is appropriate for rethinking our society and community.

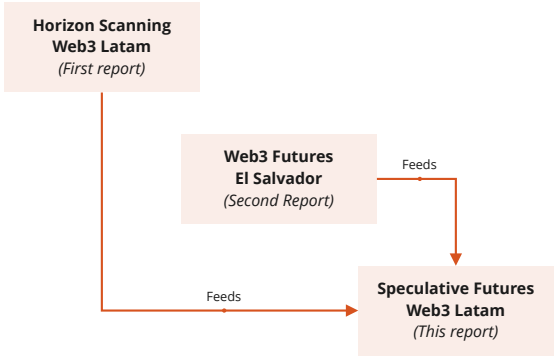
For Pluriversa, the question about sustainability is inextricably connected to the question of the development model we want for our communities. In this day and age, we cannot talk about development without talking about sustainability, nor about rethinking better economic and social models that reduce the inequity that has been widespread in recent decades.

A post-development model that empowers communities is required, and when we talk about the role of Web3 in the Global South, this reflection must be taken into account. We explain this reasoning in the following graph.



Our process

In this latest release, we gather the knowledge and insights from our previous reports to imagine speculative futures for Web3 in Latam.



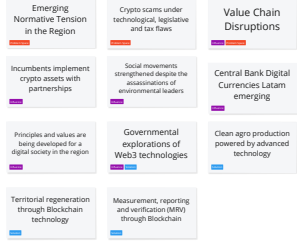
Horizon Scanning Web3 Latam

Included content in this speculative result

11 trends

- The rise of a Common Ethics
- Advanced Food Production
- Measuring Nature
- Blockchain-powered GovTech
- Supply Chain Disruption
- Accelerating the regeneration of Nature
- Blockchain-powered Private companies
- Normative Tension
- Increased Social Unrest
- Nationalizing Crypto
- New technology, same crimes

11 Pivotal Signals

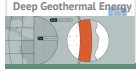


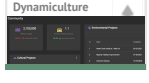
72 Signals

Web3 Futures El Salvador

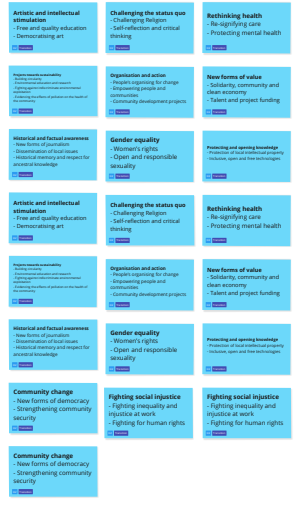
Included content in this speculative result

10 Inspirational cases





22 Transition Initiatives



19 desirable complexities

18 challenges for Autonomy

Web3 Futures El Salvador

Included content in this speculative result

24 Speculative Use Cases

7 Bitcoin Adoption Drivers

- Local Leadership Support
- Local Merchants Engagement
- Young Participation
- Banking for All
- Carnivals for the Future
- Infrastructure Advancement
- Support network

12 major events / inputs

- Applied biotechnology in everyday life
- Ocean Acidification
- Economic Recesion
- China's supremacy
- US National Debt
- Plummeting Biodiversity
- HEALTH CRISIS
- The fall of the United States as a dominant empire
- MASSIVE WATER SCARCITY
- Bitcoin as global reserve currency
- Bitcoin Supply Shock

Additional Trends & Techs

Included content in this speculative result

14 Wicked Opportunities by Kedge*

For more information, please visit https://thefuturesschool.com

5 ID3 Contexts by Phas3*

For more information, please visit https://www.phas3.io

62 Additional Trends and Technologies by FTI*

Brain Machine Interfaces	Cloud Neutrality	Post-Quantum Cryptography Standards	Affective Computing	Splinternets	Renewable Energy	6G	Collaborative robots—or cobots
Distributed Computing Earning Models	Autonomous Robot Swarms	Clean Hydrogen	A.I. for good	Data Ownership	DAOs	Mesh Networks between Iot devices	Circular Economy
Drone Surveillance	Quantum Computing	Privacy and Unionizing at Big Tech	Alternative Credit Scoring	Earned Wage Access	Techno-Nationalism	Bio-Cyberattacks	Indoor Farms
DEFI	CBDCs	Big Tech Disrupts Health Care	Big Ag Data	Multi-input Recognition	Encrypted Messaging Networks	On-chain Surveillance	Privacy Regulation
Provenance and Authentication	Altered States & Psychedelics	Robots-as-a-Service	Global Cybersecurity Pacts	Farming-as-a-Service	Emotion detection by A.I.	Green Stimulus Plans	Fractional Ownership
Crypto Staking	Personal Electronic Keys	Learn to Earn Models	Farm Management Platforms	Personal Digital Twins (Avatar Bots)	Regenerative communities	Bioacoustic Recognition	Edge Computing
Food Cybersecurity	Human Migration Patterns Shift	Increased Use of Ambient Surveillance	Biometric Scoring	Multi-User Platforms	AI as Critical Infrastructure	Work From Anywhere	Return to the countryside
5G	Service Bots	State-sponsored Security Breaches	Extreme Weather Events	Crypto Mining Fuels Green Energy	Sea Level Rise		

For more information, please visit https://futuretodayinstitute.com

About the Futures Roadmap

The Futures Roadmap matrix is a foresight tool representing a timeline with three segments: period 1 for 0 to 5 years, period 2 for 10 to 15 years and period 3 for 10 to 15 years.

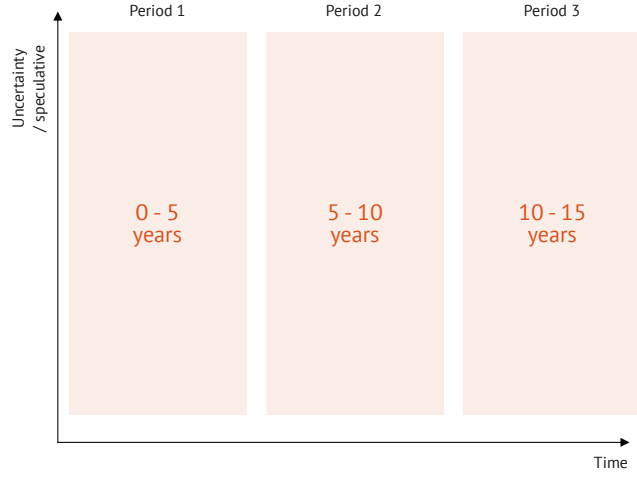
Each segment includes all the content in recent pages (trends, signals, insights, future ideas, and speculative cases). The uncertainty of some elements goes towards “up” or “down” as the timeline increases. The movement from one horizon to another is labelled as “transitions”.

Period 1 - Sustaining transformations and innovations.

Period 2 - Transformations and explorations.

Period 3 - Visions and prolonged disruptions.

As you will see, multiple line plots can be drawn to show future patterns while traversing the different elements.



The Futures Roadmap Matrix

Disclaimer
This is speculative!

The views and speculative scenarios expressed herein are the authors' own and **are not representative of the organisations in which they have been employed.** The names of nations, companies, services and products mentioned in this report are used for creative and fictional purposes. They are not intended as indictments or complaints by Pluriversa or this report's authors.

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All images in this report *(excluding our portraits)* have been created using Midjourney's artificial intelligence under a paid members license. For information about the terms of use, please visit its website at https://www.midjourney.com/.

/imagine prompt: **an artificial intelligence illustrating beautiful images. hyperrealism. --ar 2:3 --v 3** - Upscaled (Max)

2. Scenario Mapping

The present

Scenario Mapping

The content blocks presented before were placed in the Futures Roadmap matrix. The criteria for their placement along the two axes were as follows:

- **Relevance in Latam over time**
- **Relevance to Web3**
- **Time of high recurrence/adoption of the use case**

You may or may not agree with where we have placed each element. In a way, the position alone is not as relevant as the various elements around it.

We encourage you to take the time to explore the different elements, we know there are many but it is a lot of fun to discuss their implications and positions. In case of need we recommend having our previous reports at hand.

Futures Roadmap
Timeline

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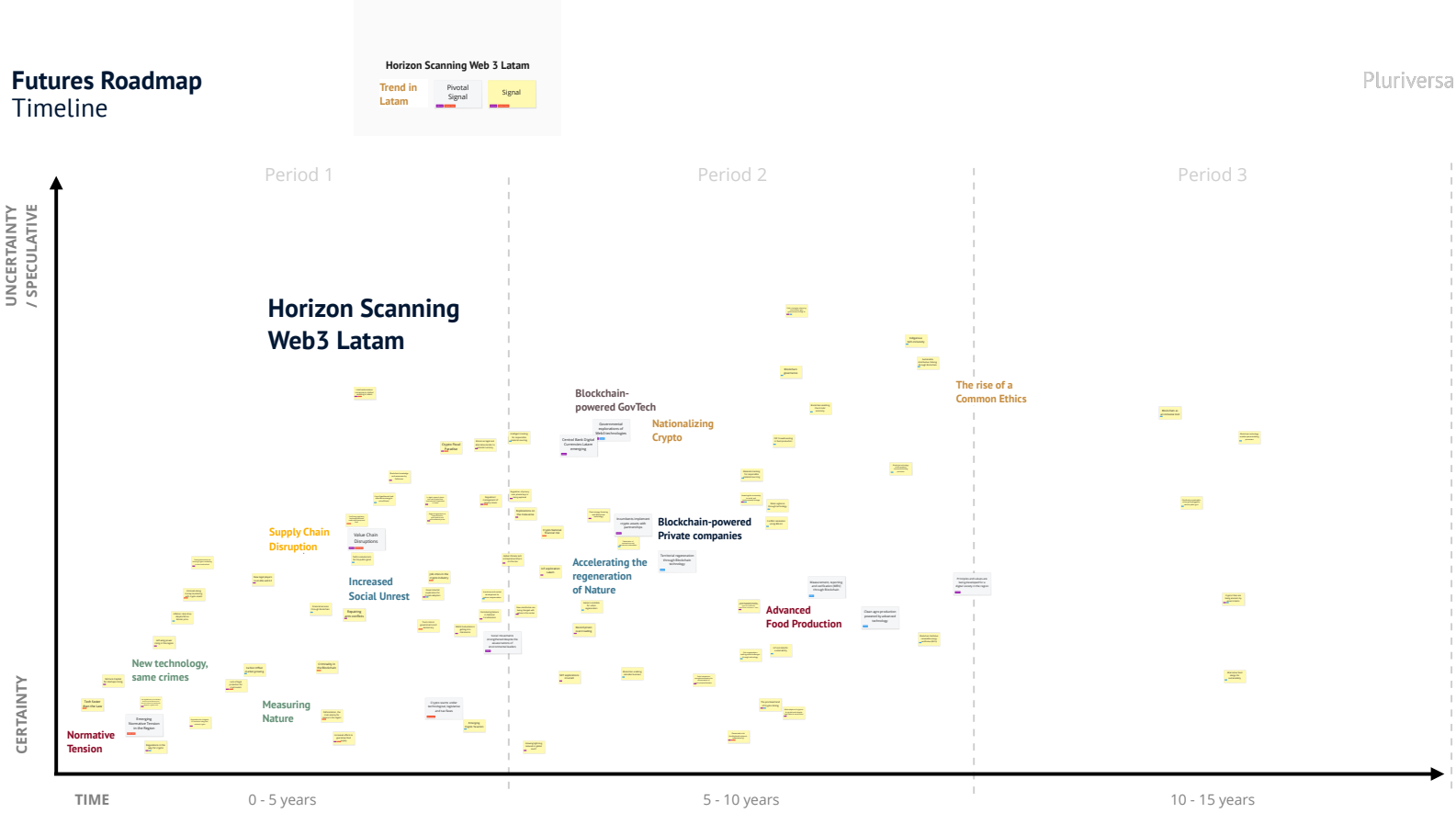
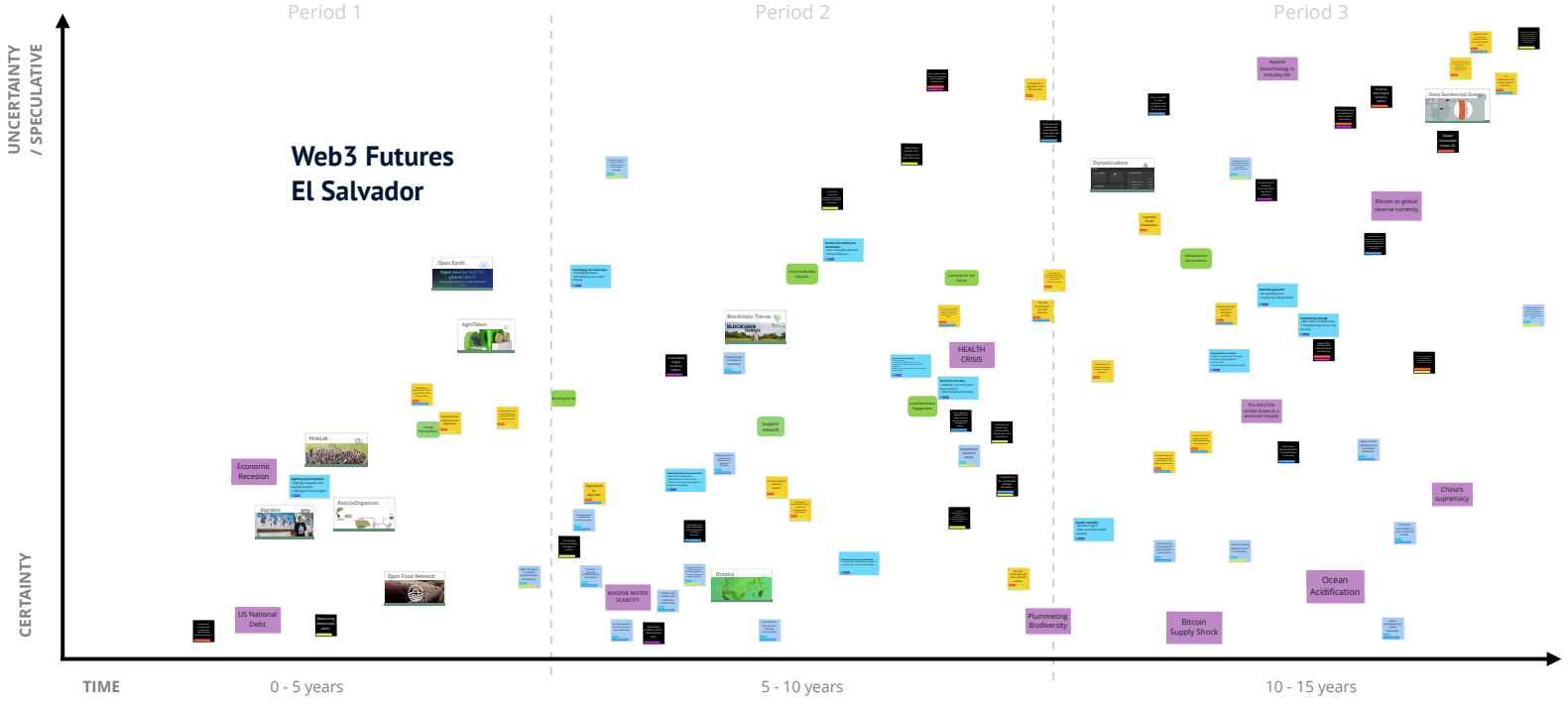


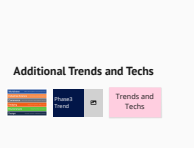
Futures Roadmap
Timeline

Pluriversa



Futures Roadmap
Timeline

Pluriversa



UNCERTAINTY / SPECULATIVE

CERTAINTY

TIME

Period 1

Period 2

Period 3

Additional Trends & Techs

Work From Anywhere
Biometric Scoring
Extreme Weather Events
Green Stimulus Plans
Encrypted Messaging Networks
Privacy Regulation
Privacy and Unionising at Big Tech
Provenance and Authentication
Personal Electronic Keys
DEFI
Learn to Earn Models
Fractional Ownership
Altered States & Psychedelics
Emotion detection by A.I.
CBDCs
Clean Hydrogen
Distributed Computing Earning Models
Splinternets
A.I. for good
Data Ownership
Food Cybersecurity
Regenerative communities
Human Migration Patterns Shift
Return to the countryside
Service Bots
Farm Management Platforms
On-chain Surveillance
Alternative Credit Scoring
Circular Economy
Indoor Farms
Big Tech Disrupts Health Care
Drone Surveillance
Earned Wage Access
Big Ag Data
Global Cybersecurity Pacts
Crypto Staking
Multi-User Platforms
Crypto Mining Fuels Green Energy
AI as Critical Infrastructure
5G
DAOs
Renewable Energy
Collaborative robots—or cobots
Autonomous Robot Swarms
Mesh Networks between IoT devices
Techno-Nationalism
Farming-as-a-Service
Robots-as-a-Service
Multi-input Recognition
Increased Use of Ambient Surveillance
Bioacoustic Recognition
Personal Digital Twins (Avatar Bots)
State-sponsored Security Breaches
Affective Computing
Cloud Neutrality
Brain Machine Interfaces
6G
Post-Quantum Cryptography Standards
Quantum Computing
Bio-Cyberattacks
Edge Computing
Sea Level Rise

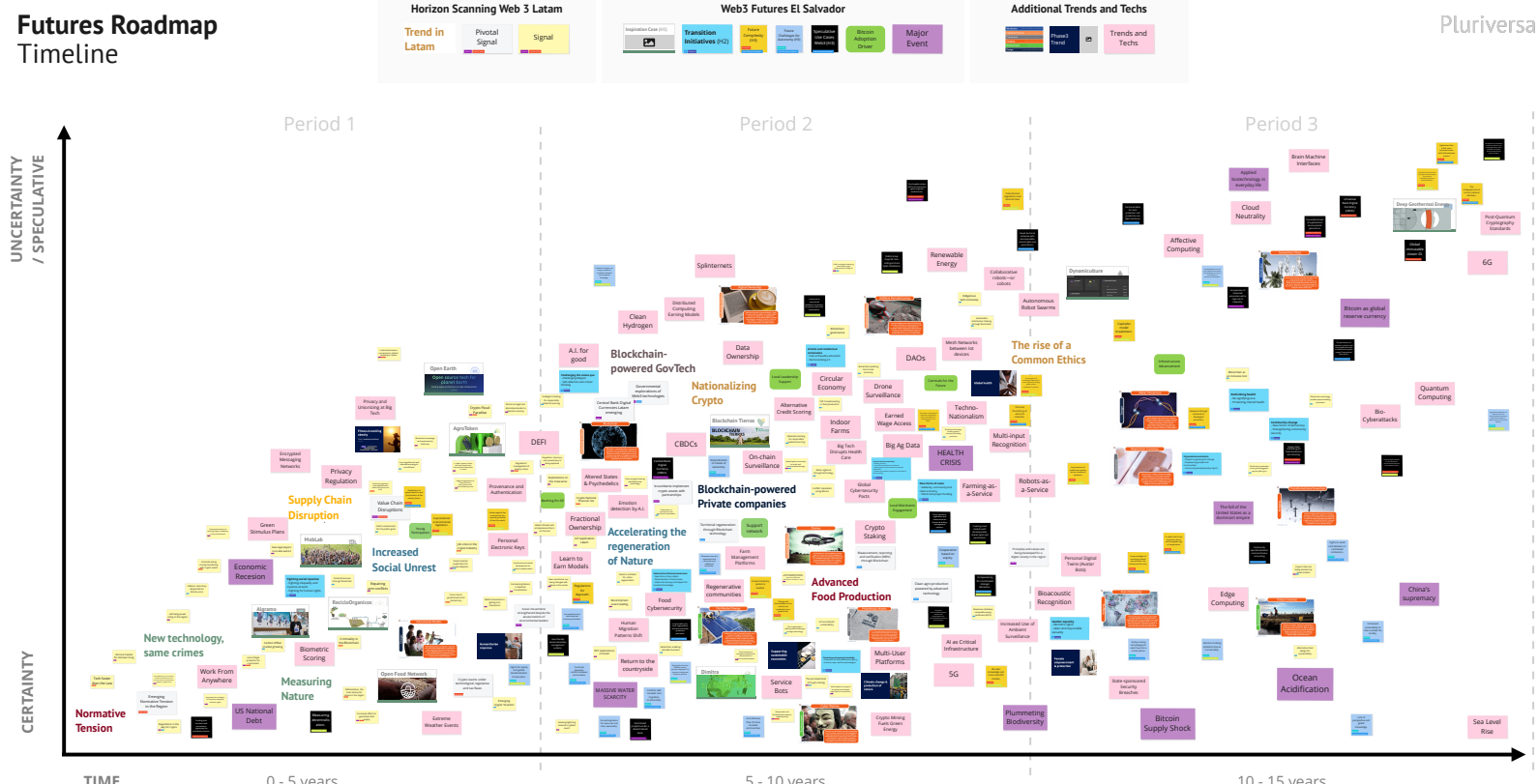
0 - 5 years

5 - 10 years

10 - 15 years

Futures Roadmap
Timeline

Pluriversa



3. Speculative Scenarios 2038

Scenarios 2038

Sustainable Futures

The question about **sustainability is inextricably connected to the question of the development model** our society needs / wants / dreams. Due to this, our focus is on sustainable environmental futures under the current and future climate crises and how Web3 capabilities can be relevant to achieve them in Latin America.

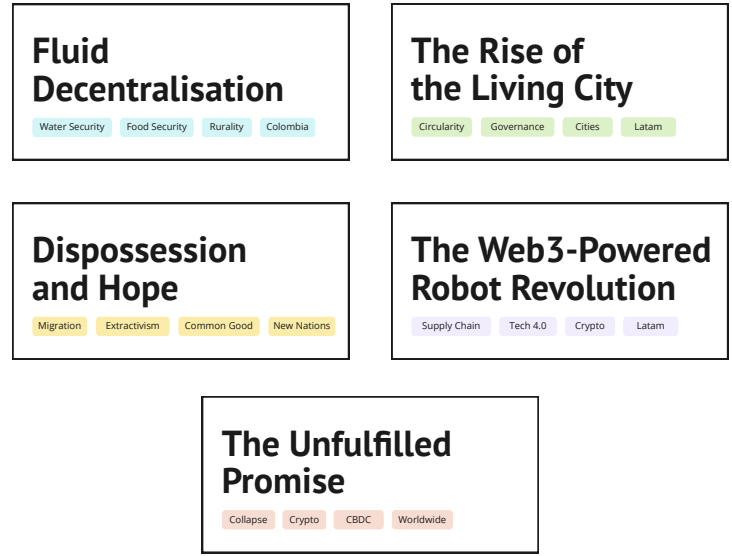
Five speculative scenarios 2038

Thanks to the mapping we carried out, we could imagine five trajectories of relevant events for the future of Latin America. Some trajectories overlap and use common elements, although with different approaches in each case. To summarise the content of each theme, they would be:

- Rurality and water
- The city and circularity
- The continent and migration
- Robots and the Web3
- Money and collapse

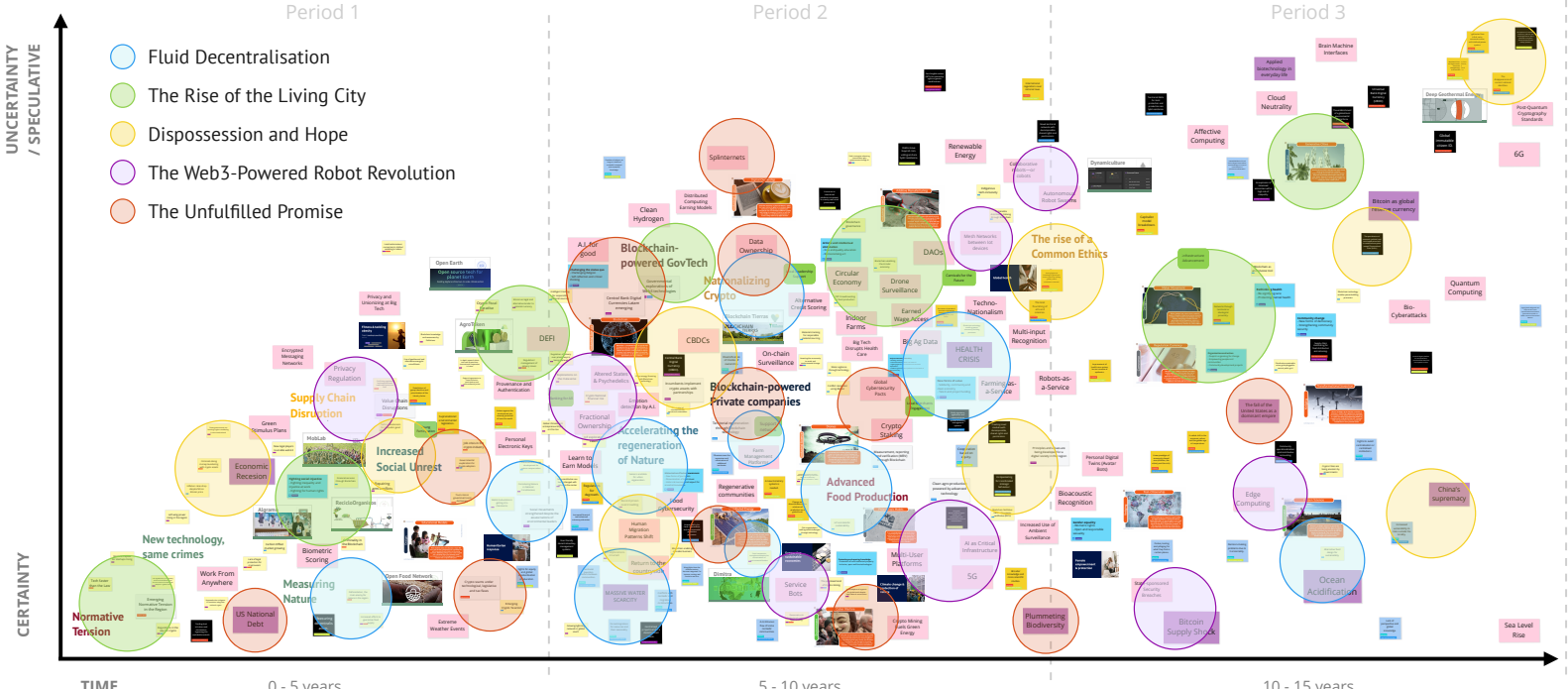
Each marked trajectory corresponds to one of the five resulting speculative scenarios for year 2038. However, the sequence of events you will find below in each story does not fit a progressive reading of these event trajectories. Please keep it in mind.

We cannot think of Web3 cases as mere apps that operate in the same political framework, in the same infrastructures, or in the same people's daily lives. We must imagine a world radically transformed in its policies, infrastructures and everyday life, in the same way, that the world changed with electricity or automobiles.



Futures Roadmap
Five Scenarios 2038

Pluriversa



Futures Roadmap
Scenarios 2038

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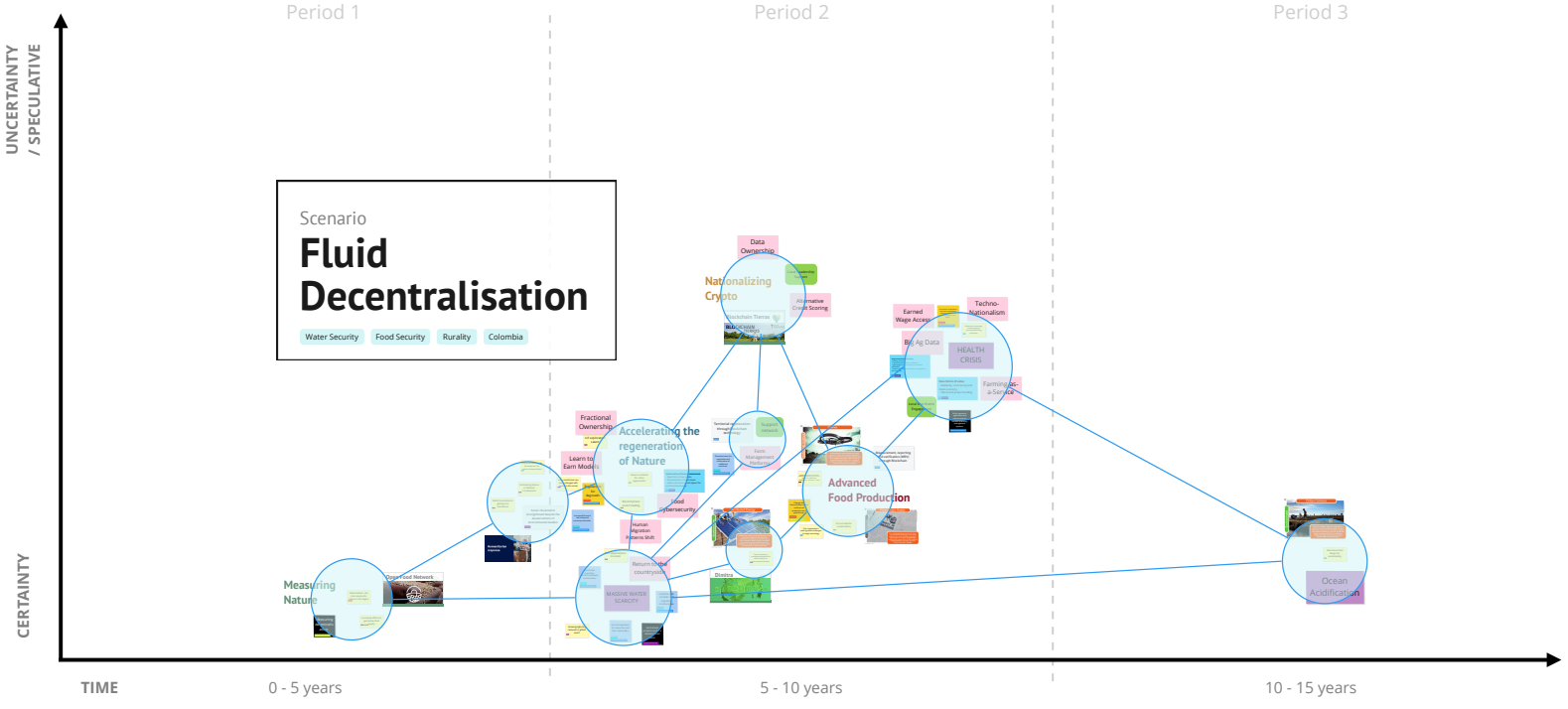

Futures Roadmap
Scenarios 2038

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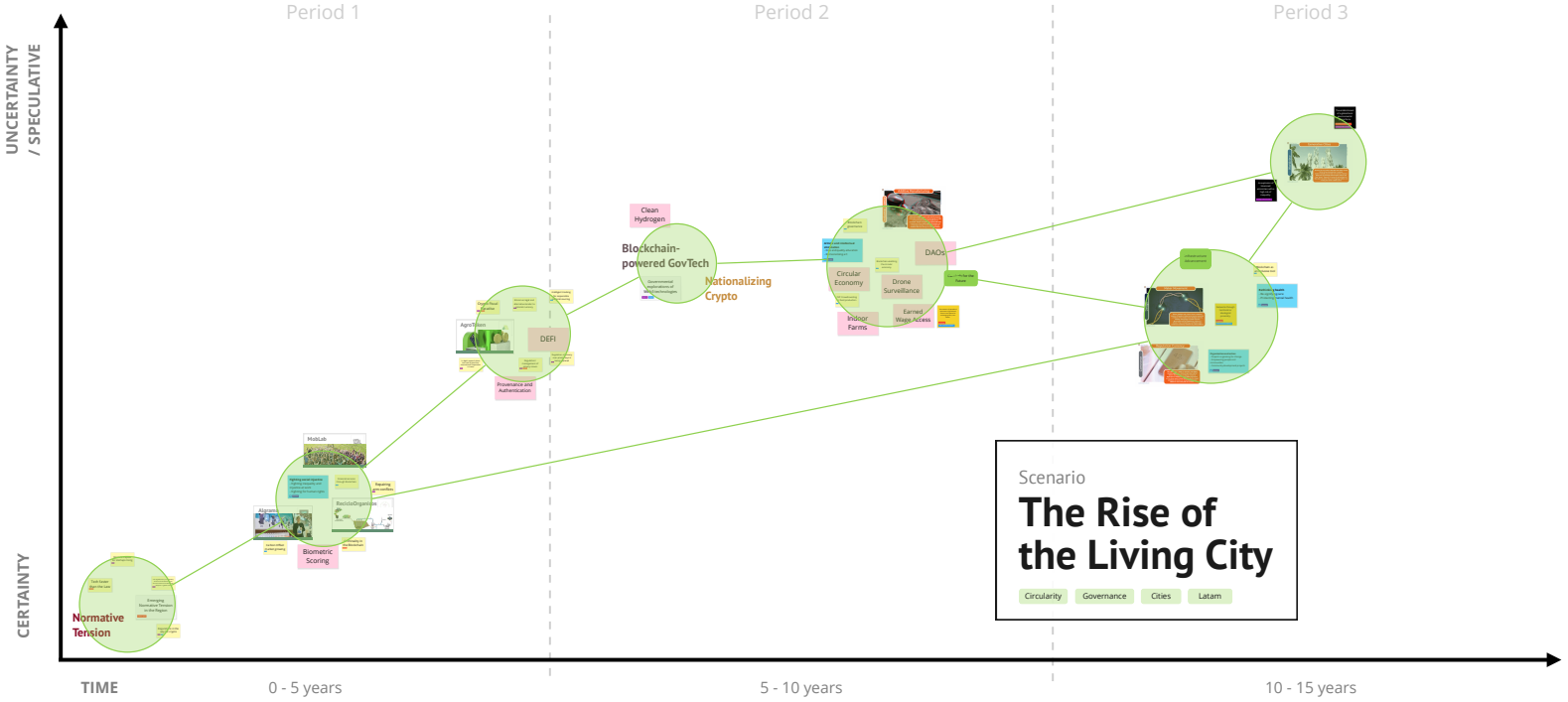

Futures Roadmap
Scenarios 2038

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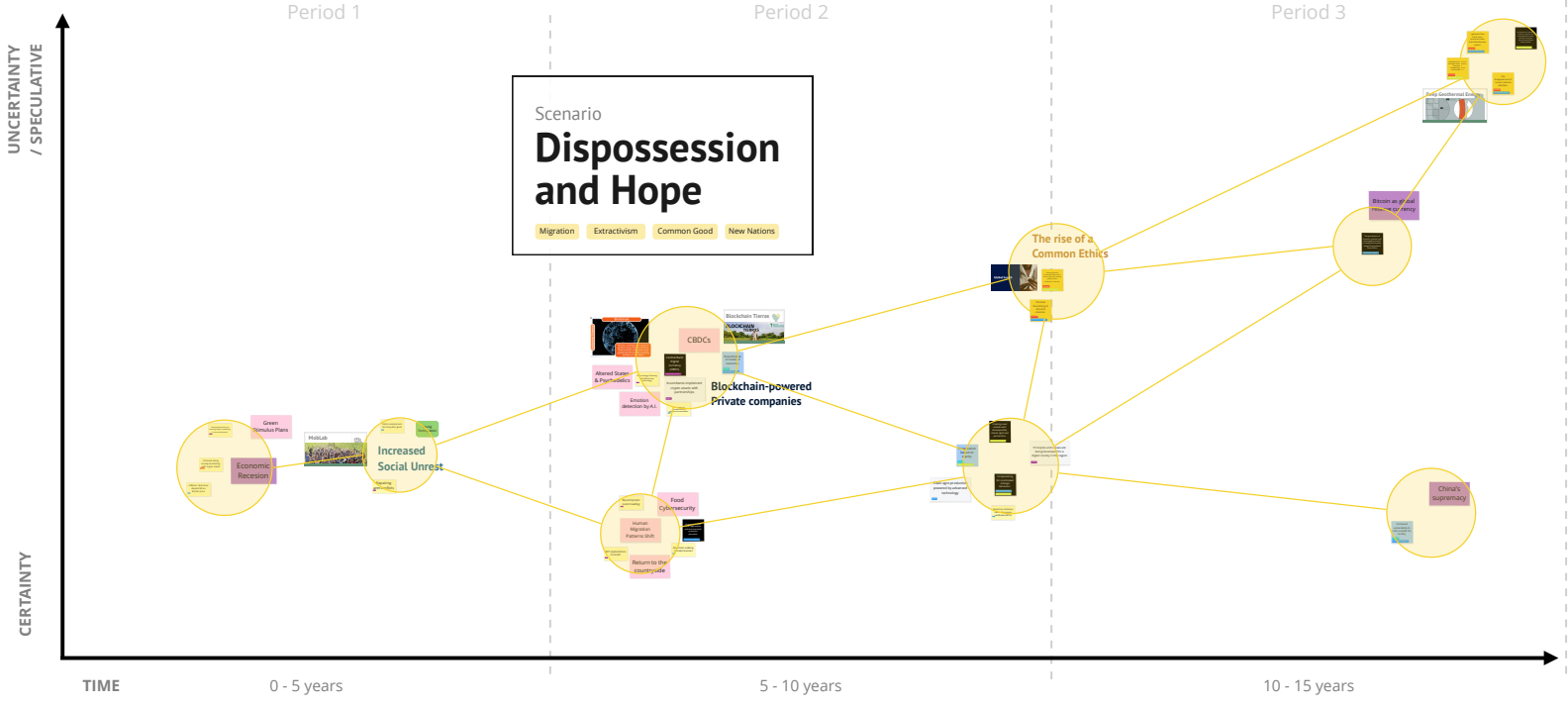

Futures Roadmap
Scenarios 2038

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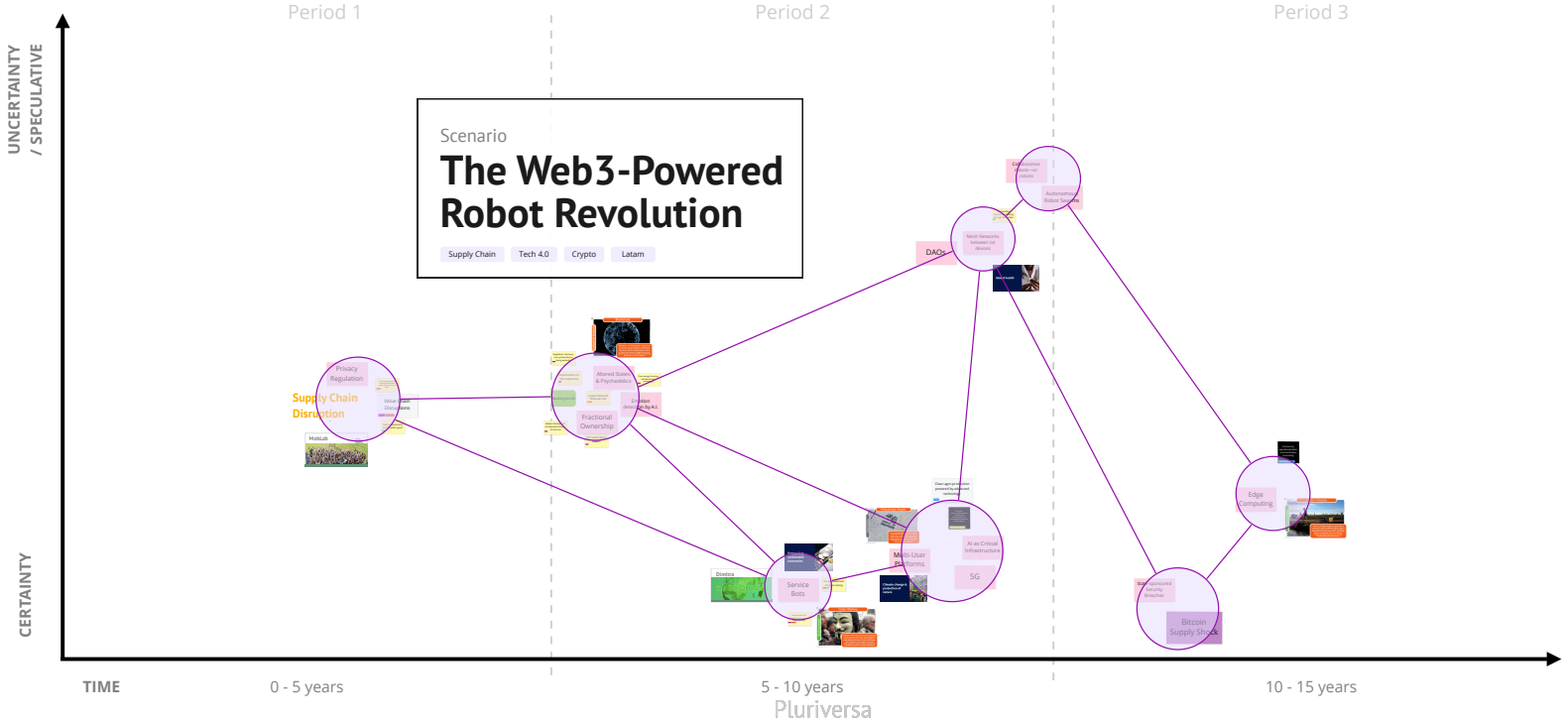

Futures Roadmap
Scenarios 2038

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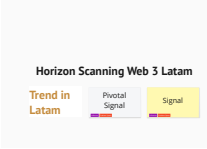
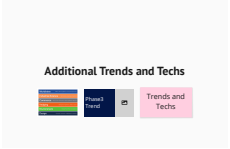
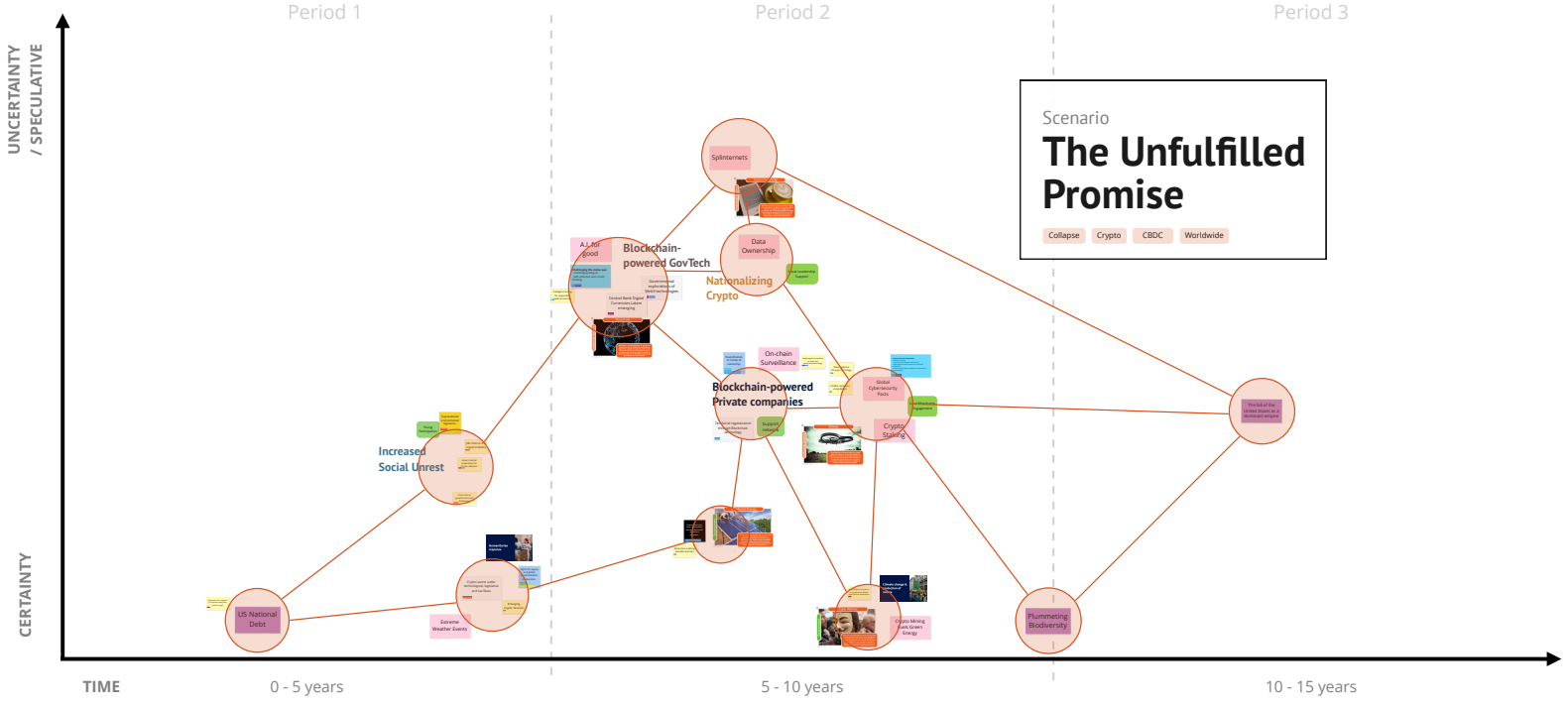







Fluid
Decentralisation

The regeneration program was a success after land redistribution.

Scenarios 2038

Fluid Decentralisation

Water Security | Food Security | Rurality | Colombia

Scenario overview

Colombia confronted massive droughts thanks to international cooperation and Web3 technologies. This last was crucial to help coordinate the population and solve the issue through decentralised cooperatives. The result was new forms of governance recognised by the government as key agents to fight climate change and protect the territory. New forms of decentralised science and protecting nature emerged, as well as essential changes in how rural communities organised themselves. Now, thanks to this new model, international cooperation revolves transparently around the causes being supported. However, other challenges exist, like new forms of territorial violence.

Fluid Decentralisation

Stronger than the drought
There were thirsty years for Colombia, but after great local efforts and thanks to international cooperation, the country managed to protect its water resource and, thus, maintain its position as one of the countries with the highest freshwater resources per capita.

The country is now not only a vital source of food for the planet but also a source of humanitarian assistance in drinking water for those partner countries that lack the resource.

The days when a third of the country's population lacked sustained access to safe drinking water are gone, and the degradation of natural resources nearly led to the collapse of the nation's most important water systems has stopped.

After significant barriers and a major health crisis caused by water shortages, the region has a glimmer of hope again, with laws for regeneration and precise regulation to encourage degrowth.

Rural cooperative evolution
The accelerated adoption of the internet and Web3 in Colombia was vital to massively coordinate the population and provide practical, wide-ranging incentives to overcome the water, health and economic crisis.

Faced with severe problems of territorial governance and thanks to international cooperation, new activist organisations emerged. Under new collaboration models and using Web3, the first Decentralized Autonomous Cooperatives (DACoops) were created.

These new organisational structures with activists from diverse locations and professions have different tasks according to the needs, like regenerating rural territory, fighting against the extractivist practices of local and foreign companies, enabling decentralised energy models, protecting the lives of environmental activists, monitoring water resources in real-time, and much more.

Environmental neo-power for rural protection
The DACoop model successfully consolidates decentralised organisations for the protection and regeneration of rural territories, which is why the Colombian government granted them power and authority for territorial and environmental management. The DACoops operate as the authority in many areas the government does not reach.

DACoops' new responsibility allows them to use environmental knowledge and indigenous ancestral wisdom to programme new algorithms for territorial protection based on inclusive artificial intelligence, smart contracts and advanced sensors installed throughout the territory.

Extractive companies use decentralised governance technologies to hold their environmental and operating permits on the Blockchain. They must make advance deposits in Bitcoin called "eco-staking" to respond to potential environmental impacts. When an extractive company breaches an indigenous treaty or causes repeated environmental impacts outside permitted margins, smart offsets are automatically executed, and extractive operating licences are cancelled. Records of these consequences are immutable and verifiable from anywhere in the world where the offender has operations. Rural communities, government and military forces are also automatically notified to ensure compliance with penalties.

A new post-development cooperation

The power of decentralisation has completely transformed international cooperation, now defined by the struggles and purposes pursued in the territory rather than by the source of its funds, legal structure or political affinities. This change has allowed a more profound link between communities from different parts of the world and the Colombian territory. Some DACoops involving local indigenous leaders and international activists digitalise ancestral ontologies and join the struggle for social and environmental rights in the Sierra Nevada de Santa Marta and the Amazon.

These new cooperation models have helped protect water and reduce the plundering of natural resources by extractivist forces.

Thanks to DACoops, extractive companies are more respectful of the environment and its communities.

Energy for all
The hydroelectric plants that provided energy to a large part of the country became increasingly obsolete due to the reduction of water affluents.

Aware of the importance of energy for the autonomy of the regions and the sustainability of the DACoops, they created community-based, decentralised and clean energy models. Technical training in using and maintaining these energy solutions provides a source of work and livelihood for many young farmers, including those from indigenous communities in the country's most remote and inaccessible areas. Therefore, DACoops have the energy to keep their governance systems operational and guarantee a reliable supply to the various rural populations.

Violence and Ethical Hacking
The scarcity of water resources exacerbated violence in different rural areas of Colombia. Armed groups and drug cartels fight for control and monetisation of water sources, leaving thousands of citizens in the crossfire and precariousness. Once again, environmental leaders and activists are declared military targets, and many people have been the victims of these atrocious acts.

Environmental hackers worldwide have joined the fight against violence under the slogan "Water is a vital right". They carry out continuous attacks on illegal groups' communications, transactions and technological platforms, making their operations difficult and confusing.

Decentralised solar farms provide education and work for young people.

DACoops promote community solidarity programmes and effectively transfers international aid to those most in need. However, DACoops' protection programmes are insufficient to protect all activists' lives, and many have to flee their homes. Fortunately, DACoops anticipated this situation and implemented cryptographic protection for activists and their families' sensitive information; it does not exempt them from being assaulted, but at least it is difficult for malicious actors to track them down.

The fall of neo-feudalism

A tremendous environmental awareness was raised, encouraging Colombia to dismantle the old neo-feudal model, where few oligarchs owned the country's most fertile tracts of land. Based on an extensive regeneration programme, land redistribution and the allocation of immutable digital deeds, a new era of social, territorial and ecological justice is established.

Thanks to technical and environmental education efforts, the peasant social base substantially improved its quality of life and incorporated clean and efficient production mechanisms using high technology that allowed the development of self-management systems for rural communities, designed directly by the DACoops to meet their needs.

All the data collected feeds the clean production certificates, which are immutable and auditable on the Blockchain, allowing real-time visualisation of the state of crops, harvests, demand, waste, and of- course, the quantity and quality of water. The food autonomy of communities has been a success in the face of scarce water resources.

Now is the beginning of the agro-industrial monopoly dismantling; the water waste they are used to having will no longer be acceptable.

Some technologies ensure efficiency in water management and food security.

Civic science activism
The massive involvement of citizens in DACoops allows for scaling up and provides clear incentives for citizen science programmes. Thanks to environmental protection and food production technologies, it is possible to provide reliable, real-time data. This data is integrated with business and institutional information under powerful analytical and machine learning models, capable of anticipating water supply crises, fostering responsible food production and greater efficiency in environmental protection.

For instance, rivers gained status as entities with supranational rights enabled by Web3, where their watercourses and protection are not limited to their territorial political boundaries. In this way, DACoops coordinated environmental and productive movements along the region's riverbeds, where a diverse range of citizen scientists such as fishermen, farmers, environmentalists, biologists and entomologists share real-time data about the health and life of the rivers.

Civic science activism transcended universal health coverage. DACoops now grant access to vaccines and new medical advances to remote rural populations. They identify hotspots of neglected diseases and create an alert system with specialised public health institutions. Medicines and medical care are linked to a single patient's ID, avoiding delays in delivering services in remote territories previously ignored by national governments for the misuse of resources.

Thanks to Web3, DACoops implemented "Contributory Accounting" that allows all participants and communities to be compensated according to their valuable contributions to environmental, food, medical and scientific goals, ensuring their members' commitment and financial sustainability.

Kids learn how to implement some technologies to protect the environment and share data to help the community.

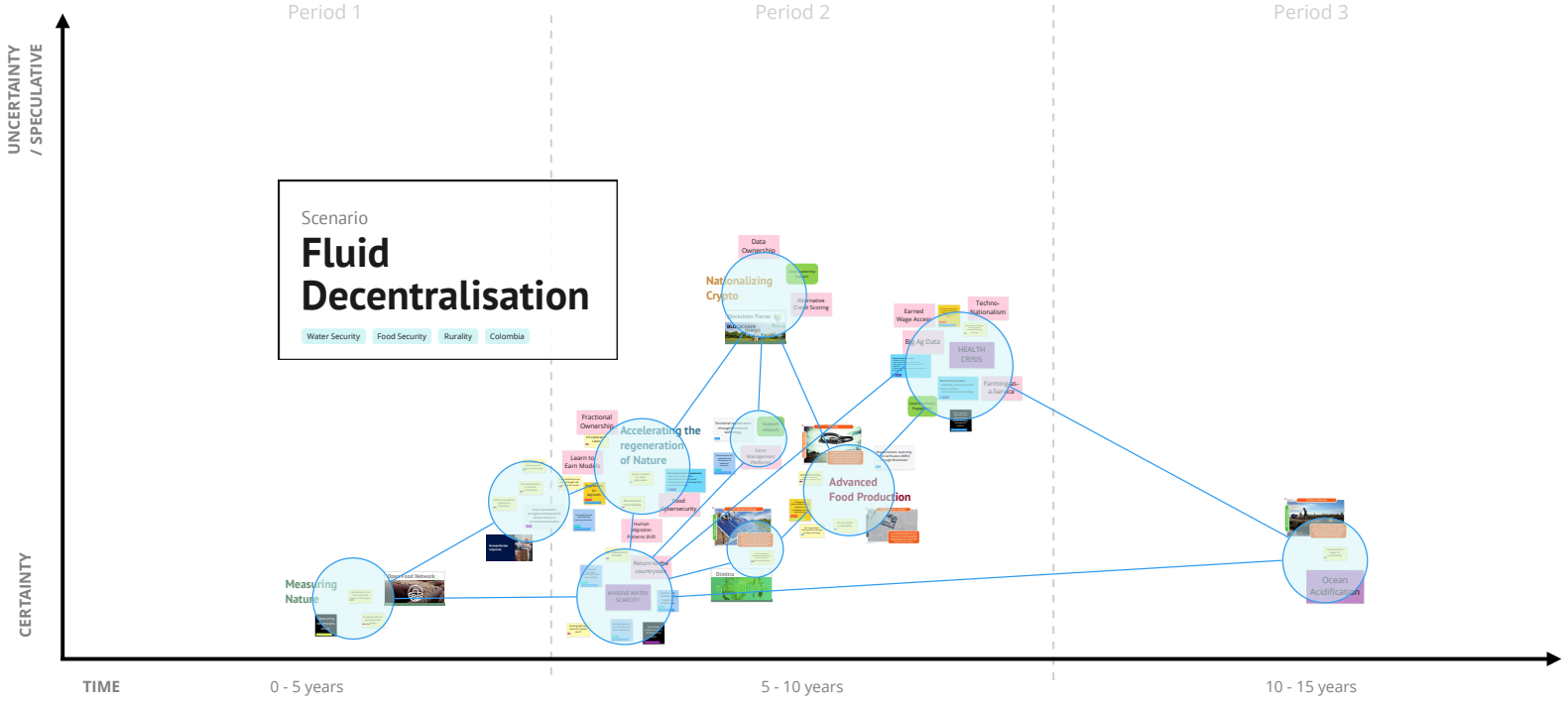
A new chapter
Thanks to all the accumulated experience, DACoops are now ready for a systemic and coordinated fight against one of their most significant challenges: cooperating transnationally to clean up and regenerate life in the Caribbean Sea while responding to more frequent natural disasters.

Ultimately, we will never be able to replace the lives, rivers, lakes, forests and moorlands lost in the last century. Still, our new awareness firmly sets in a new chapter in Colombia's history as a water-protecting state and a global powerhouse of life.

In the past, rivers carried tons of rubbish to the Caribbean.

Futures Roadmap
Scenarios 2038

Pluriversa



Implications Map
into the Future

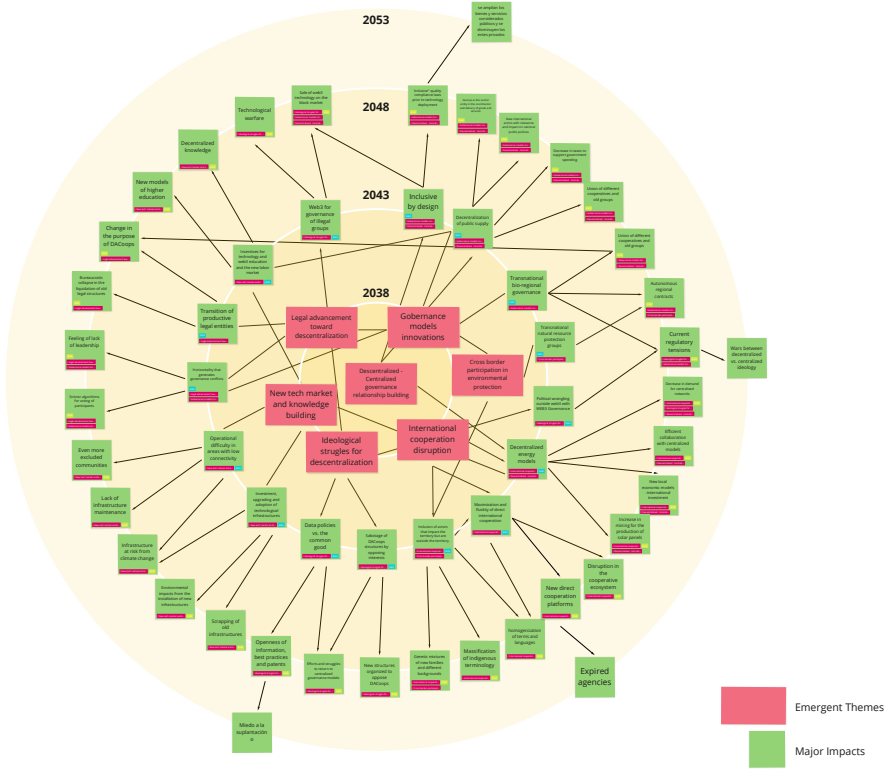
The futures wheels help us explore the consequences of significant changes occurring in the scenario to visualize possible consequences that are often counter-intuitive. This exercise gives us another layer of visibility for developing policies and actions for development.

First-order implications 2043

- Bundling of several traditional organizations into new DACoops
- Simplified governance and greater horizontality
- Decentralization of public supply where central government allocates resources to DACoops
- Conflicts within territories over old central interests
- Manipulation of means to counteract decentralization by the elite in crisis
- Collaboration of different disciplines is facilitated: academics, biologists, anthropologists, indigenous people, peasants and foresters unite to restore and protect natural systems
- Communities across the Amazon River formed the first transnational collaborations.
- The first habitable transnational parks are established
- With technological support, the beginning sensorization of rivers, mountains, jungles and forests for protection
- Extractive companies hire groups to destroy and alter sensors
- Significant changes in education are generated to accelerate the transition to Web3
- A massive decentralized education movement began
- Web3 jobs boom is becoming an essential economic sector in the region
- Disconnected communities lose options to integrate into the economy
- A new market opens up for scrapping old infrastructure
- Central data policy clashes with the interest of the common good.
- Groups using Web3 are considered guerrillas in some countries and labelled as criminals
- DACoops are constantly hacked by centralizing interests.

First-order implications 2048

- Legal frameworks for open data and new patents are created in some countries
- There are violent conformations between major global forces in the region for governance and resource power
- There is constant cyber warfare; protocols have the imperative to be incorruptible
- A massive movement for decentralized education begins
- Decentralized education has validity within traditional systems
- Decentralized education pluralizes indigenous concepts and formats, and unexpected crossbreeding takes place
- Millions of people become unemployed due to technological development that replaces them
- The first bio-regional smart contracts for sustainable resource extraction in a local and artisanal way are achieved
- Ecosystem services are provided directly by the bio-regions, and money flows in a direct and transparent manner
- Indigenous participation is overwhelming, as technology translates native languages in real-time.
- The tokenization of bio-regions allows thousands of people worldwide to invest in sustainable projects for these ecosystems
- Efficient, functioning linkage between central and decentralized government
- International cooperation directs funds and communicates directly with local development, achieving collaboration without leakage of funds
- Many agencies and NGOs are outdated by direct collaboration




The Rise of
the Living City

Scenarios 2038

The Rise of the Living City

Circularity | Governance | Cities | Latam

Scenario overview

Relational cities in Latin America are helping confront climate change and establish a new form of relating with the environment. This was all possible thanks to a smart contract signed in Lima by some of the region's megacities. These megacities established a 'proof-of-circularity' protocol, moving away from linear economies and towards circular ones. With the help of international cooperation, new forms of governance emerged where citizens had a direct say on important local matters. Similarly, new forms of decentralised finance allowed people to invest in different initiatives, facilitating the flourishing of common goods. However, the implementation of so much technology is not risk-free.

The Rise of the Living City

The Relational and Convivial City
Latin America is experiencing a boom of relational cities, i.e. cities that are not only facing climate change but also generating systems that relate to the existing and pre-existing life and ecosystems of the territories they are part of.

This movement was made possible by the agreement on Technological Ethics and Autonomous and Regenerative Cities in Lima, Peru, which was signed as a smart contract on Web3 and ratified years later by 15 megacities.

This agreement laid the foundation for transforming cities into true incubators where human life could coexist with nature in symbiotic systems with the surrounding bioregions and with state-of-the-art technology for regeneration. The priority is good living, the autonomy of communities, and the plurality of worldviews of the people who populated the cities on a massive scale through constant internal and external migration.

The rise of progressive left governments in the region gave priority and incentives for people to form decentralised ventures to self-organise and locally manage their services while intelligently connecting with central systems in mutual collaboration, transparency and remuneration.

Circularity
The 15 megacities within the Lima agreement do not allow linear economies, in other words, the production of any product or service that does not consider waste as part of its value chain.

To comply with international environmental agreements, the cities' carbon offsets consider the use of waste and eliminate the concept of "rubbish". A proof-of-circularity blockchain protocol is incorporated, whereby energy generation and other usable materials are recorded and can be verified internationally, involving citizens in composting organic material and decision-making under a zero-waste mantra.

The digitalisation of money, smart contracts, the immutability of the Blockchain, artificial intelligence, and the internet of things allowed these complex systems to be woven together in intricate and ultra-efficient ways. This is the beginning of a truly circular economy at scale.

Plural technology governance
The first autonomous settlements were established through a coordinated effort between international cooperation and municipal governments, where citizens had a say in decisions for the common good. A group of activists and techno-utopians developed the first Decentralised Autonomous City Governments (DAGovs) for the governance of such suburban communities, in which citizens, through a technological platform, not only communicate with each other and with other localities but also participate directly in decision-making.

Such citizen governments function with more representative, participatory, direct and fluid democracy, choosing their governors on the same platform with an immutable record of their proposals and achievements at the end of each term.

In turn, within the DAGovs exists diverse thematic action groups that organise and carry out joint projects; proposals can be selected by open and fair tendering. Contracts are citizen-monitored and audited by any citizen or individual worldwide. International aid flows directly to the thematic groups with decision-making authority in response to the broader community's needs.

In a recent case, a DAGov thematic action group in Sao Paulo, Brazil, proposed improvements to the waste management procedure for vehicle batteries. The proposal received local community approval, toxic waste expert review, and international funding for implementation, all on a single platform of the local DAGov.

All of this has been possible with the adoption of a tokenised economy. Backed by the various layers of the Bitcoin protocol, this new form of economy enables live governance experiments in which citizens can process their credentials, pay taxes and services, and make decisions that affect their localities in an immediate, immutable and transparent manner.

Finances for Transition
Other Decentralised Citizen Finance (DeCiFis) platforms enabled people inside and outside the city to invest in a wide variety of projects such as clean energy, community transport, waste management, building public green oases, greening buildings and growing organic food. Thanks to this explosion of new services with an injection of mixed capital from taxpayers and corporate contributors, cities generated a wealth of new jobs, taking their well-being to unprecedented levels.

Trusted community treasury models and automated resource funds are created, allowing capital to flow efficiently and transparently, in addition to decentralised, egalitarian and community-based cryptographic-key-management systems (CBCKMS). Thus DAGovs have decomposable, share rights and permissions, which allow to distribute segments of access among participants or to monetise sub-segments of governance roles.

These services are controlled by smart contracts that distribute capital across different levels of investor-participants and public funds immediately and transparently. The old centralised financial systems are no longer in total control, still are now more horizontal actors providing services to this distributed network according to the decisions of each locality through DAGovs.

Thus, the economy of the cities flows so that citizens invest constantly and freely in the projects that interest them most, proposed by the thematic action groups within each DAGov.

The CO2 absorption capacity of these nascent green cities means that regeneration benefits the DAGovs' finances and treasury, as other polluting actors must pay to compensate for their emissions to actors that function as contaminating gas sponges.

City Sensorisation and Green Pollution Control
Through city sensorisation, accurate data flows through the Blockchain publicly. The city revolution and data-driven management have brought megacities to an unprecedented level of environmental control. These innovations can provide early warning of high levels of carbon dioxide, noise, crime, water flow, and the interaction and care of species that have begun to coexist in the city through oases and green roofs.

With so many sensors in the city, cybersecurity is a strategic priority. The 15 megacities of the Lima agreement established a decentralised research unit involving local and foreign experts, former hackers, DAGovs and municipal governments. This plurality ensures implementing higher standards in cryptography and cybersecurity and counter-intelligence of potential attacks.

Companies must also submit to strict environmental and cybersecurity controls through sensors audited by the government and DAGovs. These metrics feed into publicly available smart contracts and enable anyone to audit penalties for environmental impacts and corporate externalities.

Decentralisation has started to gain traction. Due to the high competitiveness of decentralised companies with better worker guarantees and rights, many corporations and multinationals have begun migrating to co-ownership and co-governance models.

Co-production
Another ethical principle to which the cities committed themselves was "Autonomy", which aims to return the capacity to produce goods and services to the people of a community and neighbourhood. Localities that have voted for this programme, designed by international cooperation through the DAGovs, have installed advanced factories with robotics and state-of-the-art machinery. The initiatives empower local people to produce clothes, home accessories, energy systems, urban agriculture supplies, furniture, and other items that strengthen creativity and meet local needs.

This concept brought about massive investments in local workshops and factories, in Makerspaces and FabLabs, where manufacturing one's goods became a form of employment and community building. Levels of drug addiction, alcoholism and domestic violence quickly dropped with the formulation of these neighbourhood spaces.

Oppression
Normative tensions within each megacity and the rise to power of some radical right-wing and authoritarian governments have meant that an oppressive elite has also co-opted these developments.

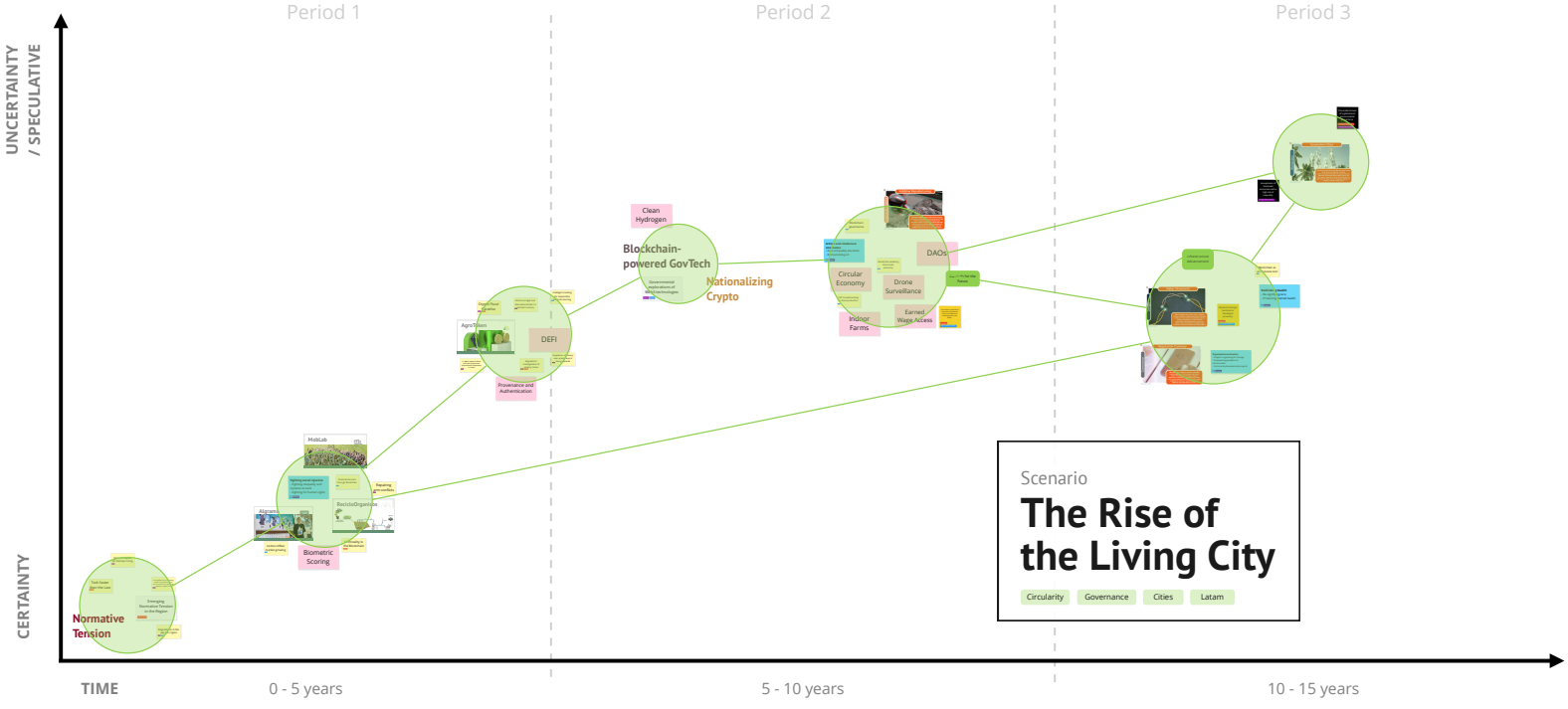
Such is the case in Mexico City, where the social enhancement through sensorisation installed for the birth of the living city is now used for dictatorial surveillance and indoctrination of citizen behaviour through social scoring, in which citizens are evaluated according to their actions. This evaluation is not optional and is the endorsement to enjoy city services, freedom and financial instruments, which are fed back to the scoring and behavioural history.

It is not clear how this experiment will end up in Latin American megacities, but what is certain is a remarkable advance in human with non-human relationships, the recovery of wildlife and the mitigation of the most adverse effects of climate change.

Massive surveillance of citizens in Mexico city using sensors and traditional use of force.

Futures Roadmap
Scenarios 2038

Pluriversa



Implications Map
into the Future

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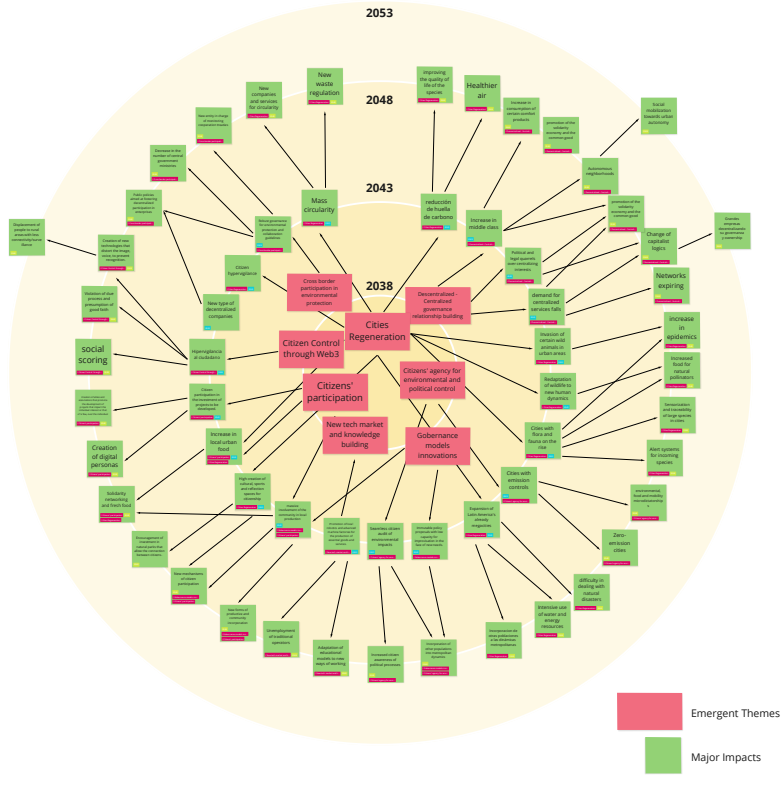
First-order implications 2043

- Reduction of carbon footprint
- Increase of middle class
- Political and legal wrangling over centralizing interests
- Lower demand for centralized services
- Invasion of certain wild animals in cities
- Readaptation of wildlife to new human dynamics
- Cities with increasing flora and fauna
- Cities with emission controls
- Expansion of the already mega-cities in Latin America
- Immutable policy proposals with low capacity for improvisation in the face of new needs
- Seamless citizen audit of environmental impacts
- Promotion of local robotics factories and advanced machines for the production of essential goods and services
- Massive involvement of the community in local production
- High creation of cultural, sports and reflection spaces for citizenship
- Increase of local urban food
- Citizen participation in the investment of projects to be developed
- Citizen hypervigilance
- Promotion of decentralized entrepreneurship
- Robust governance for environmental protection and collaborative guidelines
- Mass circularity
- Carbon footprint reduction

Second-order implications 2048

- Fostering solidarity economy and the common good
- Autonomous neighborhoods
- Social mobilization towards urban autonomy
- Change of capitalist logics
- Large corporations decentralizing their governance and ownership
- Increase in epidemics
- Increase of food by natural pollinators
- Sensorization and traceability of large urban species
- Sensorization and traceability of large species in cities
- Alert systems for incoming species
- Environmental, food and mobility micro-dictatorships
- Zero emission cities
- Difficulty in dealing with natural disasters
- Intensive use of water and energy resources
- Incorporation of other populations into metropolitan dynamics
- More flexible changes of government and not limited to fixed time periods
- Greater citizen awareness of political processes
- Unemployment of traditional workers
- New forms of productive and community incorporation
- New mechanisms for citizen participation
- Encouragement of investment in natural parks that allow citizens to connect with each other
- Increase of solidarity networks and fresh food
- Creation of digital people
- Creation of elites and associations that promote the development of projects that impact the individual interest or that of a few, over the particular one
- Social scoring
- Creation of new technologies that distort the image, voice, to prevent recognition
- Displacement of people to rural areas with less connectivity / surveillance
- Public policies aimed at fostering decentralized participation in enterprises
- New entity in charge of monitoring cooperation treaties
- New companies and services for circularity
- New regulation on waste
- Improved quality of life for species
- Healthier air



Dispossession and Hope

Scenarios 2038

Dispossession and Hope

Migration | Extractivism | Common Good | New Nations

Scenario overview
Latin America is experiencing an unprecedented massive migration due to extreme temperatures and the deterioration of the quality of life. People are desperate and armed groups are taking advantage of the region's vulnerability to send large groups via the Pacific ocean to pursue the 'Asian Dream.' The world is under Asian dominance after the crisis of capitalism, and Latin America is experimenting with decentralised forms of governance to confront the situation. Despite the struggles, new solutions using Web3 technologies are emerging, and a new form of regional identity is taking shape.

Dispossession and Hope

Centralising myopia
As the different scientific committees predicted more than two decades ago, high temperatures and precarious living conditions generated a migratory crisis that pushed many communities to the south. Some search for cooler climates; others head to the Amazon and mountainous areas to guarantee their access to water resources; Unfortunately, in both cases, international conflicts are inevitable.

The "Great Reboot" proposed by global elites failed, and most population no longer believed in plans for global salvation under the myopia of centralisation. After a decade, the famous project was just another example of inequality, keeping the same privileges and guaranteeing them access to scarce natural resources.

In the face of a crisis of this magnitude, governments and state services collapsed, and it was imperative to decentralise social and health assistance, regional protection and state governance. Now Latin America has begun dismantling most of its old nation-states, making evident the obsolescence of the United Nations. Many are clamouring for a more comprehensive transition process, but unfortunately, the incremental scale of natural disasters cannot wait.

Under the grip of climate change and the unprecedented social crisis, Latin America experienced the most intense migratory flows and violence in recent history.

The Asian silk dream
The situation for many is desperate. Illegal groups are taking advantage of the region's vulnerability to move migrants across the Pacific Ocean to Asia's economic promise.

Thousands of Latin American families embark on this challenging journey for a better future, but racism and human rights violations against unprotected migrants are not uncommon. Their priority is to transfer to their relatives in Latin America some digital money issued by the local central bank. Even though they fear that due to their illegal status, the government will confiscate their savings at the click of a button, block capital flows to their home regions at any time, or cut off their access to essential services.

Fortunately, the immutable identities of the Web3 allow families to keep track of the health, economic and general status of their loved ones abroad, significantly reducing cases of neo-slavery and human trafficking.

Unprotected natural resources
The world is under Asian global supremacy, and Latin America has no centralised state or coordinated armed forces; Pacific coastal communities suffer from continuous illegal incursions by Asian fishing drones, leaving fish and shark species on the brink of collapse.

Amid the crisis of global capitalism, Latin American paramilitary groups ally with Asian extractivist interests, receiving crypto-financing and advanced weaponry, instilling terror in some resource-rich areas to steal the land, deepening the migration crisis.

Asian military power keeps a watchful eye on Latin America's social, economic, environmental and technological environment, making it almost impossible to respond to these extractivist threats. Given this outlook, there is genuine concern about an invasion to steal the rich deposits of lithium, silicon and other strategic minerals for technological production.

The birth of a decentralised Latin America
Latin America is dismantling the failed states and old political borders. The continuing suffering of the migrant population and severe geopolitical risks enabled the emergence of a new Latin American consciousness of common goods and continental cooperation framed by bioregions, their protective communities and the energetic structures that compose them.

These bioregions are community epicentres with nation statuses such as the Amazonian Lung nation, the Orinoco Valley nation, the Central Volcanic nation, the Peace Forest nation, the Norpatagonia nation, or the Western Sierra Madre nation, to name a few. These emerging states redefine local community identities but align with a new continental vision: the Decentralised Latin American Brotherhood (DLAB).

The new flag for the Decentralised Latin American Brotherhood.

This is the beginning of a new prototype in Latin America called the Decentralised Society (DeSoc).

A solid foundation
Under a representative democracy, the diverse emerging nations are coordinating their efforts in the complex management of the migration, military and environmental crises. It is essential to minimise counterparty risk in transactions with other nations, which is why Bitcoin is declared the continental reserve currency.

The true catalyst for continental decentralisation was the diaspora from the ancient nation of Venezuela. In previous decades, the Venezuelan migrants who flooded Latin America settled in new regions, creating transnational communities that cooperate in a decentralised manner, boosting the flow of people and economies throughout the continent.

If the Venezuelan community laid the foundations for a new decentralised Latin American society, it was thanks to El Salvador's old learnings the continent understood the importance of having reliable cryptocurrency protocols such as Bitcoin. This perfect cryptocurrency fostered the transition to decentralised clean energy, decentralised financial systems and decentralised ownership of these two.

An economy for the common good
Thanks to the Bitcoin protocol's quantitative transparency, the emerging Latin American nations can focus on the qualitative impacts of this new prototype of a Decentralised Society. In this way, outdated indicators such as the Gross Domestic Product (GDP) solely focused on economic production are abolished, giving way to a calculation of systemic qualitative elements of the welfare state of society and the environment.

This new philosophy has also permeated private enterprises where natural resources and labour rights are now a priority, and sexual discrimination or tax evasion is discouraged.

Businesses and nations no longer confuse their "success" with financial profit, now have integrated an immutable Web3-hosted common good balance sheet with qualitative indicators where the "benefit" is to increase the common good. These indicators focus on five key points: human dignity, solidarity, justice, environmental sustainability, and democracy.

A new Artificial Intelligence for the continent's security, fed with social and environmental data, manages the strategic capital allocation under a decentralised solidarity economy. This Artificial Intelligence anticipates the migratory flows to avoid the collapse of natural systems wherever they arrive and increases the response speed to natural disasters. It also mediates the resolution of conflicts between nations, where, in addition to the agreements reached, the parties make Bitcoin deposits as a sign of trust for future steps forward.

Bitcoin for peace and sustainability
Wars became so cost-prohibitive under the risk of annihilation through systemic food shortages and climate change, making violent groups and drug cartels find competition over the legitimate custodial status of territorial property impractical, thus creating a breeding ground for growing nonconformism among their militants.

A new property model and custodial status are needed, one that allows storing effort (energy) and inhabiting an annihilation-resistant space (cyberspace) to foster society's cooperation and provide a just method of consensus.

By implementing on the continent a digital-synthetic and cryptographic commodity known as Bitcoin, the entire form of ownership was redefined, restoring the ability of communities (including violent groups) to reach a consensus on their legitimate state of custody and thus "justly" resolve emerging conflicts. Bitcoin not only represented a solution as the perfect property but also became the social consensus protocol that made warfare obsolete by serving as its functional substitute.[1]

Cooperating nations and communities finally understand the relevance of the best "proof of work" to build trust between actors. The nature of climate change forced them to cooperate in new radical ways for efficient response, mitigation, adaptation, and innovation of systemic production and governance making Web3 the tool to implement direct democracy.

This cypher-acupuncture (sound decentralised digital money) completely changed civilisation and the global social mindset to a low-time preference. It means that now citizens consume less and invest a lot more in their future, creating a new level of well-being and artistic flourishing without precedent.

These changes allowed the old economic, political and technocratic elite to subjugate. Now sobriety and austerity, collective control of energy and labour, and placing limits on expanding production are valued for promoting emerging nations' autonomy and creativity.

[1] This segment is an adaptation of Jason Lowery's amazing work. For more information, read this article.

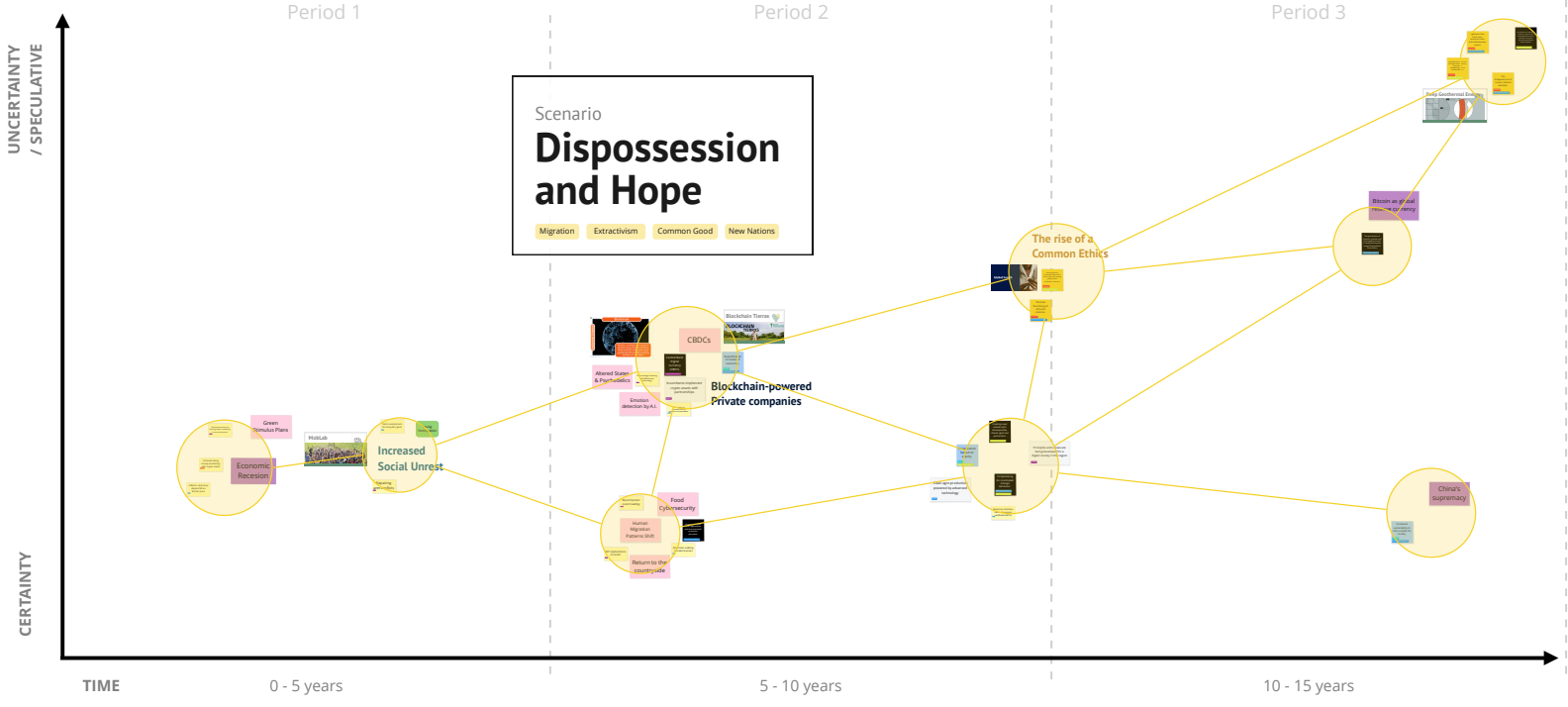
Bitcoin provides a new level of prosperity, sovereignty and peace in the Decentralised Latin America Brotherhood.

There is still crime and pirates breaking into the best-adapted communities. There are many social, military and migratory challenges ahead. Still, the continent achieved an unprecedented civilising evolution, where a new continental identity emerged, and large violent clans and drug cartels disappeared.

The Bitcoin financial district in the Central Volcanic nation.

Futures Roadmap
Scenarios 2038

Pluriversa



Implications Map
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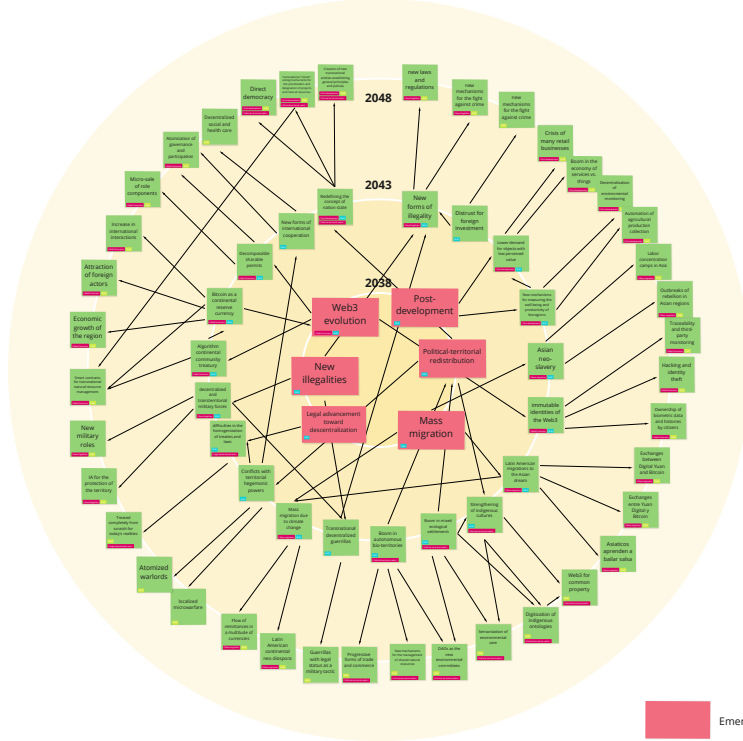
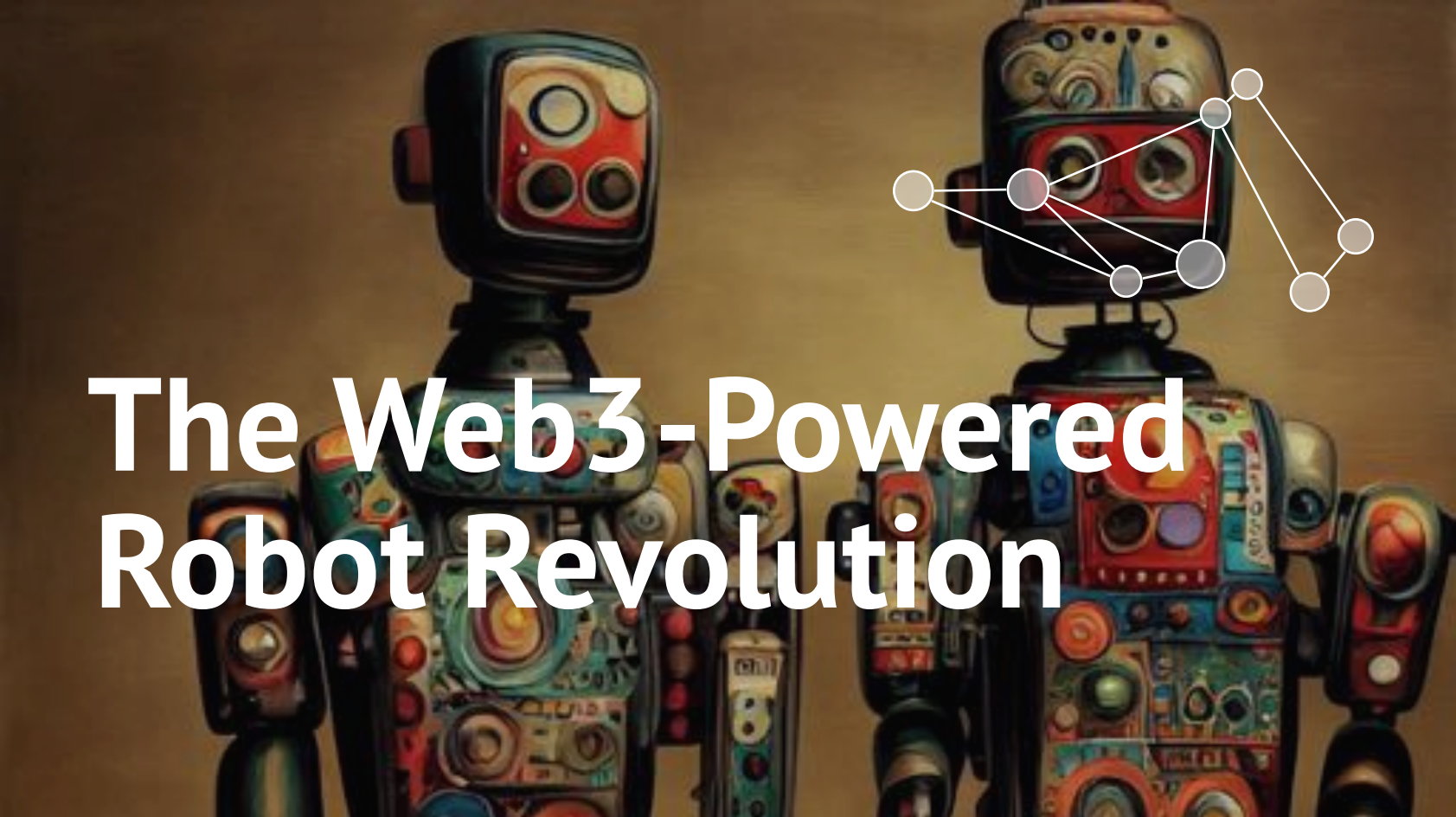
Major implications 2043

- Redefinition of the concept of the nation-state
- New forms of illegality
- Mistrust of foreign investment
- Reduced demand for objects of low perceived value
- New mechanisms to measure welfare and productivity of bioregions
- Asian neo-slavery
- Immutable identities of the Web3
- Migrations of Latin Americans to the Asian dream
- Strengthening of indigenous cultures
- Rise of mestizo ecological settlements
- Rise of autonomous bio-territories
- Decentralized transnational guerrillas
- Massive migrations due to climate change
- Conflicts with hegemonic territorial powers
- difficulties in the homogenization of treaties and laws
- decentralized and trans territorial military forces
- Algorithm continental community treasury
- Bitcoin as the continental reserve currency
- New forms of international cooperation

Second-order implications 2048

- New mechanisms for the fight against crime
- efforts to guarantee legal security to investors
- Decentralization of environmental surveillance
- Automation of agricultural production collection
- Labour concentration camps in Asia
- Hacking and identity theft
- Ownership of biometric data and histories by citizens
- Digitization of indigenous ontologies
- Sensorization of environmental care
- DAOs as the new regional ecological committees
- New mechanisms to manage shared natural resources
- Guerrillas with legal status as a military tactic
- The flow of remittances in an infinite number of currencies
- Localized micro-wars
- AI for territorial protection
- New military roles
- Smart contracts for transnational natural resource management
- The economic flourishing of the region
- Increased international interactions
- Atomization of governance and participation
- Decentralized social and health care
- Transnational "citizen" voting mechanisms for projects and natural resource prioritization and designation
- Creation of new transnational entities establishing general principles and policies





The Web3-Powered Robot Revolution

Robots and Avatars interact and trade in the Metaverse without human intervention.

Scenarios 2038

The Web3-Powered Robot Revolution

Supply Chain | Tech 4.0 | Crypto | Latam

Scenario overview

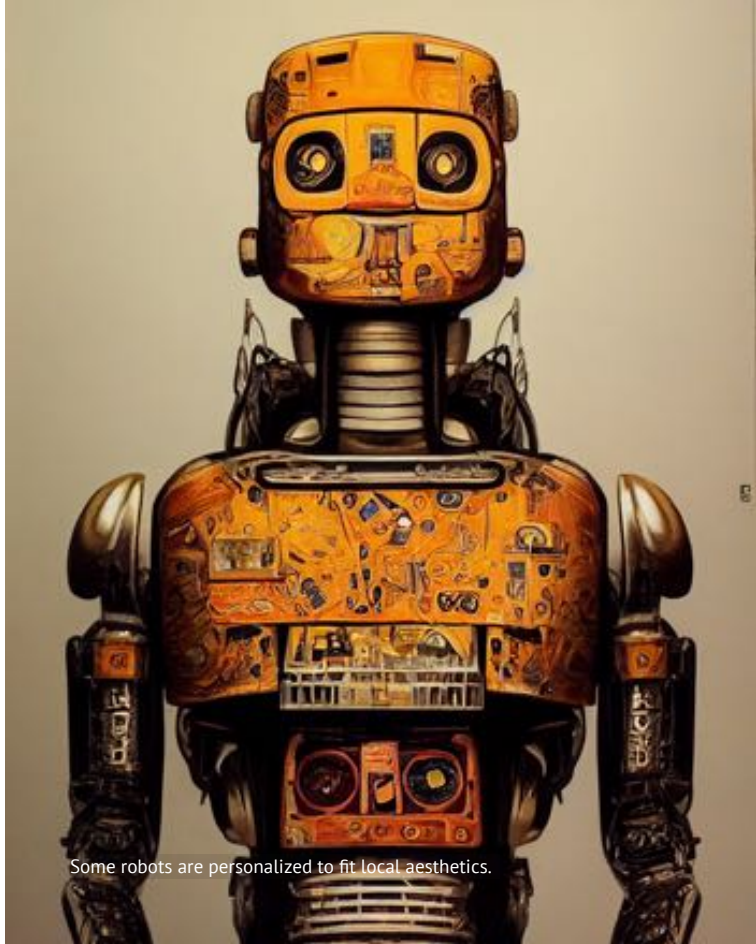
2023 became known as the year of 'the great shortage'. In time, countries moved away from globalisation and relocated entire industries back home. Countries in Latin America established their own data centres using a decentralised Web3-based cloud. These allowed Web3 robots to become functional, and life began to change drastically. However, the fundamental social transformation occurred when people were able to create their own legally binding avatars in the Metaverse. What could go wrong when robots and avatars trade at the speed of light?

The Web3-Powered Robot Revolution

Supply Chain Disruption
The year 2023 came to be remembered as "the great shortage" because of the supply chain disruption. As a consequence, 15 years later, countries had turned their external commerce policies, inverting their commercial balances and reestablishing important industries on their soil. The global economy figured out that certain strategic goods are best produced locally to avoid the risk of shortages in logistics supply chains. Globalisation had been successful, but for many, it was necessary to rethink some aspects.

Developed countries saw an excellent opportunity to offer robotic and automation solutions to the global south. They gave them robots (hardware) and software so the robots could operate in a decentralised manner. This was all possible thanks to the risk aversion developed against the centralised models of Web2. In its place, Latin American countries hosted their data on a decentralised Web3 cloud. This cloud was censorship-resistant, and the distributed data system guaranteed that information would not be affected at a given point, making a server hack useless.

Latin America adopted these robot and automation technologies without giving them much thought in order to be able to produce locally certain strategic goods. This way, developed countries with a robotic industry were



Some robots are personalized to fit local aesthetics.

able to establish new commercial relations and consolidate a new form of economic power in the emergent market of robotic services, integrating multiple 4.0 technologies, like artificial intelligence, the Internet of Things (IoT), and, of course, Blockchain.

As on other occasions, the Latin American private sector was obliged to implement state-of-the-art technology in its logistical operations; otherwise, it would have had a disadvantage against external competitors. With time, Latin American tech talent specialised in developing Web3 software and the artificial intelligence used by robotic systems, converting software and artificial intelligence into two of the most important exports of the region.

Robots with transactional power

The combination of Blockchain, the IoT, and Artificial Intelligence became the common denominator of complex production processes. This implementation meant that, progressively, and thanks to the Web3, robots developed the ability to perform valuable transactions using a vast universe of cryptocurrencies, each with its own capabilities and features.

For example, it became common for the autonomous vehicle of an average family to manage its own wallet with a balance of different cryptocurrencies so that it could interact autonomously with the robots of electricity or hydrogen charging stations or vehicle repair robots.

Such was the development resulting from robots that countries in Latin America and near the Equator in other continents, because of their geostationary orbits, were able to develop their own space programmes based on Decentralized Science (DESci). This incentivised scientists to openly share their research and receive credit for their work.

An autonomous vehicle interacts with its repair shop robot using cryptocurrency.

Thanks to this, it became common for robot satellites to manage their smart contracts autonomously, as well as the tokens they receive in exchange for specific tasks and the spatial discoveries they make on a daily basis.

The transactional inflexion
However, the true sociological transformation emerged when people created autonomous avatars of themselves in the Metaverse. These avatars represented users legally and transactionally through the power of artificial intelligence and cryptocurrencies.

Autonomous avatars and robots, both with strong transactional power, unleashed an employment crisis when they started trading value in the real world at the speed of light. This revolution generated discontent among the Latin American working classes. Consequently, this evolved into riots where all sorts of robots were burned and vandalised. The offices and factories of international robot manufacturers were also affected.

Paradoxically, inside the Metaverse, millions of avatars protested following the orders of their humans. Street riots were contained with a very real fleet of last-generation drones and police robots that governments had just acquired.

AI Emotion Detection
To calm the protests, regulators promised to transform and revise algorithms so they could limit the impact of crypto-robot transactions on the life of citizens. As a result, many governments implemented strict robot regulations regarding operational and security protocols. Some countries even implemented Isaac Asimov's laws of robotics as part of the new ethical regulations to protect people's lives while keeping the functional integrity of robots.

A satellite robot from the Latin American space programme.

Many manufacturers and suppliers of robotic services implemented emotion detection algorithms to anticipate criminal acts against robots due to the increasing levels of robophobia. These algorithms were designed to alert manufacturers about any potential hostile behaviour against robots. This is still a controversial issue.

In the eyes of many people, this technology needs improvements. To them, it has implicit biases capable of generating inadequate information and, in some cases, even causing problems.

To solve this issue, governments of the global south created an emotion bank to cover up the different Latin American emotional expressions. This allows for more empathic interactions between humans and robots, delivering an essential Artificial Emotional Intelligence (AEI) component to the average experience of Latin American users.

To make this possible, many countries created the figure of an International Robot Agency. It is not unusual to find divisions for Web3 and AEI within these agencies.

Crypto Supply Shock
The world will never forget the day when significant quantities of many cryptocurrencies disappeared from one moment to the next due to a bug in the Linux operating system. Being widely used in cryptographic nodes worldwide, the consequences of this event had an impact on a global scale, both in human and robotic economies.

Artificial Emotional Intelligence is provided with local visage.

Economists all over the world have raised their flags. They think that this situation might result in a new crisis.

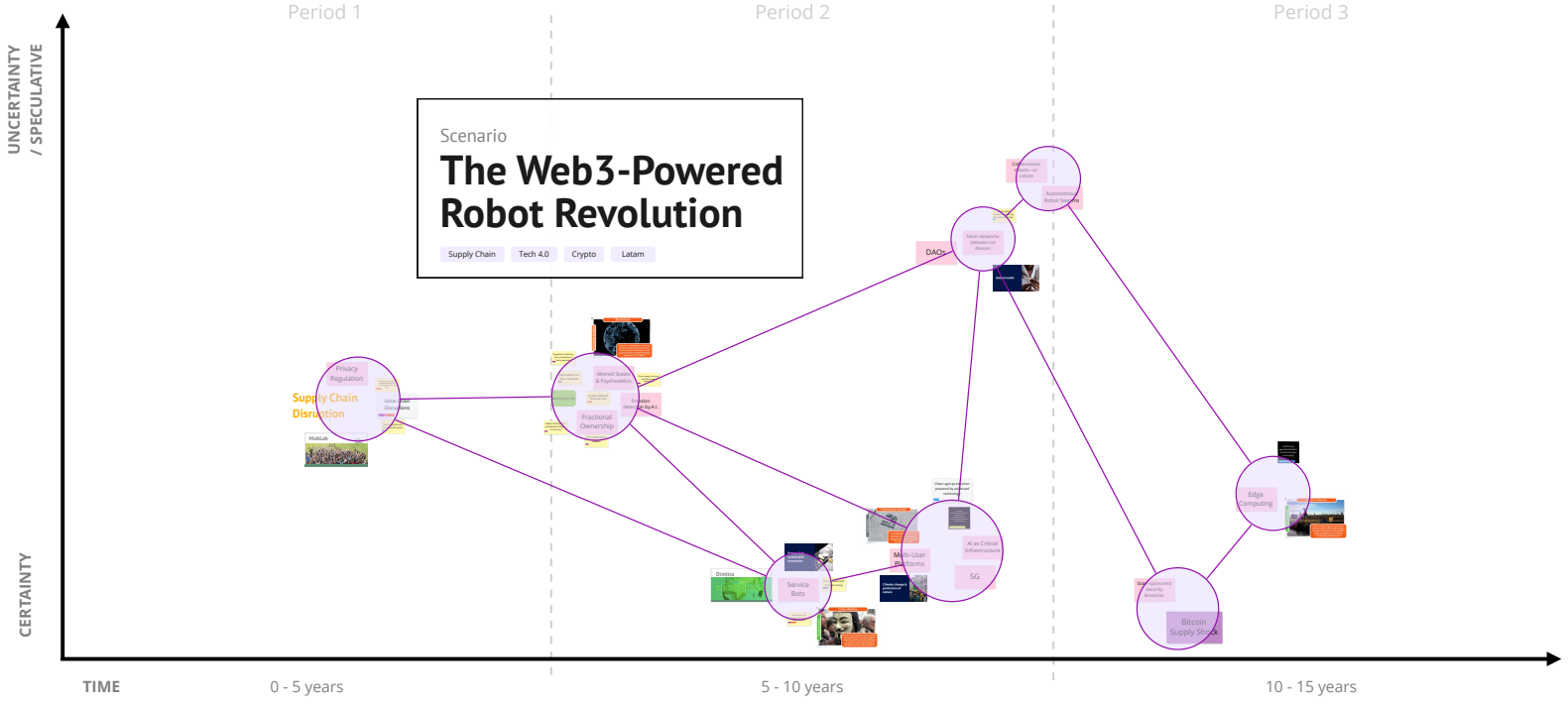
On the one hand, crypto-robot transactions have stalled, and people fear the upcoming chaos in the global supply chains. This last would take the world back 15 years to “the great shortage” when everything began. On the other hand, many people lost their cryptocurrencies and other similar assets. If nothing is done, the economy could be seriously affected, and millions would end up in the streets.

Of course, just like humans, the satellite robots of the Latin American space programme would also go bankrupt.

Without cryptocurrency to spend, bankrupt robots are easy to spot.

Futures Roadmap
Scenarios 2038

Pluriversa



Implications Map
Into the future

Pluriversa

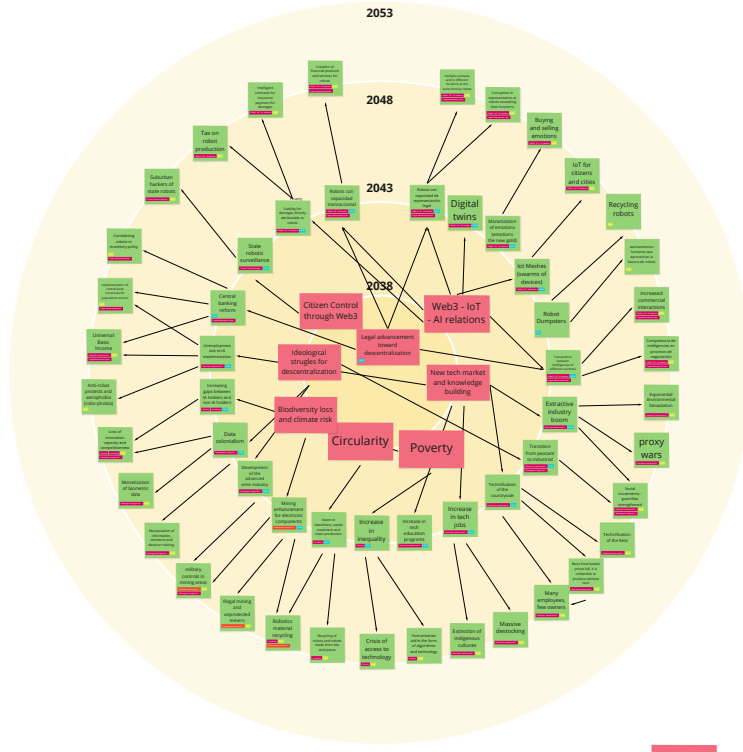
The futures wheels help us explore the consequences of significant changes occurring in the scenario to visualize possible consequences that are often counter-intuitive. This exercise gives us another layer of visibility for developing policies and actions for development.

First-order implications 2043

- IoT Meshes (swarms of devices)
- Robot landfills
- Transactions between artificial intelligences of different countries
- Rise of the extractive industry
- The transition from peasant to industrial manufacturer
- Technification of the countryside
- Increase in tech jobs
- Increase in tech education programs
- Boom in cleanup, waste treatment and clean production
- Increase in mining for electronic components
- Development of advanced industrial weapons
- Data colonialism for central power
- Increasing gaps between those who have and those who do not have AI
- Unemployment due to AI implementation
- Central banking reform
- State robotic surveillance
- Liability for damages falling directly on robots
- Robots with transactional capability
- Robots with legal representation capabilities
- Digital twins

First-order implications 2048

- IoT for citizens and cities
- Recycling robots
- Human settlements taking advantage of robot waste
- Increased commercial interactions
- Competence of artificial intelligence in negotiation processes
- Exponential environmental devastation
- Territorial proxy wars
- Social movements - strengthened guerrillas
- Maximization of the production of a few with technology
- Lower prices of the basic food basket, it is unviable to produce without tech
- Many wage earners, few owners
- Massive unemployment
- Extinction of indigenous cultures
- Humanitarian aid in the form of algorithms and technology
- Crisis of access to technology
- Recycling of robots and robots made from bits and pieces
- Illegal mining and unprotected miners
- Monetization of biometric data
- Loss of capacity for innovation and competitiveness
- Protests and xenophobia against robots (robo-phobia)
- Universal Basic Income is a reality in some countries
- Implementation of central bank currencies for population control
- Consideration of robots within monetary policy
- Suburban hacker of state robots
- Taxation of robot production
- Creation of financial products and services for robots
- Execution of multiple contracts and in different places at the same time by robots
- Corruption in the representation or robots exceeding their functions




The Unfulfilled
Promise

Scenarios 2038

The Unfulfilled Promise

Collapse | Crypto | CBDC | Worldwide

Scenario overview
At the beginning of the 30s, the US was highly in debt, and a new economic depression emerged. An unprecedented social upheaval occurred, and people started looking for alternative ways to maintain their purchasing power. Cryptocurrencies were one of the most popular alternatives for risk takers. The massive crypto adoption also led to crypto fiscal paradises and several decentralised networks competing, where Central Bank Digital Currencies are relevant but still dangerous.

The Unfulfilled Promise

The Crazy 20s
Between the years 2023 and 2028, Americans emitted an additional 6.8 trillion dollars, and their total internal debt surpassed 40 trillion dollars. To put this number in context, 40 trillion seconds are equivalent to 1.3 million years.

The world fell into darkness. A social upheaval like nothing the world had ever seen occurred right after the American debt default in 2029.

To mitigate the economic impacts of this economic depression, the United States built (again) a wall on the frontier with Mexico. This time the wall works with robot technology to discourage the exodus of Latin American people escaping from the US to their respective countries.

The chaos of seeking a valuable refuge
Like Voltaire prophesized, paper money eventually returns to its intrinsic value: zero.

The impact of the depression on Latin America was disastrous. All the economies turned to alternative forms to preserve their purchasing power. Metals like gold, rhodium, or palladium were on the lists of traditional investors. However, the real protagonist of the "monetary salvation" were cryptocurrencies; they had already made thousands of speculators and techno-optimists millionaires. Lots of scams and bankruptcies occurred under the name of cryptocurrencies, but people didn't seem to mind. After all, the economic turmoil was such that they only thought of saving themselves.

Crypto enthusiasts celebrated the destruction of fiat money, and they fantasised about the luxury cars that they would be able to acquire. Those unable to get rid of traditional money fell into extreme poverty.

Cryptocurrencies were adopted globally and in a traumatic way. Nonetheless, the world continued to leave behind the ruins of past economies under a new and tokenised macroeconomy.

Crypto frivolity
Despite the economic depression, video games based on Non-Fungible-Tokens (NFTs) continue to be one of the fastest-growing industries in Latin America, maintaining their Proof-of-Game (PoG) system.

Every day, millions of players of all ages in these gamified economies engage in addictive interactions and fantastic adventures to win tokenised battles and capture NFT characters. They can later redeem them in the real world for money or pay directly with them for everyday expenses.

Some banks even receive NFTs as credit collateral. The most desired ones are those from “Supatrupa and Friends”, a renowned video game and cartoon character that is a hit among all ages. Living by playing and playing for a living seemed like the life dream of any Latin American teenager.

The problems did not take long to arrive. Many communities watched in horror how its culture, language, customs, and local economies deteriorated, but what is worst, one young generation was entirely ruined by colourful NFTs. The young ones do not want to study or work for the community’s needs, creating an atomised social crisis.

Communities took legal action against videogame companies accusing them of neo-colonialist practices. Still, their economies were so strong that they could evade their charges by bribing the judges with limited edition NFTs, where Supatrupa collaborates with JayMia, an ultra-famous Costa Rican singer.

Crypto Fiscal Paradises

With confidence in governments eroded, many companies found ways to avoid taxes by putting their crypto-assets in crypto fiscal paradises. This bothers governments worldwide, as they have been unable to create a legal framework that limits the use of crypto and establishes how it should fit inside the global tax system.

Each country has specific interests, making it difficult to work on the required normativity. However, the main challenge is not a political one but a legal one. To legislators, it has been impossible to rule over cryptocurrencies because the technology goes faster than the norms created or modified.

Supatrupa and Friends. A renowned video game and cartoon character.

During these 15 years, Latin America has not been indifferent to the global trend of population decline. Theirs has been at a slower rate, but the population is getting old. The pension system collapsed due to the economic depression, and there were insufficient funds to guarantee everyone their retirement. Governments tried to redistribute resources throughout the transition to cryptocurrencies, but the elites protested and found a way to evade their money.

Crypto fiscal paradises offer pension saving plans, causing a collapse of the pension funds of many countries. This is legal as it protects private property and the life savings of an elite unwilling to make a fair contribution.

These new form of fiscal paradises is nowhere near disappearing, and quite the opposite is occurring. Many countries have started to promote themselves as crypto-friendly.

Splinternet
The promise of decentralisation using Web3 technologies did not generate greater cooperation. On the contrary, nationalist interests and protectionism were strengthened. Younger generations do not remember when the Internet operated under the protocol of the World Wide Web and felt like a single and unified global network.

There are currently many decentralised networks, each with a specific security protocol. This has resulted in intense competition between some networks to attract certain users.

The different networks are segregated and divided. Some are very efficient but only open to the wealthy. Others have less computing power but more open access; some are technocratic and hyper-surveillance cyberspaces.

Latin American countries don't know which way to go. Free market laws dictate that competition between different networks is good and can help innovation surge, but the opposite seems to occur in practice. A technological stagnation occurs in terms of this splinternet and Web3.

The different networks have slowly become a political issue. Powerful countries have gotten together in the same network, leaving behind small Latin American countries with less technological power.

Nationalising Crypto
The world experienced a surge in cryptocurrencies, both private and backed by governments. Those with the best profitability and features were adopted faster and became the most relevant ones. Unfortunately, that was not the case with the Digital Guaraní, Paraguay's central bank currency.

Due to the lack of technological power, the new Paraguayan digital currency could not compete with other more robust digital currencies from powerful countries. The country had to adopt the lesser evil of all: the Brazilian Digital Real. This situation revived old resentments between the people of the two countries.

Brazil did not miss the opportunity to exert some colonial power over the small Paraguayan nation. A similar situation is occurring in Bolivia due to asymmetric trade policies. Many fear the Brazilian government will attempt to annex these two nations to its territory.

Pro-democracy and human rights advocates fill the streets of the main Brazilian cities. They consider everything an insult to the brotherhood of Latin American countries. However, the Brazilian extreme right defends the government's expansionist interests, creating a barrier that divides the country.

Having the support of BRICSET countries (Brazil, Russia, India, China, South Africa, Egypt, and Turkey), it seems that the fate of Paraguay and Bolivia is inevitable.

Blockchain Governance

A group of countries, focused on solving some of the century's most pressing political issues, have decided to implement decentralised government mechanisms to help them make decisions without using official government institutions. Many countries have asked for this, especially those in the global south that don't see themselves represented by their political class and suffer the price of corruption.

This experiment has mixed results. Some countries are doing wonderfully, while others have had difficulty using decentralised government mechanisms to govern based on Blockchain.

It is more common to find cases where technology ends up being a problem, and people start to talk about going back to traditional governing methods. Such is the case of Guatemala, where an unexpected design error in the Web3 governance protocol widened the gap between the poor and the rich.

Protestors during the Rio de Janeiro blockade.

The corrupt credit-based voting system faultily considered all the possible long-term cases of proof-of-social-participation. Those at the top saw how their decision power and wealth increased while those in need of resources fell into extreme poverty.

This has become so important that many academics have decided to focus on it. Many young people choose to study anything related to decentralised forms of government.

The Solution is Worse than the Problem

After the depression of the year '29, and with the preceding massive adoption of cryptocurrencies, the energy consumption of irrelevant tokens increased worldwide. Given the poor economic conditions, regulators could do little, so they incentivised more and more the development of new versions and features for tokens with the hope of invigorating the economy.

Unfortunately, climate change pressures and the oversupply of tokens end up in a collapse of the energetic supply, and with that, the price of energy went up. This price increase resulted in lower demand for digital tokens and negatively impacted the mining activity necessary to maintain cryptocurrencies safe through the proof-of-work and the proof-of-stake protocols.

As a result of the collapse of the security of blockchain networks, an army of hackers attacked various system vulnerabilities. They focused on a vulnerability in some smart contracts where users that exchanged tokens could ask for reimbursements, stealing their tokens. After this attack, millions of users lose trust in the supposedly secure token systems. People start selling en masse, increasing the panic and turning this situation into a vicious and bloody cycle for many.

Some people just want to watch the world burn.

It is the end of Supatrupa and its tokenised addiction empire, dragging with it banks' gamified economy and millions of youth and adults.

A new economic depression arose nine years after the previous one. This was the result of the bankruptcy of various Web3 projects. Large amounts of capital were lost, and even worse, the spirit of an entire generation that believed in technology as a solution to humanity's problems became compromised.

Some radical anti-technological movements emerged as a result. They demand that technology be restrained to very specific aspects of human life and that there be a system specialised in expanding the capabilities of individuals. For these groups, technology is not the solution to our problems.

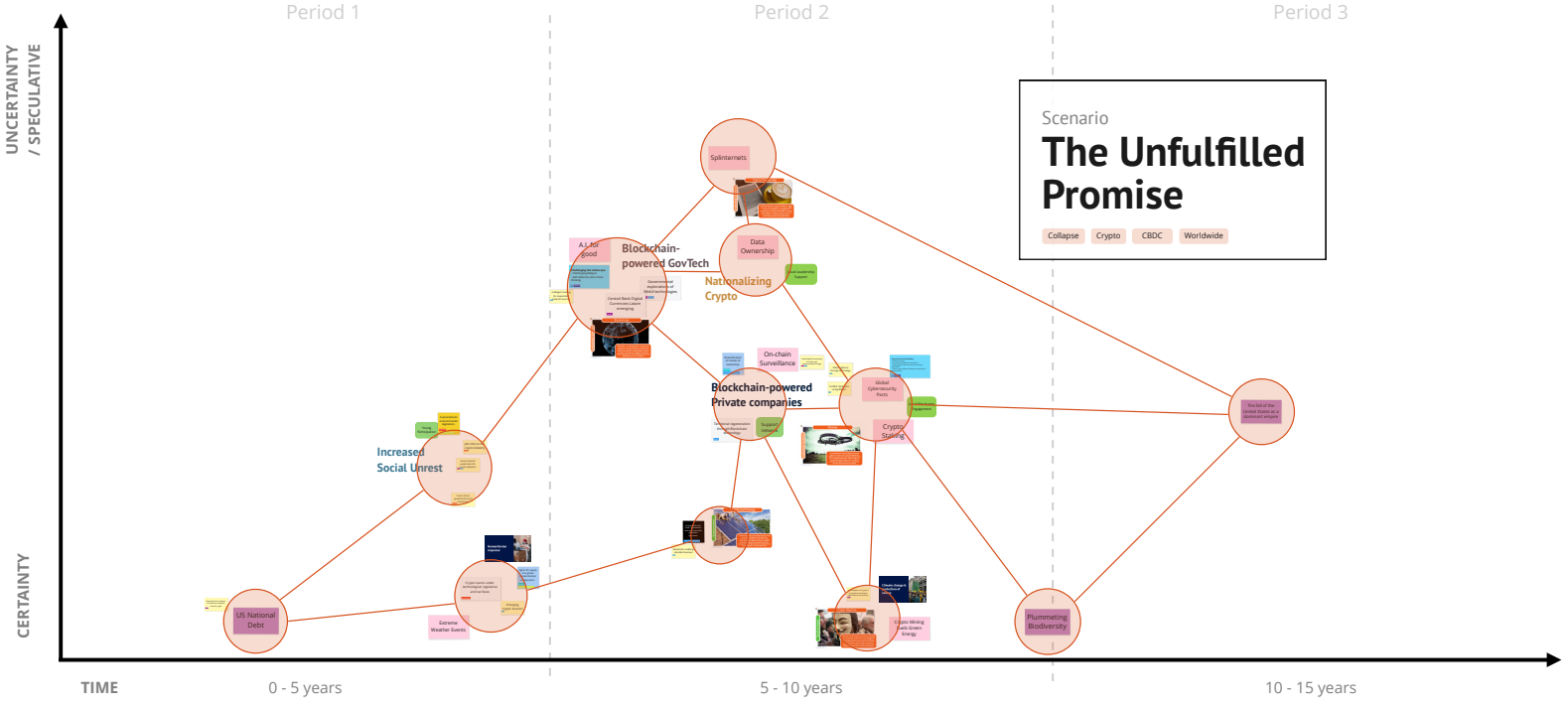
After a long period of failed innovations, governments and private companies finally gave up on using decentralised Web3 technologies to solve their problems.

Many promises were made to save the world using blockchain technology, but the global collapse of biodiversity now seems unstoppable. Although Blockchain was helpful for certain things, designers, developers, investors, and policymakers did not consider giving it an intentional focus on sustainability. The technology fell very short of their expectations.

Wall Street is burning due the second depression of this century.

Futures Roadmap
Scenarios 2038

Pluriversa



Implications Map
Into the future

Pluriversa

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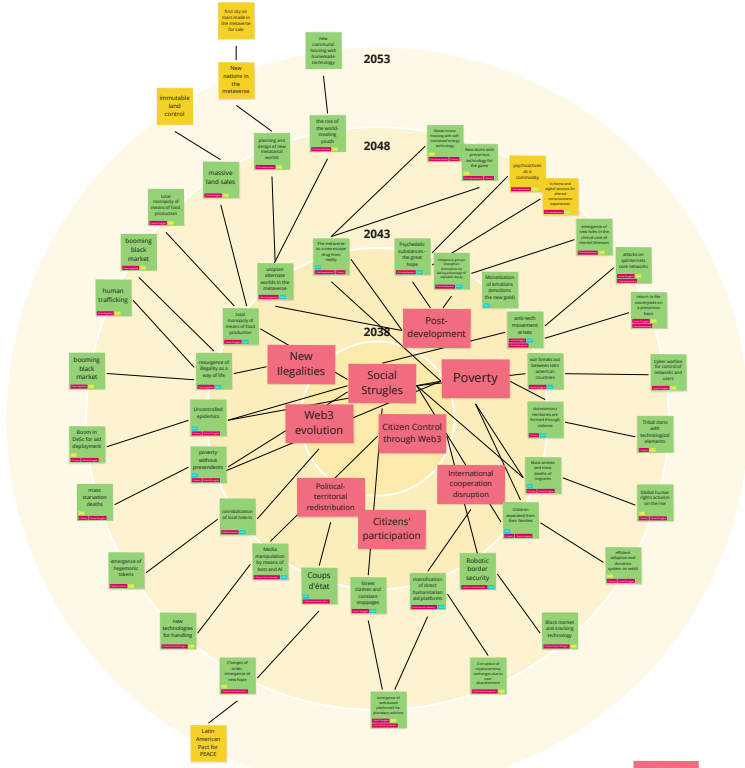
First-order implications 2043

- Anti-tech movement arises
- War breaks out between Latin American countries
- Autonomous territories are formed through violence
- Mass arrests and mass deaths of migrants
- Children are separated from their families
- Robotic border security
- Massification of direct humanitarian aid platforms
- Street clashes and constant strikes
- Coups d'état
- Media manipulation by bots and AIs
- Cannibalization of local tokens
- Poverty without precedents
- Uncontrolled epidemics
- The resurgence of lawlessness as a way of life
- Abandonment of primary sector tasks
- utopian alternate worlds in the metaverse
- The metaverse is a new escape drug from reality
- Psychedelic substances explorations become a new hope for humanity
- Indigenous groups strengthen themselves by taking advantage of the capitalist decay
- Old age support cooperatives are being formed

Second order implications 2048

- Precarious return to the country side for many
- Cyberwar for control of networks and users
- Tribal clans with technological elements protecting their territories
- Global human rights activism grows
- Efficient adoption and donation system on Web3
- Anti-tracking technology on the black market
- Corruption of crypto-platforms due to users' abandonment of crypto-currencies
- the emergence of web3 platforms for global activism
- Changes of order, the emergence of a new hope
- New technologies for mass manipulation through media
- The emergence of hegemonic tokens
- Mass deaths from famine
- The boom in DeSc for aid deployment
- Booming of black market
- Human trafficking
- The total monopoly of means of food production
- Massive land sales
- planning and design of new worlds in the metaverse
- Rise of world-creating youth
- Housing made of waste of war with autonomous energy technology
- New slums with precarious technology for gambling
- Mass adoption of psychoactive substances for mental illnesses
- The emergence of new roles in clinical care for mental illnesses
- Attacks on splinternet backbones



4. Findings & Opportunities

Conclusion

Based on the scenarios, we make general recommendations for developing policies and initiatives for the development of Web3 for Latin America's plural, economic, political, financial, environmental, and legal well-being.

Due to the complexity of the topic, we acknowledge that these recommendations are partial but conclude three months of profound immersion in the context of the nascent technology in the region. We hope this research and our conclusions can help shape Web3 toward desirable futures.

Policy

Governance

TOP EMERGING TOPICS

- Governance models innovations
- Citizens' participation
- International cooperation disruption
- Political-territorial redistribution
- Citizen control through Web3

KEY REQUIREMENTS	DESCRIPTION
Ensure the right of association through decentralization	To ensure new ways of association and increase societal commitment by allowing several actors to act directly and without representation, in the decision making process and allocation of public services.
Develop rules to determine interstate relation and new governance models	New types of organizations such as DaCoops will enable (new types of corporations, international organizations and local communities)
Transversal innovation capacity in all government institutions	An agile and systemic approach to change is needed to embrace the rapid pace of tecnology and entrepreneurship that Web3 will demand
Enable collaboration for Web3 development from grassroots movements and interests with a systemic understanding	Understanding the complexity of Web3 development, it will be necessary to play the role of connectors rather than palliative problem solvers
Determining the correct use of data and protection of users from governments to citizens	Since the web3 can become a means of control, protecting citizens against the control of their data and its manipulation is of utmost importance for the respect of their rights
Develop and implement Web3 cooperation platforms in a more direct way	These mechanisms will seek to favor the relationship between cooperation and fund participants by avoiding intermediaries

PROVOCATIONS FROM THE FUTURE

- Bundling of several traditional organizations into new DACoops
- Decentralization of public supply where central government allocates resources to DACoops
- Manipulation of means to counteract decentralization by the elite in crisis
- DACoops are constantly hacked by centralizing interests.
- Simplified governance and greater horizontality
- Conflicts within territories over old central interests
- Central data policy clashes with the interest of the common good.
- There are violent conformations between major global forces in the region for governance and resource power
- Ecosystem services are provided directly by the bio-regions, and money flows in a direct and transparent manner
- Efficient, functioning linkage between central and decentralized government
- International cooperation directs funds and communicates directly with local development, achieving collaboration without leakage of funds
- Many agencies and NGOs are outdated by direct collaboration

Policy

Environmental

TOP EMERGING TOPICS

- Circularity
- Cross border participation in environmental protection
- Cities Regeneration
- Biodiversity loss and climate risk

KEY REQUIREMENTS	DESCRIPTION
Create legal frameworks for enabling and promoting public - private collaboration for NDCs (National Determined Contributions) using Web3 tecnologies	As we saw, Web3 can be a moyor enabler for the contribution and measurment of the NDCs goals of the Paris Agreement.
Creat legal frameworks for sensorization with in the city and natural protected areas	Sensors can play a mayor role in measuring climate and raising important alerts. Also they can be used for other purposes like citizen control, social scoring and identity recognition
Strenght environmental measures and enabling circularity	To develop key measures and transnational bodies that can follow up on the changes in the environment to allow a better allocation of natural resources that surpass current territory lines and avoid rebound effects
A systematic approach for environmental protection	To enhance societal engagement over the protection of the environment by decentralizing and automatization of surveillance and care of natural resources
Empowering and enabling distributed food networks and de-centralized services	Enhance internal networks and enable the use of Web3 for the development of these networks.

PROVOCATIONS FROM THE FUTURE

- With technological support, the beginning sensorization of rivers, mountains, jungles and forests for protection
- Extractive companies hire groups to destroy and alter sensors
- Communities across the Amazon River formed the first transnational collaborations.
- The first habitable transnational parks are established
- Rise of autonomous bio-territories
- Massive migrations due to climate change
- Decentralization of environmental surveillance
- Automation of agricultural production collection
- Sensorization of environmental care
- DAOs as the new regional ecological committees
- New mechanisms to manage shared natural resources
- Military controls in mining areas
- Illegal mining and unprotected miners
- Robotics material recycling
- Mining enhancement for electronic components
- boom in cleanliness, waste treatment and clean production

Policy

Education

TOP EMERGING TOPICS

- Poverty
- New tech Market
- Knowledge Building

KEY REQUIREMENTS	DESCRIPTION
Evolve education into a more dynamic system	To promote multidisciplinarity, innovation and descentralization of education institutes
Promote awareness of the development and use of Web3 in the academic curriculum	To provide schools and universities with the necessary tools for the correct use of Web3 technology
Promote the formation of educational platforms from other points of view (indigenous, Afro, peasant) through the Web3	Develop educational models that promote lifestyles specific to the territories and facilitate involvement in their own development with technology
Build resilience among people who is starting in the Web3 environment	Due to the volatility of the market, it is importnant to help people who are getting into Web3 at the time of a crisis
Protect the public from potential scams	It is necessary to make known what Web3 is and what it is not and to mitigate the theft of money by lies and hacks

PROVOCATIONS FROM THE FUTURE

- Collaboration of different disciplines is facilitated: academics, biologists, anthropologists, indigenous people, peasants and foresters unite to restore and protect natural systems
- Significant changes in education are generated to accelerate the transition to web3
- A massive decentralized education movement began
- A massive movement for decentralized education begins
- Decentralized education has validity within traditional systems
- Decentralized education pluralizes indigenous concepts and formats, and unexpected crossbreeding takes place

Policy

Social

TOP EMERGING TOPICS	KEY REQUIREMENTS	DESCRIPTION
New illegalities	Create new transnational bodies for the protection of heritage and cultural resources	Transnational bodies will help reinforce the protection of indigenous cultures as well as the regulation of armed groups with extraterritorial reach
Poverty	Facilitating the development of autonomies for the common good	Creating regulatory frameworks for the empowerment of communities in their own well-being
Social Strugles	Empowering local and autonomous financial activity platforms	Encourage the development of decentralized ventures for the active involvement of local solutions.
Post-development	Empowering platforms for local and autonomous financial activity	Create programs for participation in decision making and use of local services.
Mass Migration	Empowering platforms for local and autonomous financial activity	Strengthen the environmental and territorial boundaries of groups defending the territory and their culture.
Social Strugles	Immediate and direct protection and assistance to people affected by climatic and economic migrations.	The creation of direct assistance platforms for their legal, economic and financial protection in times of crisis.

PROVOCATIONS FROM THE FUTURE

- Strengthening of indigenous cultures
- Rise of mestizo ecological settlements
- Guerrillas with legal status as a military tactic
- New mechanisms for the fight against crime
- Rebellion hotspots in Asian regions
- New forms of illegality
- Localized micro-wars
- New military roles
- Decentralized transnational guerrillas
- Total monopoly of means of food production
- Anti-tech movement arises
- Uncontrolled epidemics
- Mass arrests and mass deaths of migrants
- Massive land sales
- Boom in DeSc for aid deployment
- Global human rights activism on the rise
- Efficient adoption and donation system on web3

Policy

Technology

TOP EMERGING TOPICS

- Web3 evolution
- Web3 - IoT - AI relations
- Citizens' participation
- New tech market and knowledge building

KEY REQUIREMENTS	DESCRIPTION
Technology at the service of people	To allow technology to become a bridge for individuals and groups participation
Increase ethical use of data	To develop a legal framework that enhance people´s transparency and trust on the ethical use of data
Promote the development of spaces for co-creation with Web3 technology	The creation of spaces for collaboration, especially with young people, towards the democratization of Web3 technology.
Advancing innovations linking AI, IoT and Web3	The blending of these three branches promises many exponential technological breakthroughs involving data, governance and real-world action
To create a regulatory framework for ethical advances in machine-to-machine transactional skills.	Machine-to-machine transactions can make many processes more efficient and sophisticated, but they can also create many imbalances between those who have the technology and those who do not
Empowering communities to create their own technology with global connection and local action	Decentralization of technology opens the door for citizens to positively alter their own context
Regulating technology and protecting citizens against cyber-attacks from individuals or other countries	Mitigating the risks of cyber attacks and hacks in decentralized networks

PROVOCATIONS FROM THE FUTURE

- Promotion of local robotics factories and advanced machines for the production of essential goods and services
- Autonomous neighborhoods
- Sensorization and traceability of large urban species
- Sensorization and traceability of large species in cities
- Alert systems for incoming species
- Creation of new technologies that distort the image, voice, to prevent recognition
- Displacement of people to rural areas with less connectivity / surveillance
- Immutable identities of the Web3
- Bitcoin as the continental reserve currency
- Hacking and identity theft
- Ownership of biometric data and histories by citizens
- Digitization of indigenous ontologies
- AI for territorial protection
- Smart contracts for transnational natural resource management
- Algorithm continental community treasury
- Legal frameworks for open data and new patents are created in some countries
- Central data policy clashes with the interest of the common good.
- There is constant cyber warfare; protocols have the imperative to be incorruptible
- Legal frameworks for open data and new patents are created in some countries
- Central data policy clashes with the interest of the common good.
- There is constant cyber warfare; protocols have the imperative to be incorruptible

Policy

All provocations by cluster (2043 - 2048)

Policy

All provocations by cluster (2043 - 2048)

Social Strugles

2043

- total monopoly of means of food production
- anti-tech movement arises
- Uncontrolled epidemics
- Mass arrests and mass deaths of migrants
- poverty without presendents
- war breaks out between latin american countries
- Street clashes and constant stoppages
- Children separated from their families

2048

- total monopoly of means of food production
- attacks on splinternets core networks
- Cyber warfare for control of networks and users
- mass starvation deaths
- efficient adoption and donation system on web3
- massive land sales
- return to the countryside on a precarious basis
- Boom in DeSc for aid deployment
- Global human rights activism on the rise
- emergence of web-based platforms3 for planetary activism

Poverty

2043

- Increasing gaps between IA holders and non IA holders
- Increase in inequality
- Autonomous territories are formed through violence
- Uncontrolled epidemics
- The metaverse as a new escape drug from reality
- Mass arrests and mass deaths of migrants
- poverty without presendents
- Children separated from their families

2048

- Loss of innovation capacity and competitiveness
- Humanitarian aid in the form of algorithms and technology
- New slums with precarious technology for the game
- Tribal clans with technological elements
- Global human rights activism on the rise
- Crisis of access to technology
- Waste-to-war housing with self-contained energy technology
- Boom in DeSc for aid deployment
- mass starvation deaths
- efficient adoption and donation system on web3

Cross border participation in environmental protection

2043

- Transnational natural resource protection groups
- Robust governance for environmental protection and collaboration guidelines
- Inclusion of actors that impact the territory but are outside the territory.

2048

- Autonomous regional contracts
- Genetic mixtures of new families and different backgrounds
- Decrease in the number of central government ministries
- Public policies aimed at fostering decentralized participation in enterprises
- New entity in charge of monitoring cooperation treaties

Biodiversity loss and climate risk

2043

- Mining enhancement for electronic components

2048

- military controls in mining areas
- Robotics material recycling
- Illegal mining and unprotected miners

Ideological strugles for descentralization

2043

- Transition from peasant to industrial
- Web3 for governance of illegal groups
- Development of the advanced arms industry
- Sabotage of DACoops structures by opposing interests
- Political wrangling outside web3 with WEB3 Governance
- Data colonialism
- Data policies vs. the common good

2048

- Technological warfare
- Decrease in demand for centralized networks
- Decrease in demand for centralized networks
- Openness of information, best practices and patents
- New structures organized to oppose DACoops
- Monetization of biometric data
- Manipulation of information, emotions and decision making.
- Sale of web3 technology on the black market
- Current regulatory tensions
- Current regulatory tensions
- Efforts and struggles to return to centralized governance models
- Loss of innovation capacity and competitiveness
- Social movements - guerrillas strengthened
- military controls in mining areas

Policy

All provocations by cluster (2043 - 2048)

Descentralized - Centralized governance relationship building

2043

- Inclusive by design
- Decentralization of public supply
- Decentralized energy models
- Political and legal quarrels over centralizing interests
- demand for centralized services falls
- Increase in middle class

2048

- Sale of web3 technology on the black market
- Inclusive" quality compliance laws prior to technology deployment
- Dacoop as the central entity in the coordination and delivery of goods and services
- New international actors with relevance and impact on national public policies
- Decrease in taxes to support government spending
- Union of different cooperatives and old groups
- Union of different cooperatives and old groups
- Decrease in demand for centralized networks
- Efficient collaboration with centralized models
- New local economic models -international investment
- Increase in mining for the production of solar panels
- Increase in consumption of certain comfort products
- promotion of the solidarity economy and the common good
- Autonomous neighborhoods
- promotion of the solidarity economy and the common good
- Change of capitalist logics
- Networks expiring

Political-territorial redistribution

2043

- Boom in autonomous bio-territories
- Boom in mixed ecological settlements
- Strengthening of indigenous cultures
- Redefining the concept of nation state
- Coups d'état

2048

- Direct democracy
- Transnational "citizen" voting mechanisms for the prioritization and designation of projects and natural resources.
- Creation of new transnational entities establishing general principles and policies
- Web3 for common property
- Sensorization of environmental care
- Digitization of indigenous ontologies
- Progressive forms of trade and commerce
- New mechanisms for the management of shared natural resources
- DAOs as the new environmental committees
- Changes of order, emergence of new hope

Circularity

2043

- boom in cleanliness, waste treatment and clean production
- Increasing gaps between IA holders and non IA holders

2048

- Loss of innovation capacity and competitiveness
- Recycling of robots and robots made from bits and pieces
- Robotics material recycling

5. Definitions

Definitions

- **Bitcoin:** The bitcoin (lower case) is the unit of account (cryptocurrency) of the Bitcoin protocol (upper case). This concept is a replicated database distributed among thousands of nodes which are incentivised with new bitcoins for keeping the database up to date and providing it with the highest possible security. It has a limited issuance of 21 million bitcoins, whose production is reduced every four years.

- **Blockchain:** A distributed database that allows digital money to be securely exchanged on the internet using cryptography.

- **Circular economy:** It is a model of production and consumption which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended. In practice, it implies reducing waste to a minimum.

- **Cloud:** The cloud is a virtual space that exists on the internet. It is a storage space where people can place their digital resources such as software, applications and files.

- **Crypto:** Short version of "cryptocurrency", which is typically decentralised digital money designed to be used over the internet. Bitcoin, launched in 2008, was the first cryptocurrency. Other cryptocurrencies like Ethereum have grown as another digital alternative to money issued by governments.

- **DAO:** Decentralised Autonomous Organization (DAO). Inspired by the decentralisation of cryptocurrencies, a group of developers came up with this idea in 2016. It is an entity with no central leadership. Decisions get made from the bottom-up, governed by a community organised around a specific set of rules enforced on a blockchain. DAOs are internet-native organisations collectively owned and managed by their members. They have built-in treasuries that are only accessible with the approval of their members. Decisions are made via proposals the group votes on during a specified period.

- **DeFi:** Decentralised finance (DeFi) is an emerging financial technology based on Blockchain. The system removes banks and institutions' control over money, financial products, and financial services.

- **Global South:** The concept of Global South is used to identify regions within Latin America, Asia, Africa, and Oceania. It refers to the resistant imaginary of a transnational political subject resulting from a shared subjugation experience under contemporary global capitalism.

- **IoT:** Internet of Things (IoT), refers to the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between the devices themselves.

- **Latam:** short for Latin America.

Definitions

- **NFT:** Non-fungible token (NFT) is a unique cryptographic identifier/token that exists on a blockchain and cannot be replicated. It is used to certify the authenticity and ownership of a specific digital asset and its specific rights. NFTs can represent real-world items like artwork and real estate. "Tokenising" these real-world tangible assets makes buying, selling, and trading them more efficient while reducing the probability of fraud. NFTs can also function to represent individuals' identities, new property rights, and more.

- **Metaverse:** The metaverse is a network of virtual worlds where users can interact with other humans and other virtual characters in a computer-generated environment. In the metaverse, people have provably ownership over digital assets, creating a networked society where digital items can be scarce and therefore valuable.

- **Protocol:** Protocols are basic sets of rules that allow data to be shared between computers. For cryptocurrencies, they establish the structure of the Blockchain.

- **Sustainability:** Developing human communities so that their lifestyles, businesses, physical structures and technology do not interfere with nature's inherent capacity to regenerate and sustain life on the planet.

- **Sybil Attack:** In a Blockchain network is when Attackers may be able to out-vote the honest nodes on the network if they create enough fake identities (or Sybil identities). They can then refuse to receive or transmit blocks, change the ordering of transactions, and prevent transactions from being confirmed. They may even reverse transactions that they made while in control, which can lead to double spending. For now, there's no guaranteed defense to this attacks.

- **Tokenisation:** Within the context of blockchain technology, tokenisation is the process of converting something of value into a digital token that is usable on a blockchain application. Assets tokenised on the Blockchain come in two forms. They can represent tangible assets like gold, real estate, and art, or intangible assets like voting rights, ownership rights, or content licensing.

- **Web 3:** A new iteration of the World Wide Web which incorporates concepts such as decentralisation in the form of distributed ledger technologies and token-based economics.

- **Web 3.0:** refers to the Semantic Web, an extension of the existing World Wide Web, which provides software programs with machine-interpretable metadata of the published information and data. It adds further data descriptors to existing content and Web data to make Internet data machine-readable.

6. Acknowledgements

Citation
If you are using this document, our preferred citation is:
Bello M, and Llano M. (2022) "Web3 Speculative Futures", Colombia: Pluriversa, https://bit.ly/Web3SpeculativeFutures

Thanks

We want to thank the team of **The Frontier Technologies Hub** for believing in our work and allowing us to participate in such a fantastic project.

To other members of **Brink**, **IMC Worldwide**, **Results for Development**, and to our friends at **Careful Industries** and **Phas3**, thank you so much for being so welcoming and supporting our work.

We hope you enjoyed this adventure as much as we did. ⚡

Pluriversa

A speculative design process mapping alternative futures of Web3 in Latam, focusing on sustainability and post-development.

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2022