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The Future of Design 2030

Samson Ng, Head of Design & Strategy





Table of Contents

- **Intro**
- **The world's future demands**
 - World population forecast
 - Countries with largest populations by 2100
 - The fastest-growing cities in the world
 - Largest economies (highest GDP)
- **Future design themes**
- **The metaverse - where everything is connected**
- **A big moment for the business world**
- **Appendices**
 - A tapestry (TPESTRE) of trends for strategic planning
 - 7 disruptions in the distant future [Gartner]
 - SDG report: first yearly decline in SDG index score [UN]
 - Principles for the design of future things [Donald Norma]

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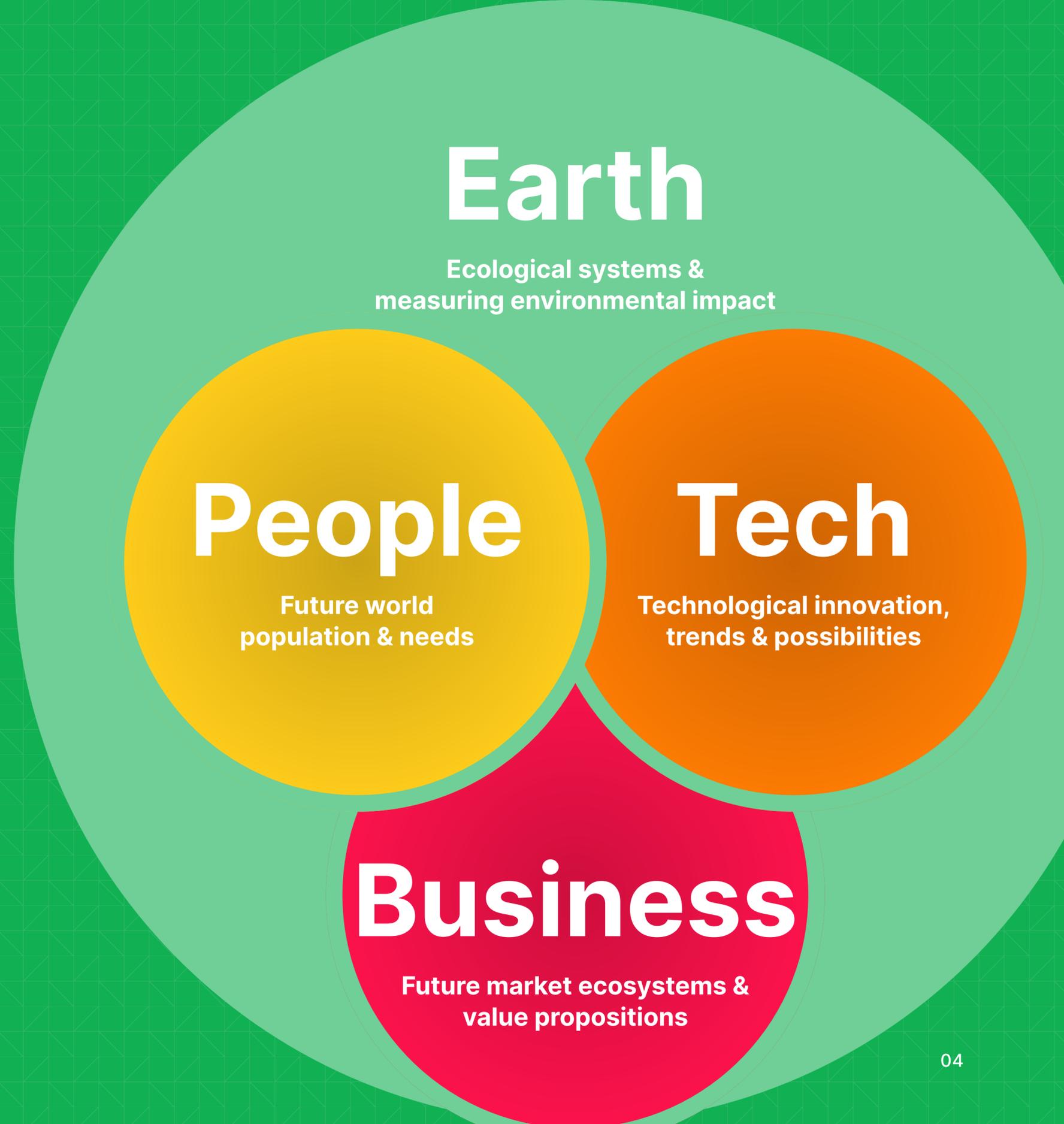
Intro: What is the future of design?

- From human-centred design to humanity-centred design

Transitioning to impact design

Our designers of the future will engage the complexities and challenges of the world by using **systems thinking**, while systems design frameworks (e.g. **circular design**) will provide more details and new sets of ROIs used to distinctly measure impact.

Cultural norms, political systems and governments will also be an important part of future changes in design goals.



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The future world's demands

- World population forecast
- Countries with largest populations by 2100
- The fastest-growing cities in the world
- Largest economies (highest GDP)

World Population Forecast

Let's take a quick look at the larger, global picture first - the 2019 forecast from the United Nation's Population Division (made before the COVID-19 pandemic) shows that world population growth peaked at 2.1% per year in 1968, and has since dropped to 1.1%. It could drop even further to 0.1% by 2100, a growth rate not seen since pre-industrial revolution days.

Ageing Population

Higher Life Expectancies

Lower Fertility Rate

People over 55 > children under 15 by 2035

22.5%

of the world's population will be 60 years old by 2050

Source: WHO, 15 Feb 2018

The world's population will rise from 7.8 billion to:

9.7 billion

by 2050

Source: UN Population Division, 2019

By 2030

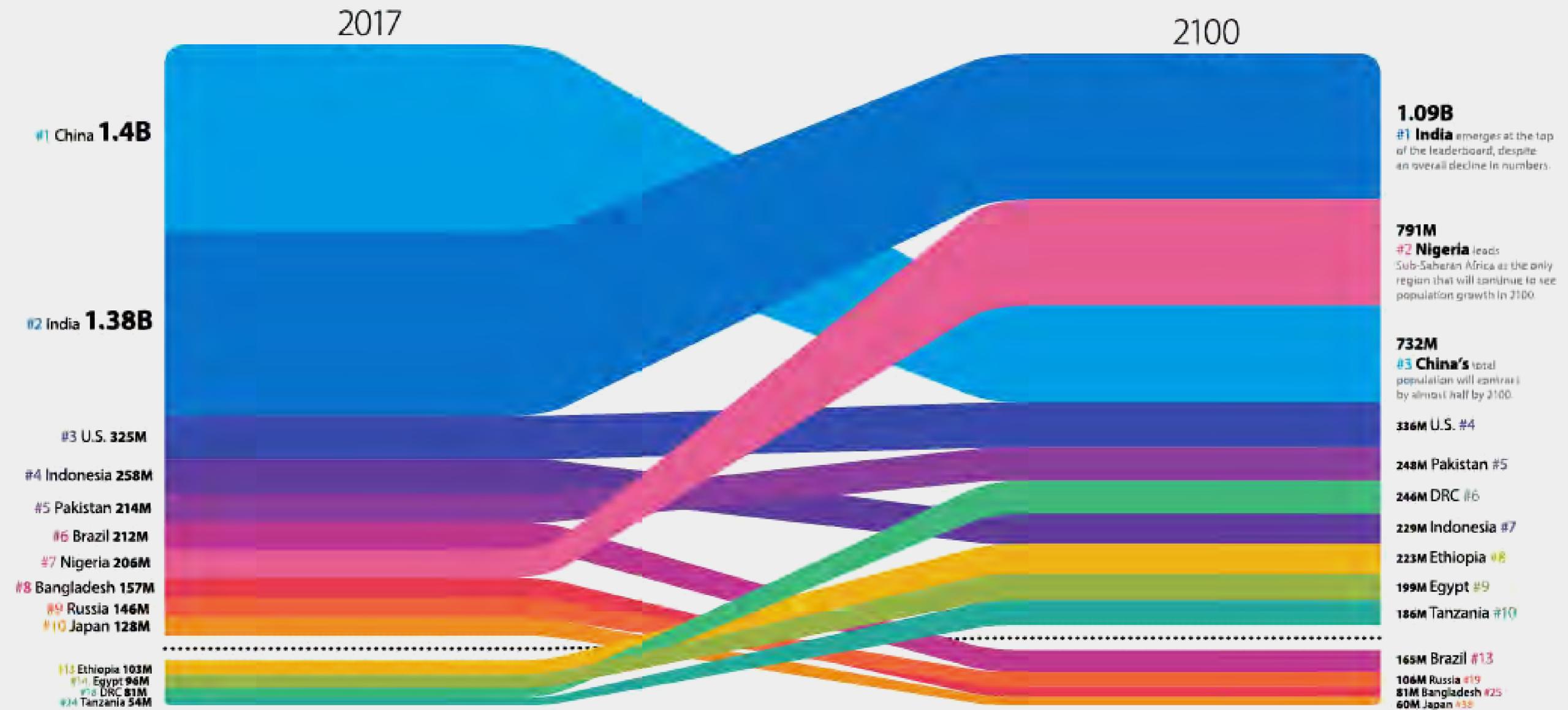
38.8%

of the global population will be 24 years old or younger, down from 41% in 2020

Source: Catalyst

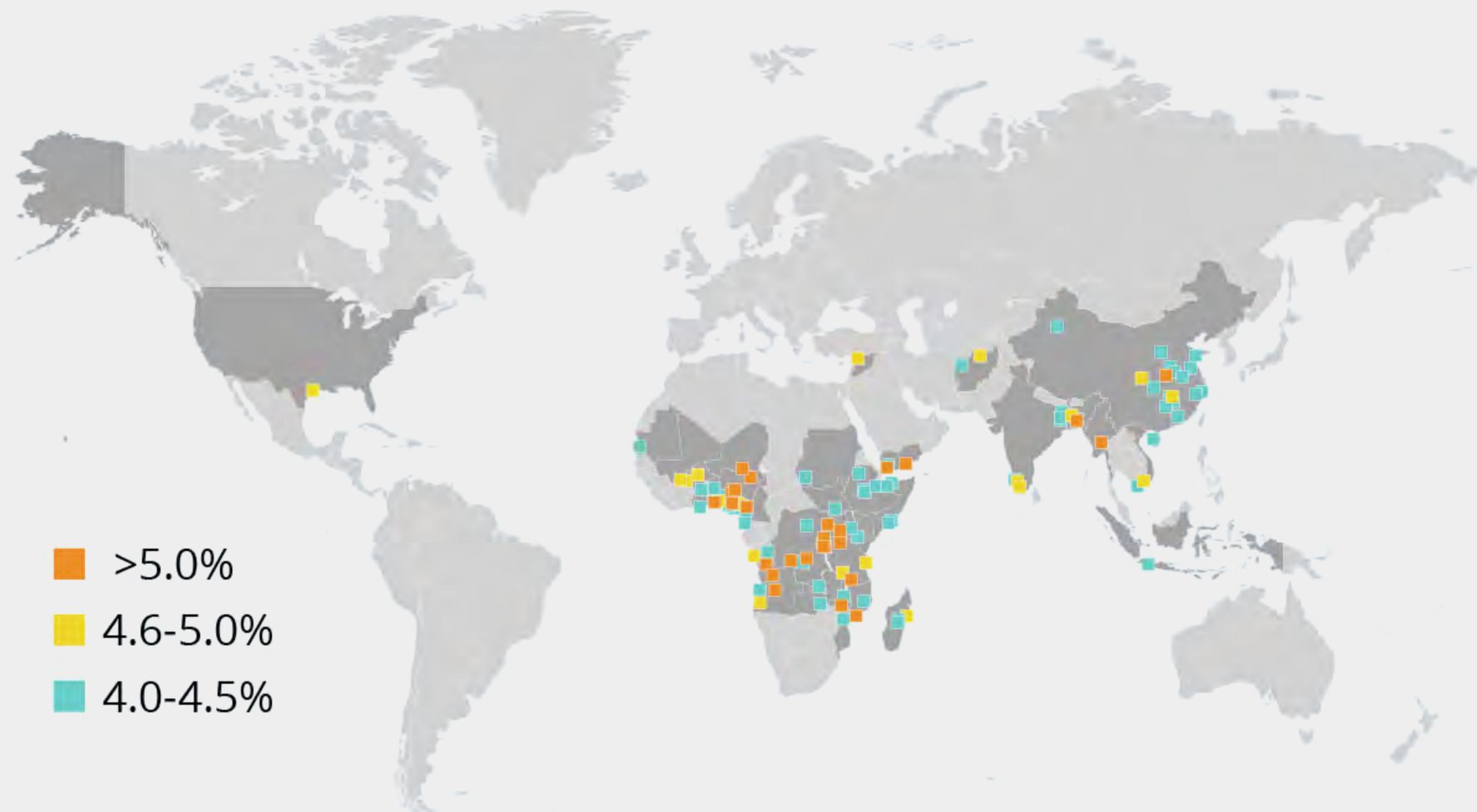
Countries with largest populations by 2100

From Visual Capitalist, data from Institute for Health Metrics and Evaluation (IHME) 2017



The fastest-growing cities in the world

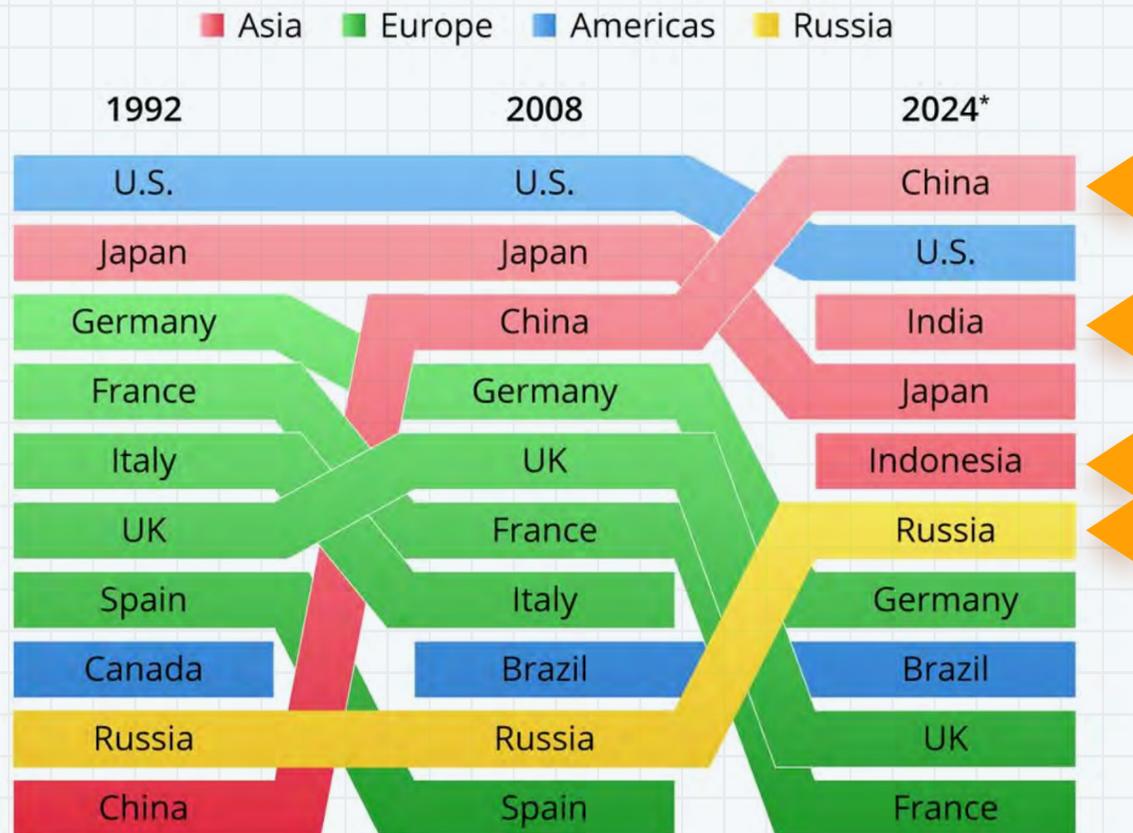
From Statista: cities with the highest average annual growth rates between 2020-2025*



* 2018 projection, out of all cities with 300,000 inhabitants or more
Source: U.N. World Urbanization Prospects

Biggest Economies (Highest GDP)

Continental Shift Over Time

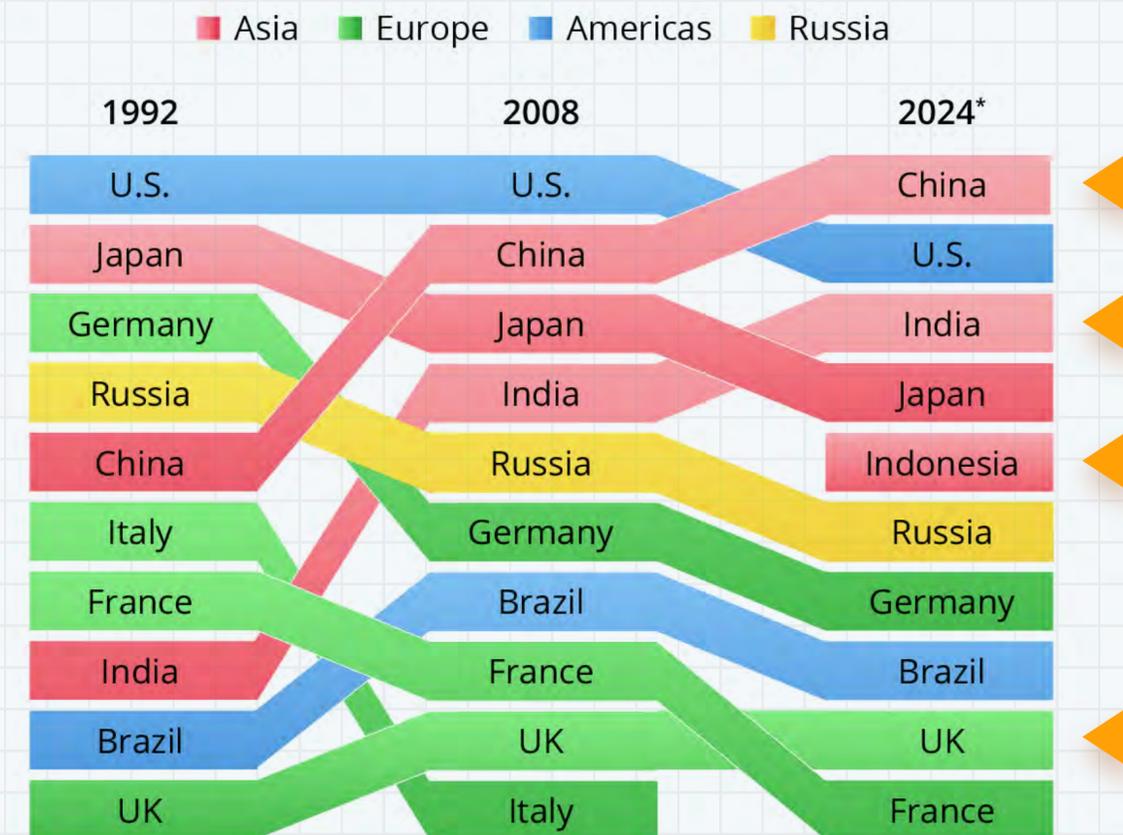


* projection
Source: World Bank and IMF



Biggest Economies (Purchasing Power)

Continental Shift Over Time



* projection
Based on purchasing power parity, intl. dollars
Source: IMF



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Future design themes

1. Everyone will be a designer and a developer
2. Databanks for real-time personal and business data
3. Regulated design frameworks
4. Designer titles, reimagined and specialised
5. XR (extended reality)
6. From 2D screens to 3D images
7. 3D data visualisation
8. Voice control, air gesture, brain-computer interactions
9. Next steps

Everyone will be a designer and a developer

The aforementioned large-scale global shifts will have massive implications in the realm of design. **Who** will be a designer? **What** will we design? And **how** will we do it?

First, more non-designers will take part in the design decision-making process, and more tools and templates will be provided for people to self explore the field of design themselves.

One trend that we're already starting to see is that designers can also be developers, thanks to the emergence of no-code development (webflow.io) and hybrid design/development tools (framer).

Future design tools will include the creation of logic and algorithms so that coding/design can happen in parallel.

What can we do right now?

- **Enable pair programming/design amongst your teams**
- **Provide 101 trainings on tech, product, business, Agile and Impact Design (more on that later...)**

Databanks will be created to aggregate real-time personal and business data

Without the need to produce an MVP (minimum viable product), real-time data will be readily available for something as cursory as a design prototype, and could even function well as a real application.

What can we do right now?

- **Start collecting and organising our data, especially that related to ESG**
- **Build open source databanks across your organisation**
- **Provide training on data-driven design**

Design frameworks will be regulated

More and more design councils will be formed around the world, and governments are already starting to get involved in promoting design frameworks on:

- Data-driven persuasive design
- Addictive interfaces
- Human emotional design
- Gamification
- Inclusive design
- ESG design
- Dark patterns

What can we do right now?

- Set up global knowledge-sharing platforms and/or trainings on specific design disciplines
- Start adopting a positive impact design framework

Photo Credits: engineeringforoneplanet.org



Designer titles, reimagined and specialised

Currently, design titles are rather poorly designed themselves! A lot of jargon and misnomers. That, however, is set to evolve. A few titles that you'll start to see are:

- Hologram Stylist
- Virtual Costume Designer
- Augmented Reality Life Designer
- Business-to-Robot-to-Consumer Specialist
- Organ Designer
- Algorithm Designer
- Design Scientist
- Organisation Designer
- Data Design Strategist
- Neuro-Computer Designer
- Happiness Designer
- Empathy Officer

What can we do right now?

- **Tap into this growing pool of specialists, internally and externally**
- **Consider how you're branding your own team, and what these job titles means for team culture**



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XR (extended reality) is on the rise

Simply put, 64% of leading consumer brands are inspired to invest in AR, VR, 3D content and 360-degree video. Expect this number to exponentially grow over the coming years.

Source: [Accenture](#)

From 2D screens to 3D holographic images

In 2018, researchers from Brigham Young University in Provo, Utah, created a real hologram using light particles at high speeds. No headsets were required to see the volumetric image.

This innovation has long been a go-to for science fiction movies, but expect it to take hold in the business and consumer world sooner rather than later.

This isn't just a novelty, the innovation will make an impact on anti-counterfeiting measures, security, identification technology and more.

3D Data Visualisation

Holographic vision enables 2D data to become 3D graphics. Imagine, digging deeper and deeper into a visualised, 3D data library to find what you're looking for.

This breakthrough will provide a totally new perspective in understanding objects and engaging in shared experiences. Sports matches, global conventions, team-building, the sky is the limit.

From a cognitive science perspective, human brains can only process a small amount of data efficiently. As it stands, 2D applications slow down users with clunky overflows of data. 3D data visualisation will offer more personalisation options to better fit user needs.

Voice control, air gesture, brain-computer interactions

Input is no longer restricted to buttons or interfaces. On top of voice commands, we'll start to see more natural ways of inputting commands. Notably, gestures.

Google is developing an advancement for gesture control through Project Soli, a chip that will allow users to gesture above a device without needing to touch the screen directly. This function will become available through phones or other IoT devices in the near future.

What can we do right now?

- **Build your R&D capabilities to explore the impact of non-GUI inputs and control devices**
- **Evaluate the impact this technology might have on your market, business model and longer-term goals**

THE VERGE

But Google hardware boss Rick Osterloh tells *The Verge* that the Project Soli radar and gestures *will return*. "They'll be used in the future," he says. They were just too expensive for the phone that Google wanted to build this time.

(He didn't say whether they'd appear in a new phone, specifically; a recent FCC filing suggests [they might come to a new Nest thermostat](#) as well.)

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The idea of a metaverse - when everything is connected

- What happens when the virtual and the physical world merge?
 - The idea of 4th Space
 - The rise of digital ownership & NFTs
 - Twin earth, twin store, twin everything...
 - Ordered at home, made at home
 - Digitisation and decentralisation of everything



The idea of 4th Space

In the forthcoming era, people will adapt to new norms in their spatial lives. Public, home and work spaces will collide, collaborate and coexist. A product of this coexistence is the 4th space (or meta space), which is a combination of all of these spaces.

The New Abnormal and the rise of fourth space

Public Space (third space)

Home (first space) Work (second space)

co-mingling co-working

co-living

Meta-space (fourth space)

combining first, second and third spaces

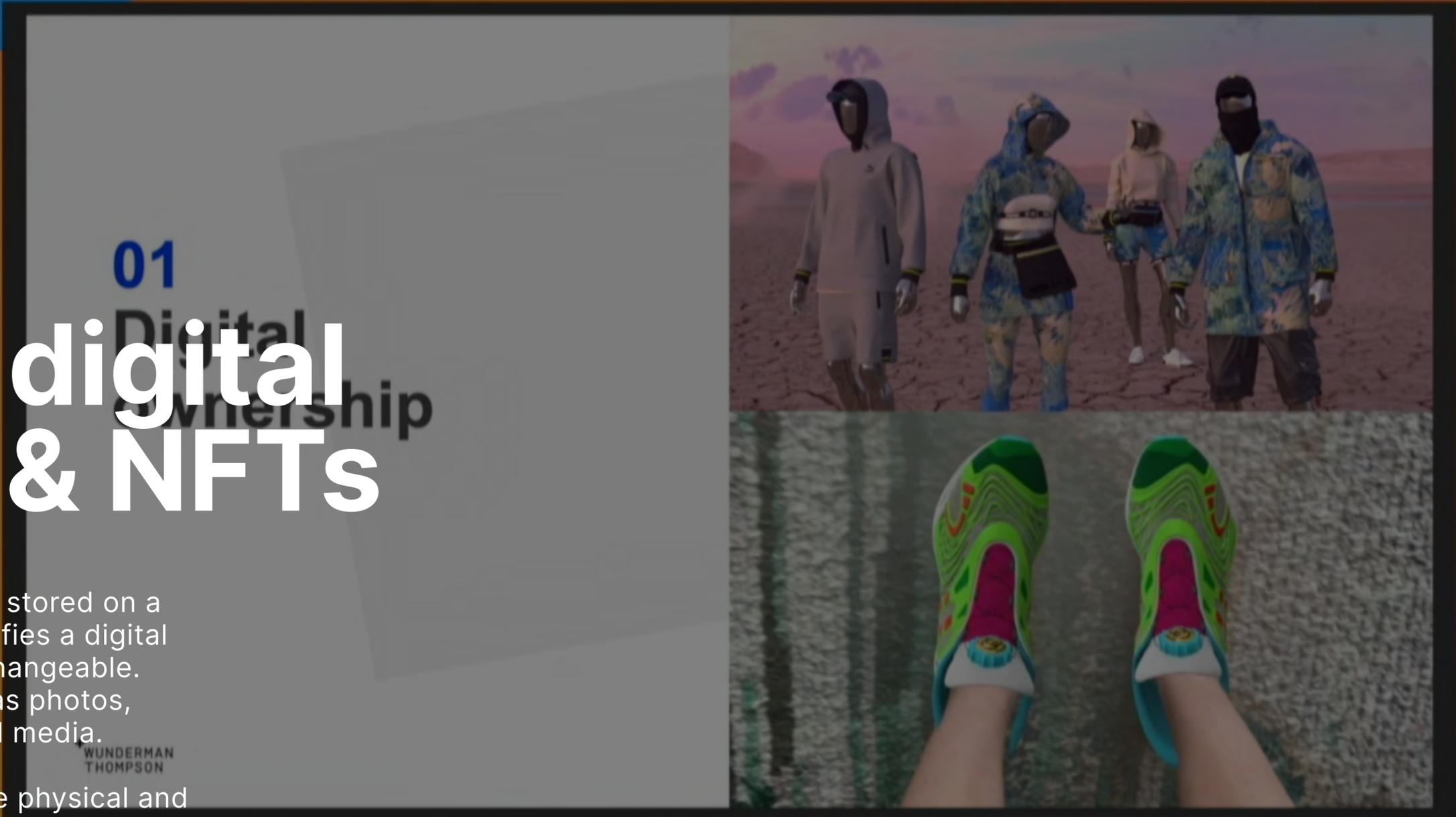
scenarioDNA 6



The rise of digital ownership & NFTs

A non-fungible token (NFT) is a unit of data stored on a digital ledger, called a blockchain, that certifies a digital asset to be unique and therefore not interchangeable. NFTs can be used to represent items such as photos, videos, audio files and other types of digital media.

Virtual goods (or items that exist in both the physical and virtual worlds) can now have a price tag attached to them, digitally.



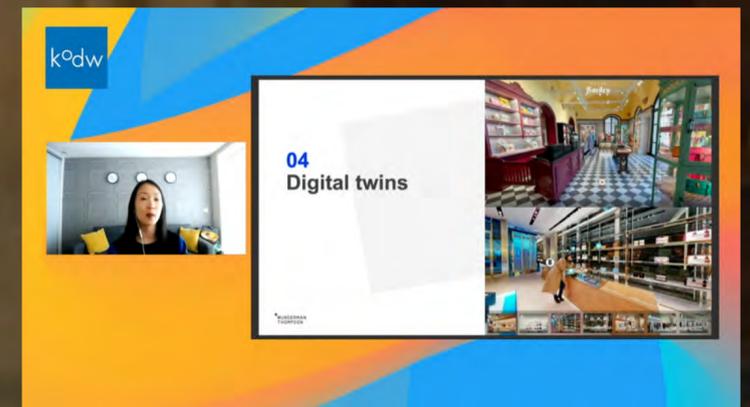
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Twin earth twin store twin everything...

How would you feel about having a digital 'you' somewhere in the metaverse, assisting you in making decisions? Digital twins will be integrated into our daily lives, and will act as our virtual guides at work, at school and at home.

The same can be said about offices, stores, or other physical places. Prefer to work/shop from home? Prepare for a more immersive experience thanks to this innovation.

Source: KODW 2021, Photo Credits: KODW 2021 and [Microsoft](#)



Burberry and Gucci digital twin shops



AI Assistant will be able to exist as a digital twin or a 3D avatar

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Ordered at home, made at home

Today, half of our food is grown from the seeds of just three companies, manufactured by three wholesalers and sold through a dozen retailers. That could dramatically change as 3D printing encourages a shift towards local food consumption.

Thanks to 3D printing technology, our global supply chain will be reimagined and more locally-grown materials will be available. In fact, 50% of what we consume in 2035 will be printed at home.

Good for consumers, good for business and good for the environment.

Source: uxdesign.cc



The digitisation and decentralisation of everything

It used to take years to build a hospital, but after the COVID-19 pandemic, we've come to understand that—given the urgency—we can do so in a matter of days. Decentralisation will take place in the hospitality realm and also in commerce, allowing for a more agile response to needs, and shorter time to treatment or delivery.



Diagnostics



Treatment



Surgery Prep

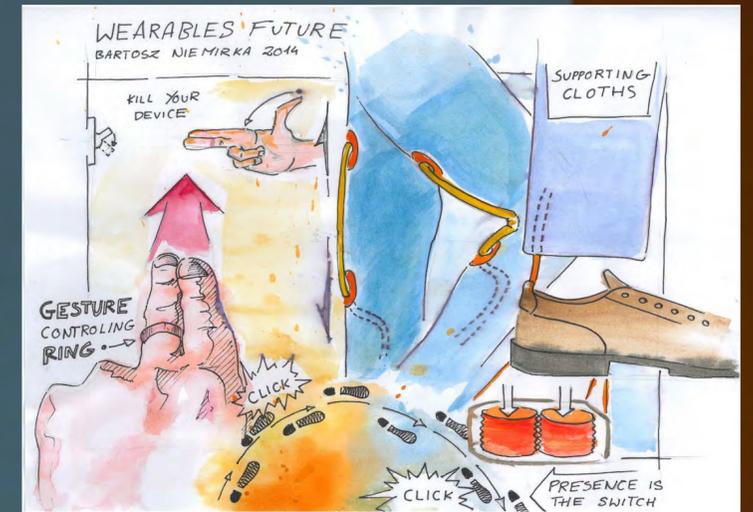
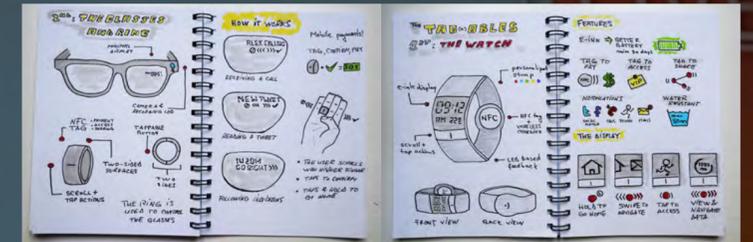


Consultation



Screening

With healthcare being this mobile, the future is full of possibilities.



Wearables, like rings, shoes or trousers will be interconnected to allow gestures and constantly monitor our bio statuses.

Display and controls will be decentralised and change how we interact with computers (including mobile devices).

PALOT

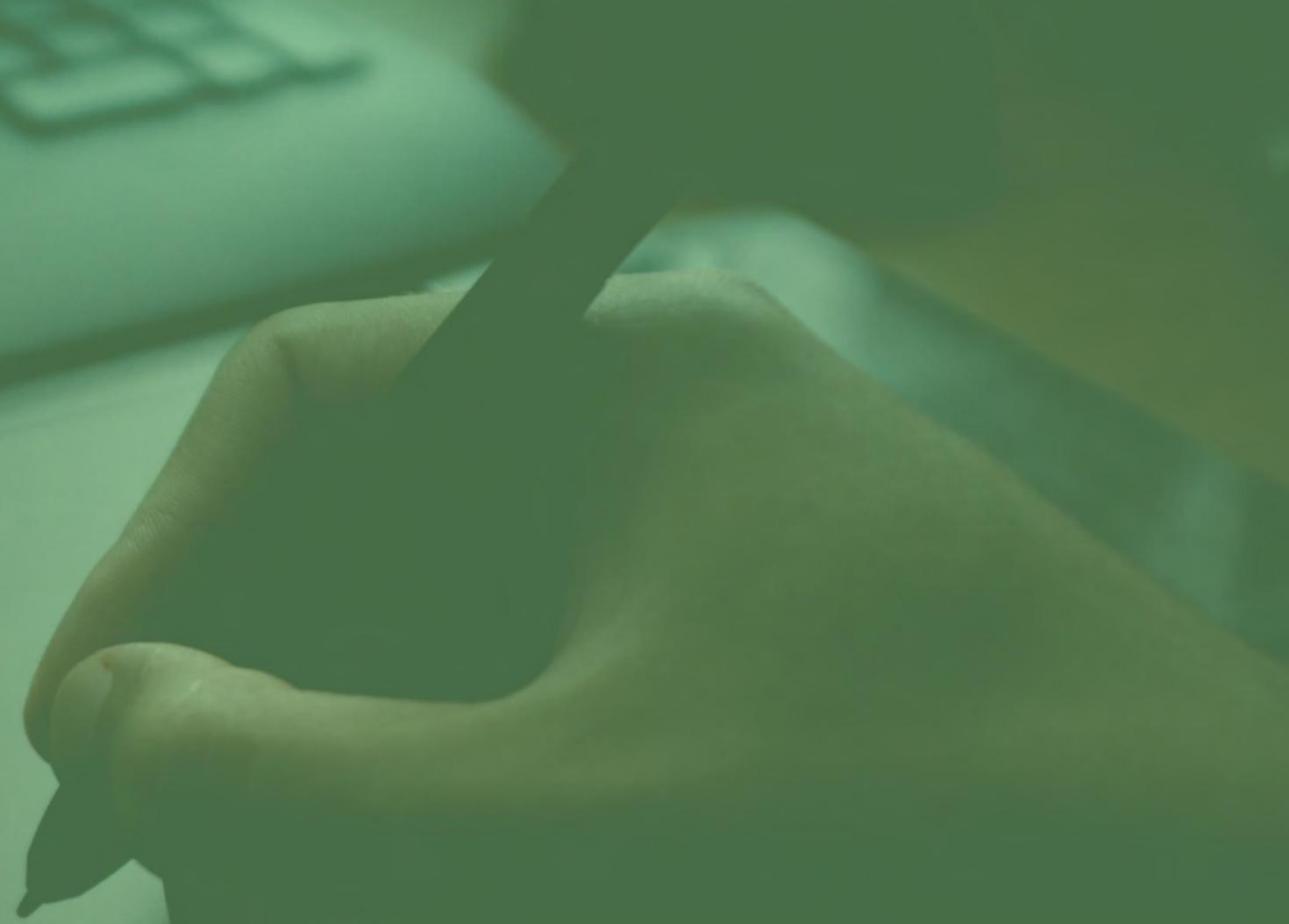
A big moment for the business world

- Sustainable design frameworks
- Impact Design
- Doing good is good for business

Making an impact

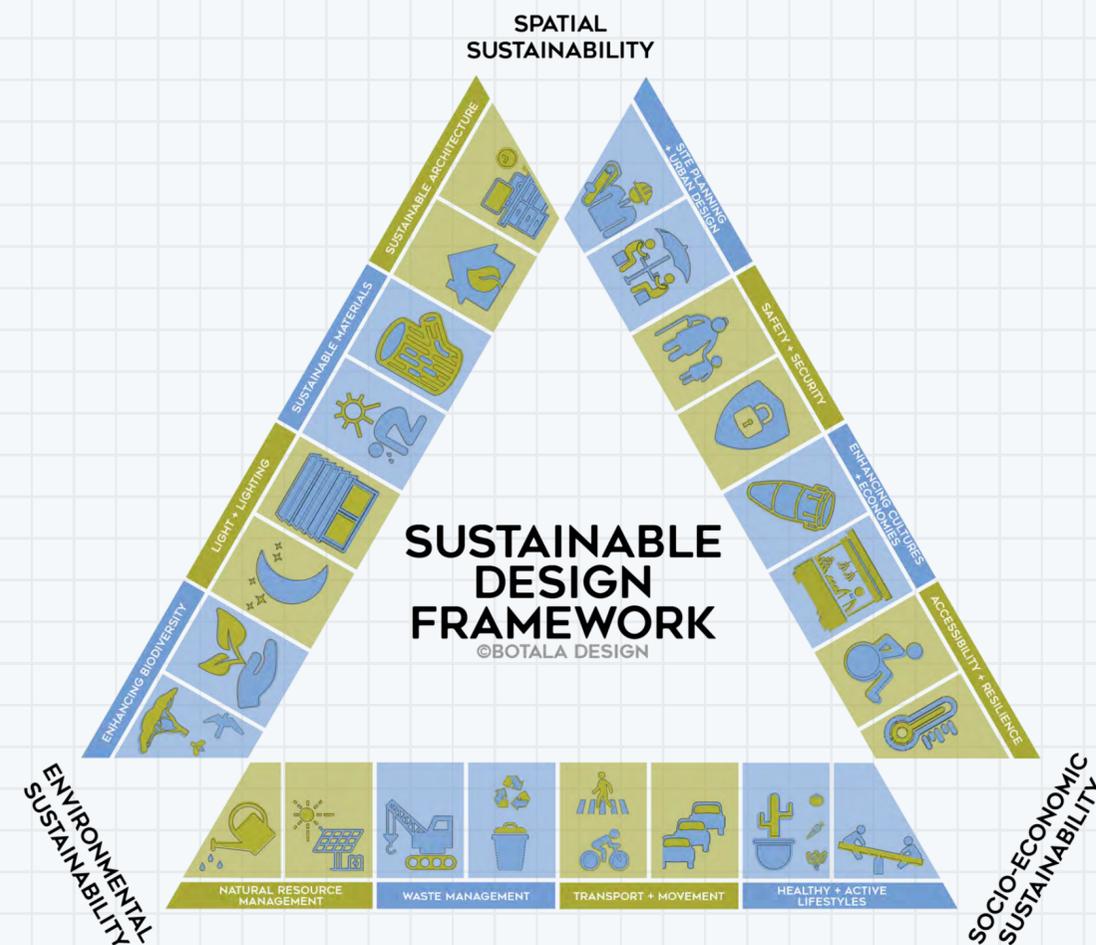
More and more, design trends, the metaverse, and the technologies that support them are putting their **transformative power** on display, and have already had humongous impact on our society and daily lives.

Using the above themes can take many shapes and forms, but one thing is for certain, there are limitless positive outcomes possible at the hands of designers of the future. That's where we can land, in the grand scheme of things, as forward-thinking businesses—*ensuring design and tech are applied to better our world.*



Sustainable design frameworks

The the near future, guidelines and metrics focused on sustainability will be more standardised.



Corporate sustainability frameworks will be *enforced*

Every listed company will be required to comply with ESG goals. Those that adapt earlier will reap the benefits and face a smoother road ahead.



Doing good is good for business

In the near future, guidelines and metrics focused on sustainability will be more standardised.

Purpose-driven brands outperform competitors by

20%

Firms facing ESG issues pay between

7 - 18

basis points more than those without

Average turnover rates are

25-55%

lower in companies with strong sustainability programs

85%

of consumers believe brands should be about something more than profit

Benefits across the board

There are real-world advantages for businesses that adapt early, often and with purpose.

Upgraded offering

Richer products and services with positive impact at their core, that benefit the user, the community they're a part of, and the world as a whole.

Strong company culture

Aligned teams—from any variety of functions and backgrounds—embracing impact-driven day-to-day actions.

Market differentiation

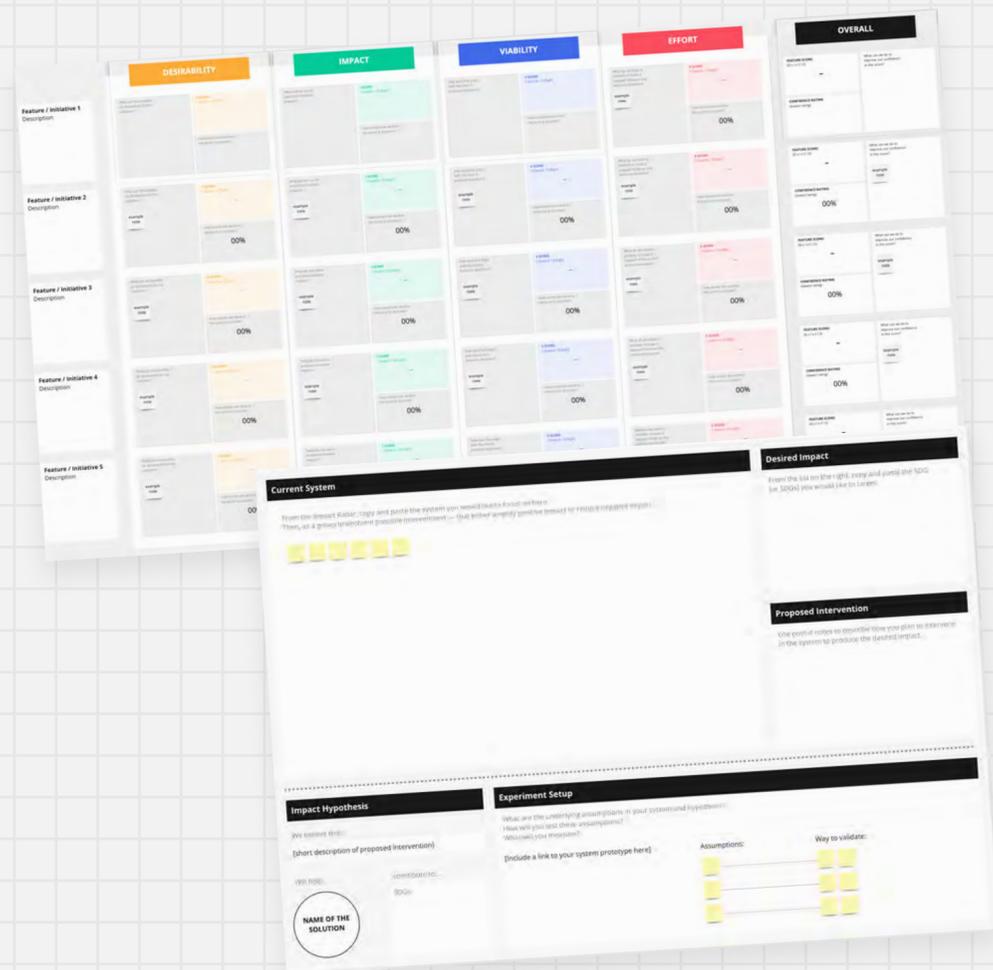
Create new market space and demand through product strategy, enhancing your brand and setting you apart from the crowd.

ESG performance

Build your capacity to report on ESG performance, opening your organisation to new investment possibilities, and exposure to new communities.

PALO IT's positive impact framework

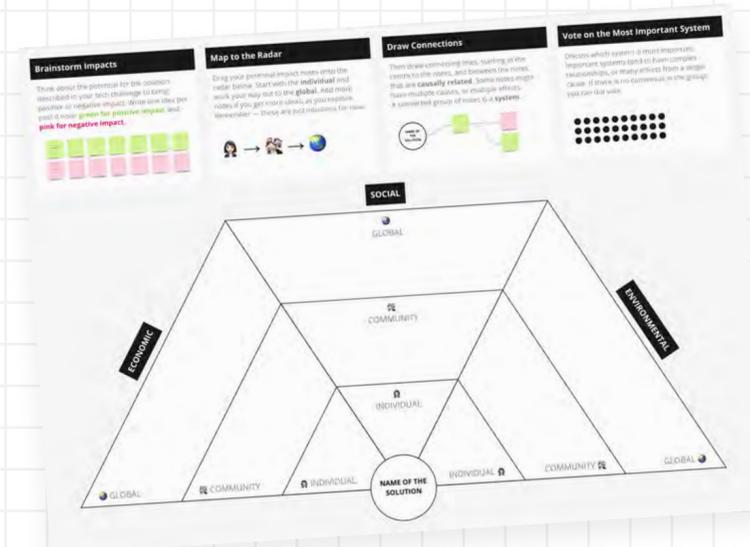
Our bespoke [Impact Design](#) framework is used both internally, and with clients, to guide our work.



A set of tools for designing for impact

Whether you have a holistic strategy in measuring positive impact, or are just starting to dip your toes in the water, future-focused businesses need the vision, theory and practical tools to ideate and build new products and services with positive impact at their core.

[DOWNLOAD THE TOOLKIT](#)



Get started today

We hope this introductory report gave you some practical ideas to start designing new products and services built for the future.

If you run into any questions along the way, drop the PALO IT team a note. Our team of innovators is at your fingertips.

CONTACT US

Ideas you might love

Urban planning design

Urban planing

Eco city



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Appendices

- A tapestry (TPESTRE) of trends for strategic planning
- 7 disruptions you might not see in the next five years
- Countries with largest populations by 2100
- Sustainable development report 2021
- Design of future things (Rules & Principles)

A tapestry (TPESTRE) of trends for strategic planning

Source: Gartner



Technological

- Augmented Human Experience
- Anywhere Operations
- Privacy Enhancing Computation



Political

- Techno Nationalism
- International Space Economy
- Disinformation



Economic

- Uncertain Growth
- Diffusion of Global Economic Power Structures
- Digital Economy Surge



Social/Cultural

- Population Shifts
- Redefinition of Work
- Institutions Shaped by the People



Trust/Ethics

- Purpose-Driven Organization
- The Great Institutional Trust Transition
- Contextual Privacy in Digital Society



Regulatory/Legal

- Regulatory Localization and the Multipolar World
- AI Governance, the Law and Future of Markets
- Regulatory Focus on Corporate Sustainability



Environmental

- Digitally Enabled Sustainability
- Carbon Flip
- Sustainability Inflexion Points

[gartner.com](https://www.gartner.com)

Source: Gartner

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7 Disruptions (you might not see in the next five years)

From DNA data storage to augmented humans, these disruptions will change the world...but not for a while

Non-traditional computer technologies

DNA data storage

Distributed cloud

Digital twin of the earth

Augmented humans

Technological biohacking

Emotional experiences

Computing technologies are evolving from traditional to digital, and then to neuromorphic, which allows them to be more human-like. Chips are getting smaller and more dense, new materials and markets are evolving, and the cost of computing is changing.

Source: [Gartner, 2020](#)

Distributed cloud is where cloud services are distributed to different physical locations, but still maintained by the public cloud provider. This means cheaper cloud services and better data sovereignty.

Source: [Gartner, 2020](#)

Computers can translate thoughts into text nowadays. Next up? Pictures can be pulled from and injected to people's minds. Exoskeleton and hearing implants can turn us into superhumans. This will change what it means to be (augmented) human, but will also raise some serious ethical questions.

Source: [Gartner, 2020](#)

Gartner predicts by

2024

Our emotional experiences will all be captured through sensors. AI identification of emotions will influence more than half of the online ads you see.

Source: [Gartner, 2020](#)

DNA data storage does this by encoding binary data in the base pairs of synthetic DNA.

One single gram of DNA could store all the knowledge generated by humans in one year.

Source: [Gartner, 2020](#)

A digital twin of the earth gives a holistic view of how climate is changing around the globe, how pollution is traveling from place to place, and even how ships are tracked from port to port. This changes how humans think about mapping, tracking, physical operations and emergency services.

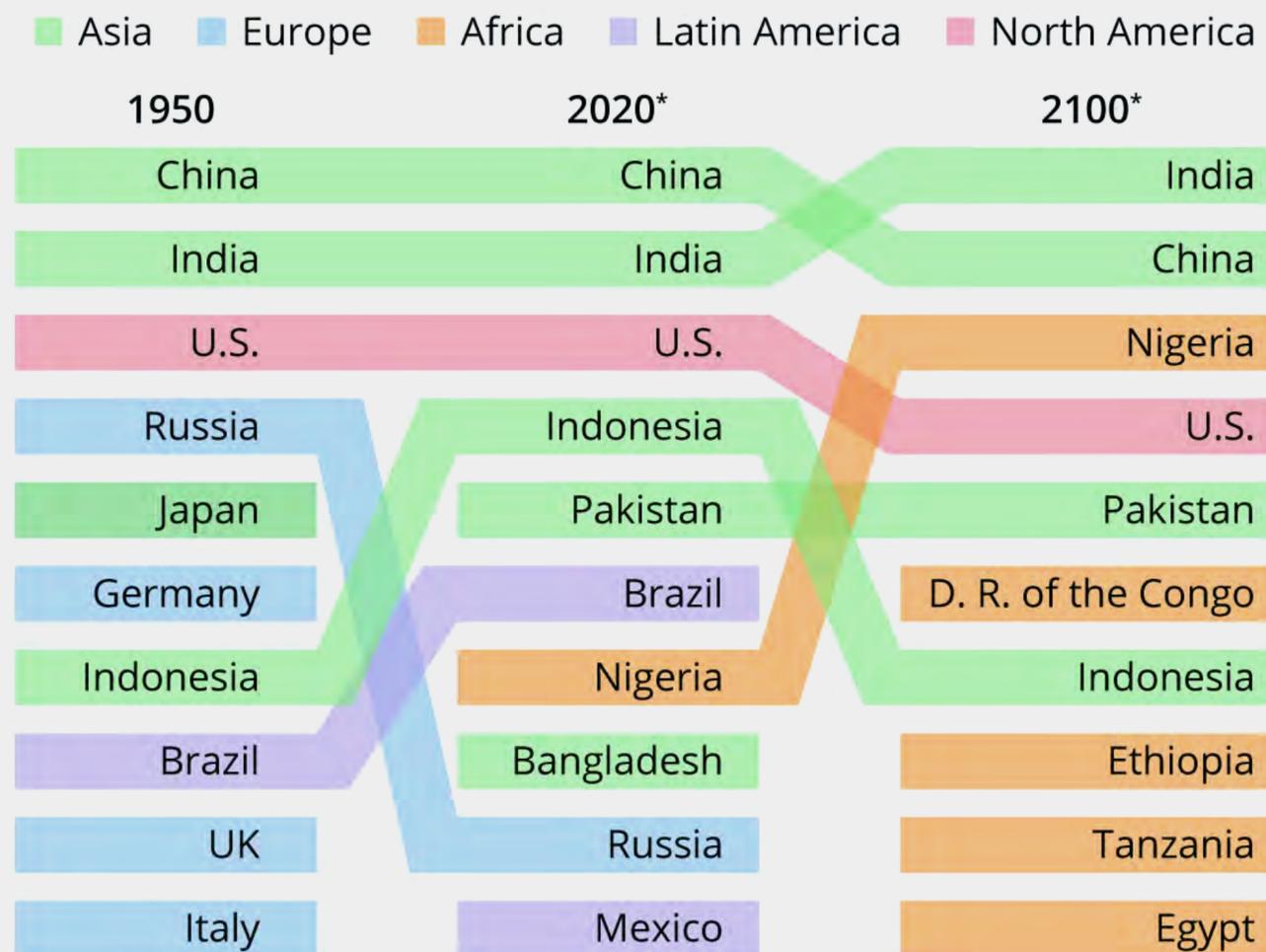
Source: [Gartner, 2020](#)

Everything is recorded. Computers are constantly listening, analyzing and storing data, but there are questions about the use of that information. This is especially important as computers begin to collect data that you're unconsciously sharing, from physical health to verbal triggers

Source: [Gartner, 2020](#)

Countries with Largest Population by 2100

Source: Statistica, Data from United Nations (UN)



* projections

China figures do not include Hong Kong, Macau or Taiwan

Source: United Nations "World Population Prospect" via Pew Research Center



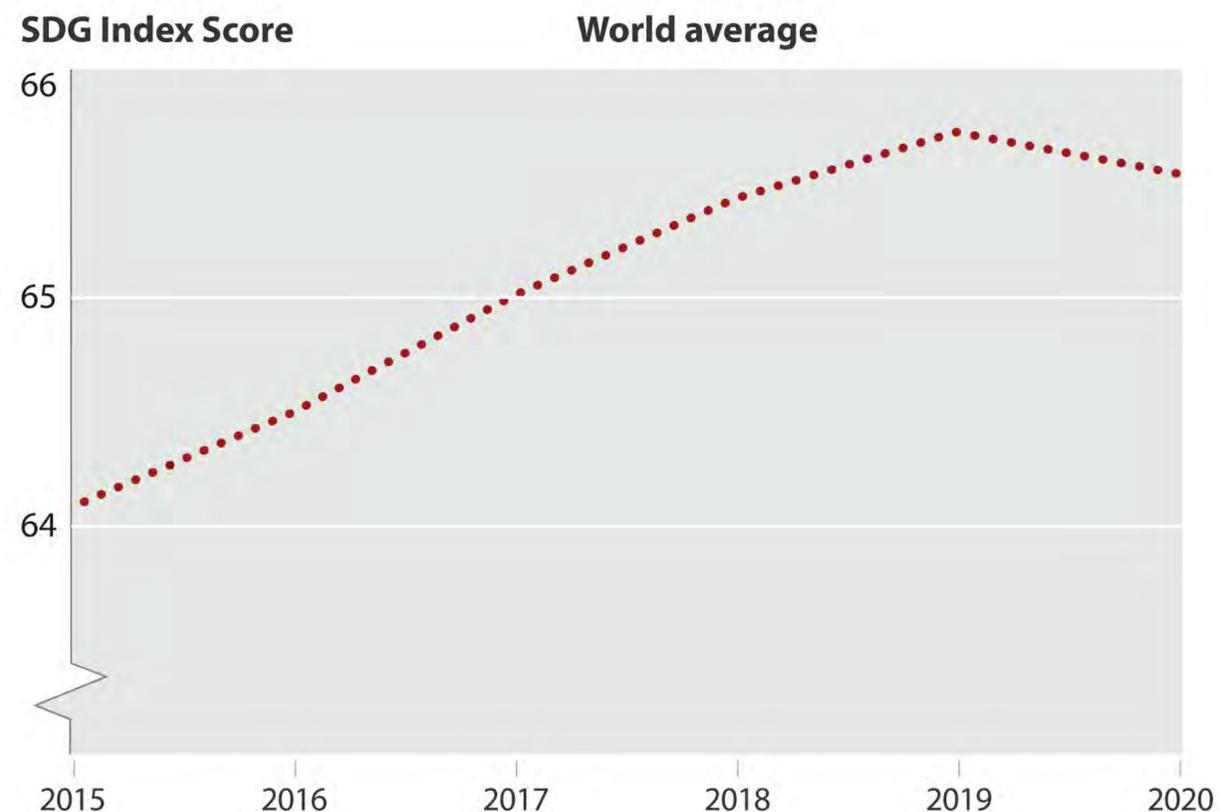
2020: First decline in SDG Index Score

since the adoption of SDGs in 2015 and priority shifts

The COVID-19 pandemic is a setback for sustainable development everywhere. For the first time since the adoption of the SDGs in 2015, the global average SDG Index score for 2020 has decreased from the previous year: a decline driven to a large extent by increased poverty rates and unemployment following the outbreak of the COVID-19 pandemic.

The decline in SDG performance globally is likely underestimated in this year's report, with many indicators for 2020 not yet available due to time lags in international statistics. The pandemic has impacted all three dimensions of sustainable development: economic, social, and environmental. The highest priority of every government must remain the suppression of the pandemic, through non-pharmaceutical interventions and global access to vaccines. There can be no sustainable development and economic recovery while the pandemic is raging.

<https://dashboards.sdgindex.org/chapters/executive-summary>



Sustainable Development Report

Executive Summary of Findings and Recommendations

Low-income developing countries (LIDCs) lack the fiscal space to finance emergency response and investment-led recovery plans aligned with the SDGs.

... **rich countries are likely to recover from the pandemic more quickly than poor countries.**

The SDGs and the six SDG Transformations can inform a sustainable, inclusive, and resilient recovery from COVID-19.

Large fiscal packages of major economies present an opportunity to foster a green, digital, and inclusive recovery.

Global challenges, including pandemics but also climate change and the biodiversity crisis, require a strong multilateral system.

Climate change has already led to a sharp rise in natural disasters, including droughts, typhoons, the impact of rising sea levels, and heat waves.

The digital revolution has moved many supply chains online but also increased the risk of widespread cyberattacks.

Sustainable Development Report

Executive Summary of Findings and Recommendations

Regional average SDG Index score against International Spillover Index score

... rich countries can generate negative socioeconomic and environmental spillovers, including through unsustainable trade and supply chains.

The pandemic has underlined the need to accelerate progress towards universal health coverage and universal access to key infrastructure, especially digital infrastructure.

The importance of digital applications underscores the vital importance of universal access to broadband services as key to social inclusion, economic opportunity, and public health.

Data gaps and time lags in official statistics to monitor countries' commitments and progress on key SDG transformations

More than five years after the adoption of the SDGs, considerable gaps in particular:

-  **SDG 4 (Quality Education),**
-  **SDG 5 (Gender Equality),**
-  **SDG 12 (Responsible Consumption and Production),**
-  **SDG 13 (Climate Action), &**
-  **SDG 14 (Life Below Water).**

The Design of Future Things

Don Norman (2017)

Design Rules for Human Designers of Smart Machines

1. Provide rich, complex, and natural signals.
2. Be predictable.
3. Provide good conceptual models.
4. Make the output understandable.
5. Provide continual awareness without annoyance.
6. Exploit natural mappings.

Design Rules Developed by Machines to Improve Their Interactions with People

1. Keep things simple.
2. Give people a conceptual model.
3. Give reasons.
4. Make people think they are in control.
5. Continually reassure.
6. Never label human behaviour as “error.” (Rule added by the human interviewer.)