

dGen Annual Report 2021



dGen

BEYOND

dGen Annual Report - 2021

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dGen is a non-profit think tank for the responsible, inclusive, and accessible adoption of technology.

We believe that technological change has the power to transform the distribution of power, money, and ownership. We convene communities, technology users, and industry to discuss how technology can be a decentralising force in society and the economy.

To find out more, please visit us at dgen.org.

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dGen, 2021

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Foreword

2020

Everything will be a little different after this. Cracks have formed in the power structures in which we, as individuals, have delegated our trust. The bosses are still the same, but the people are not. Something has to give.

But, for now, an end of sorts feels near. Medical breakthroughs produced a record number of vaccines in record time, and the distribution of vaccines around the world has commenced. 2021 is finally here.

Reid Yager

Managing Director, dGen

Welcome to the dGen Foundation Annual Report - 2021.

Introduction

Welcome to the dGen Foundation Annual Report - 2021. The annual report is an opportunity for us to highlight our work over the past year and provide an outlook for upcoming initiatives.

While 2020 proved a difficult year for millions of people across the globe, it provided us an opportunity to raise awareness about a range of topics pertinent to our mission. From the future of work, to digital fiat use cases, to the adoption of emerging technologies, dGen produced foundational resources on issues that will define the next decade.

We will turn two in 2021. This year we will embark on an ambitious multi-year campaign to engage and educate everyday users of technology. dGen has been generously supported by Beyond Ventures and our Co-Founders, Jake Stott and Nick Dijkstra. However, to achieve our impact goals, we recognise the importance of growing our financial resources.

In 2021, we will establish new public and private sponsors, announce an advisory council of individuals and leading organisations to support and guide our work, and launch targeted initiatives across our impact areas.

The dGen Foundation Annual Report - 2021 was prepared by Evelyne Buzziol, Francisco Rodríguez, and Maggie Clarendon.

Who We Are

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What We Do

dGen is a non-profit think tank for the responsible, inclusive, and accessible adoption of technology.

We work with leading research institutions, companies, non-profits, and decentralised, open source projects. Our work includes analysis and insights on emerging technology trends across society and the economy. We conduct research and training on how to build accessible and inclusive products and help engaged communities push for change through technology. We are committed to raising awareness about how technology can decentralise traditional structures of power, money, and ownership.

Our work is guided by four impact areas. These impact areas drive our research programmes, community initiatives, and educational campaigns. *dGen impact areas:*

- **Inclusion and Access:** New technologies, such as digital currencies and Web 3.0 applications, present a high barrier to access for many social demographics. Through the Inclusion and Access impact area, we focus on connecting projects and companies with communities that have traditionally been underserved by the financial system.
- **Money and Sovereignty:** The role of sovereign fiat money in the global economy is being closely examined by policymakers, citizens, and private industry. The Money and Sovereignty impact area looks at the emergence of Central Bank Digital Currencies (CBDCs), the debate over private currencies, and the power of the nation-state.
- **Ownership and Identity:** Digital identity and non-fungible digital goods stand to profoundly impact the digital world. The Ownership and Identity impact area explores social identity in the digital age, and the ownership and monetisation of your digital self.
- **Governance and Power:** The Governance and Power impact area dives into decentralised systems and individual participation in society. What should we expect from individuals and users for sound governance of representative governments and decentralised systems?

We are excited to introduce our first academic research initiative on the connection between periods of technological advancement and social and political change. We will coordinate with leading research institutions and academics to analyse how technology has been a catalyst for the centralisation of money and power.

1

Part One: Year in Review

Analysis and Insights

Our analysis and insights focus on emerging technology trends across society and the economy. The reports feature leading experts from around the globe on a range of subject matters. Our sponsored reports are conducted with organisations or companies looking to dive deeper into specific topics or issues.

We have highlighted a few reports from 2020 below:

European Blockchain Ecosystem

We kicked off 2020 by taking a look at the European blockchain ecosystem. *Blockchain in Europe 2020 Review* featured input from more than 60 experts and 1200 organisations in over 20 countries.



Central Bank Digital Currencies (CBDCs)



We released two reports in 2020 on Central Bank Digital Currencies (CBDCs) – *Central Bank Digital Currencies: Considerations for a Digital Euro* and *CBDCs: Geopolitical Ramifications of a Major Digital Currency*.

Decentralised Finance (DeFi)

In our report, *DeFi: Risks & Usecases for Mass Adoption*, in partnership with Aave, we looked at current developments and emerging trends in Decentralised Finance (DeFi).



Remote Work



Covid-19 challenged many societal norms in 2020. In our report on remote working – *Remote Work in Europe, 2030* – we explored how a large scale shift to telecommuting might change European culture and society.

dGen Community and Partners

Community

Our community is defined by what we can do together. In 2020, we focused on engaging and activating a community interested in the social and economic impact of emerging technologies. We are committed to building a space where researchers, organisations, and young people can gather to discuss why they care about technology, how it affects their lives, and what access and inclusion in the digital age really means.

We launched a network of ecosystem ambassadors from around the world consisting of aspiring entrepreneurs, industry operators, and young people looking to get involved. We also established our first fellowship programme with emerging tech experts, academics, and researchers from every corner of Europe.

Newsletter

Our monthly newsletter – “Future on Fridays” – shares our favourite opinion articles, top headlines, must-see tweets, and the latest from the dGen community. We strive to provide critical insights and analysis on the most important issues across Europe’s tech ecosystems.



Partnerships

2020 would not have been possible without the support of our partners and financial sponsors. We would like to thank Ledger, Whereby, R3, Global Digital Finance (GDF), AAVE, ADAN, Algorand, and Digital Euro Association (DEA).



Public Funding Programme

dGen launched a new initiative in 2020 focussed on European public funding. Our public funding team works with academic institutions and private organisations to facilitate partnerships, conduct research, and engage in funding opportunities.

Impact through Public Funding

Our 2020 initiatives focussed on major demographic and social issues. Investments in research and developments today determine the innovations of tomorrow.

Centring on technology's impact on society, our projects built consortiums with institutions and SMEs across Europe. This included programmes to address the gender gap in the blockchain ecosystem, develop job opportunities for underrepresented groups, and build advocacy opportunities for youth groups.

ERASMUS + PROGRAMME YOUTH IN ACTION

- History Makers
- Young Innovators in Blockchain
- Remote Education

Social Impacts of
Artificial Intelligence

EUROPEAN AI FUND

EC PILOT PROJECT CONNECT

Supporting high-quality
news products and tackling
fake news

What does public funding mean to SMEs and startups?

Public funding is a significant driver of the innovation ecosystem. The economic support of public funding enables more projects access to more opportunities. Projects must collaborate with qualified partners, fostering the exchange of knowledge and technical capabilities in a trusted environment for the greatest impact.

Public funding is also a primary source of initial funding for European SMEs and startups that may be too early, or lack product market fit, for private investments.¹ According to Leonidas Katelaris, a Researcher at the Institute For the Future (IFF), increasing the number of projects with access to public funding has a direct impact on how many companies may attract private investors and eventually deliver a product to market.

2

Part Two: Trends

Throughout history, social change coincided with profound economic changes.

We believe the convergence of trends across technology, bio-science, and finance will spur a new revolution in communities across the globe.

Trend One: Impact of Covid-19

2020 did not go the way any of us expected. It is hard for us to fully begin planning 2021 when we are still not sure how long lockdowns and travel restrictions will remain in place.² But we've already seen the beginning of several changes sparked by the abrupt disruption of last year.

Social Impacts

Prior to this past year, remote working was a luxury or an economic necessity.³ Stay-at-home orders and health and safety concerns forced workers and employers alike, not to mention students and schools, to adapt. A year into these changes, it is clear that work and education will never be the same.⁴

The pandemic exposed critical weaknesses in our social fabric as governments failed to lead and citizens prioritised the individual over the collective. We learned that intelligent and capable management of our health systems, governments, schools, and economy cannot be taken for granted. We can only hope that the difficulties of the past year will lead to more support for remote workers and learners, better access to social systems, and stronger worker protections.³

Political Impacts

Covid-19 was a catalyst for much more than changes in our work and education norms. Discussions over police brutality,⁵ institutional racism,^{6 7} LGBTQ+ bans,⁸ authoritarian trends,⁹ climate justice,¹⁰ and political censorship¹¹ boiled to the surface around the world. Aside from mass public protests during the summer in cities around the world over police brutality and anti-democratic regimes, Covid-19 changed how and where we voice our opinions – pushing more people to the digital world.¹² It forced us to think constructively about better ways to be heard in our societies, and ensure that vulnerable populations are both listened to, and supported equally.

We rely more today on fewer (and more powerful) infrastructure providers than in the early days of the web.¹³ And, while new communication and organising vectors are emerging, the internet has turned into a dark forest.^{14 15}

In the 2020s, more people will be more connected than ever before.

What will be the implications?

How will we ensure no one is left behind?

What does responsible innovation look like?

Political Impacts (con't)

The struggle between free speech, censorship, and civility exploded.¹⁶ Rifts between ideologies pushed citizens to narrow their social graphs further.¹⁷ Through social media, this reached levels that no one could have anticipated. “Fake news” and misinformation are not new – previously we knew them as yellow journalism or propaganda. But never before were the manufacturers of such vitriol the citizens themselves.¹⁷

Covid-19 and consequential elections are easy targets for pundits trying to explain *why* civil discourse degraded so much. In reality, it is *how* that is the story here. Panic around the spread of the virus and the politicisation of mask wearing¹⁸ created an arena ripe for misinformation and the proliferation of conspiracy theories with real impacts – the death of millions.¹⁹ Trust in national leaders and the scientific community plummeted against a backdrop of conflicting information in a day and age where everyone feels entitled to their own truth.²⁰ Even with platforms such as Facebook and Twitter cracking down on misinformation, with warnings on posts or completely removing posts, actions by centralised companies tended to only further drive down trust in the institutions meant to serve society. At the heart of all this, is an internet that is increasingly hostile and closed to meaningful discourse.

Economic Impacts

While Covid-19 continues to have a devastating impact on our health, the economic impact felt around the world is still unfolding.²¹ Governments are leveraging all the monetary tools and resources available to stimulate growth and protect vulnerable citizens. However, many small businesses and individuals are still struggling to find the best way out of this crisis.²² Many feel left behind and forgotten by poor administration of relief efforts, with lockdowns choking their businesses.

The influenza of 1918 was a contributor to the economic conditions that led to the Great Depression. While that pandemic was resolved without a vaccine, it had a permanent influence not on the collective but on the atoms of human society – individuals.²³ Consumer preferences and consumption patterns changed drastically. Austerity characterised lower and middle class families' approach to the 1920s, while the upper middle class and high society of the roaring twenties fed a stock market bubble.

Economic Impacts (con't)

The 2020 Covid-19 pandemic exposed cracks in the foundation of the alliance between fiat money and neoliberal policies.²⁴ The Western world is over-leveraged and underfunded. For example, the US Federal Reserve printed trillions of dollars since the start of the pandemic²⁵ and expanded its balance sheet from \$4 to \$7 trillion.²⁶ The Dollar is losing ground to other currencies, and, despite governments and companies outside the United States holding trillions of dollars of USD denominated debt,²⁴ it is uncertain how the pandemic will affect the Dollar's position as the global reserve currency.

Youth Impacts

Despite the differences in upbringing – Millennials came to age during tough economic conditions, while Gen Z's initially inherited a strong economy²⁷ – the expectations of younger generations of the economy, government, and society will be forever changed by Covid-19.

The oldest Gen Z's are now 24, with a large portion entering the labor force for the very first time. According to The Guardian, the Covid-19 outbreak might have the same long-term effects on youth expectations of capitalism as the financial crisis.²⁸ Although their expectations for the future might change during the next decade, one element remains clear in their forecasts. Gen Z strongly believes technology will be the central force that drives economic, social, and political change in their lifetimes.

Overall, new generations want a seamless experience between the physical and digital world. They want that experience to be a positive one and for new technology to drive progressive changes. While for most people, Covid-19 meant a profound change in their daily lives, digital natives were already confident with many parts of this new model,²⁹ confirming that they are truly the decentralised generation.

'64% of Gen Z think artificial intelligence will have a positive impact and 66% believe the Internet will bring us closer together.

When asked which value, quality, or attribute is most important to your generation, Gen Z rated tech-savviness [sic] (19%) almost as highly as freedom (22%).²⁹

Trend Two: New Generations, New Values

Historically, population trends shape societies and their politics: new generations give rise to different interests and habits.³⁰

Although Millennials and Gen Z do not represent the largest cohort of the European population, as older generations retire, they will become the largest consumers and backbone of the workforce.³¹ This population segment grew up as digital natives in an era of major social and economic change. Their values and preferences are quite different from those who have come before. Therefore, it is significant to understand young generations' priorities to predict where the next wave of technological advancements must go in order to meet their expectations.³²

Access to an ever-increasing amount of information has resulted in an audience attuned to global issues. Below we take a look at their social habits and consumer preferences:

Sustainability

Young demographics are taking action to combat climate change and build a sustainable future. Sustainability concerns will impact spending habits and decisions about where to live and work. Given these young generations' emerging purchasing power across the global economy, green policies and a more sustainable free market economy will shape the future business.

This shift is already happening, with an evident effect on big names in fashion, as young people have a greater willingness to pay more for eco-friendly products.³³ According to a PwC survey, 62% of surveyed Gen Z's are willing to pay higher prices for food produced locally, and 47% of them would pay a premium for food items with eco-friendly packaging.³⁴

Digital Currencies & Payments

In 2020, Europe saw a further consolidation of its digital single market. This trend is characterised by an increase in online and digital payments, especially among young people. Cash usage remains strongly correlated to local preferences, with great differences across European countries.³⁵

Digital wallets (e-wallets) are gaining particular importance. A recent survey revealed that 46% of young people pay with digital wallets 1-5 times a month.³⁶ Further, a move to digital currencies could become far more normalised, as 80% of Gen Z are aware of digital currencies, with 28% considering investing in cryptos.³⁴

Accessible Digital Platforms & Services

Especially when approaching younger generations, the relevance of high usability, convenience, flexibility, and transparency are fundamental to deliver a successful digital product or service. Young generations demand technologies - in every sector - to be extremely customised to individual needs. For example, Gen Z pays particular attention to their healthcare, with 44% tracking their wellness daily through specific apps.³⁴

Therefore, emerging technologies, such as AI, predictive analytics, PSD2 payments (electronic payments services regulated under the EU Payments Service Directive 2), Financial Transaction Services (FinTS), and blockchain must develop integrated, tailored, and seamless products for young generations to achieve product market fit.³⁴

Individuals as Consumers & Products

Smart devices and social media have considerably increased customers' touchpoints. In this field, younger consumers already play a key role. For instance, 76% of German Gen Z's learned about a product through social media influencers.³² This reveals how consumers became 'explicit advertisers' in today's market.³⁷

Younger generations perceive themselves – their digital personas – to be marketable objects. They are keenly aware of their place in capitalism as both consumers and products. Companies who acknowledge, not exploit, this new paradigm will build more loyal and engaged audiences. But the consumer-product reality brings new issues for companies as young generations push for more privacy and more control over their digital identities.

Millennials and a portion of Gen Z are now the young adults of the world and, as such, the most important part of the population when referring to overall economic prospects.

3

Part Three: Predictions

A Decade of Change: Predictions for the 2020s

Decentralisation of Globalisation

1 Nationalism will continue to rise in democratic countries.³⁸ Larger contingencies of voters will push for policies that prioritise favourable economic outcomes for native industries. Meanwhile, cross-border communities and economies will grow more connected as globalisation completes its digitalisation.³⁹ The state will no longer be the primary driver of global coordination as independent and decentralised groups form to tackle societal problems.⁴⁰

Sovereign Money Is Challenged

2 Citizens begin to question fiat money, but it is the financial world that initiates a challenge. Decentralised coordination between the facilitators of global trade and holders of sovereign and institutional debt will produce an organic and spontaneous alternative to the Dollar.⁴¹ As the Dollar falls and becomes more competitive in trade,²⁴ policymakers in the United States will struggle between allowing a new global reserve currency or digging their foxhole deeper.

Cryptography Becomes A Priority

3 Encryption will become standard, but access will be unequally distributed. As cryptography becomes a national security imperative,⁴² governments will invest in cryptographic tools and protocols to secure the bureaucratic state.⁴³ At the same time, consumers will continue to push for access to more encrypted products, but the surveillance state will push back.⁴⁴

Digital Identity Arrives

4 Digital identity initiatives such as the World Wide Web Consortium (W3C) Digital Identifiers (DID) protocol, will go mainstream.^{45 46} Applications and products, first from open source cryptocurrency projects and then from mainstream tech companies,^{47 48} will leverage digital identifiers. The proliferation of digital identifiers will change how we engage in conversations on the web and in the digital economy.⁴⁹

A Greener Bitcoin

5 Bitcoin will continue to gain adoption and find a permanent place in the global economy. More financial companies will invest into energy efficient mining operations⁵⁰ and support a greener bitcoin supply chain.⁵¹ This will spur new investments and applications of renewable energy.⁵² But as the hash rate continues to climb,⁵³ energy consumption will weigh on the network and ethos of the community behind it.

Payments, Payments, Payments

6 Digital payments will be ubiquitous. The infrastructure for digital payments that are cheap, fast, and accessible will finally arrive in the 2020s.⁵⁴ New products and services will emerge on the new infrastructure for social micropayments, global instant settlements, and financial services for emerging economies.⁵⁵ Central Bank Digital Currencies (CBDCs) will deploy in all G7 countries and find a role to play in monetary policy and the broader economy.⁵⁶

4

Part Four: Outlook

2021 Outlook

2021

The world is changing. The tech revolution of the 2020s is here, and it is not slowing down for the world to steady. We, the people of the revolution, the users, the technologists, the entrepreneurs, and the anonymous, are ready. And, we want real change this time.

dGen was born out of the emerging technologies that will come to market in the 2020s. We want to help guide platforms, companies, and decentralised projects through the revolution. We aim to do this by helping them better understand their users, connecting engaged communities pushing for progressive change, and raising awareness about how new technologies can change the structures of power, money, and ownership that dominate our society.

Come join us on a journey to decentralise the world.

Reid Yager

Managing Director

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dGen is part of Beyond, a venture studio exploring a new world. For more information, go to beyond.ventures.



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