



GovTech / E-governance Global Industry Landscape in the Post-Pandemic World 2021/Q2 Teaser

June, 2021



Global GovTech and E-governance Industry Analytical Report 2021/Q2

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Introduction

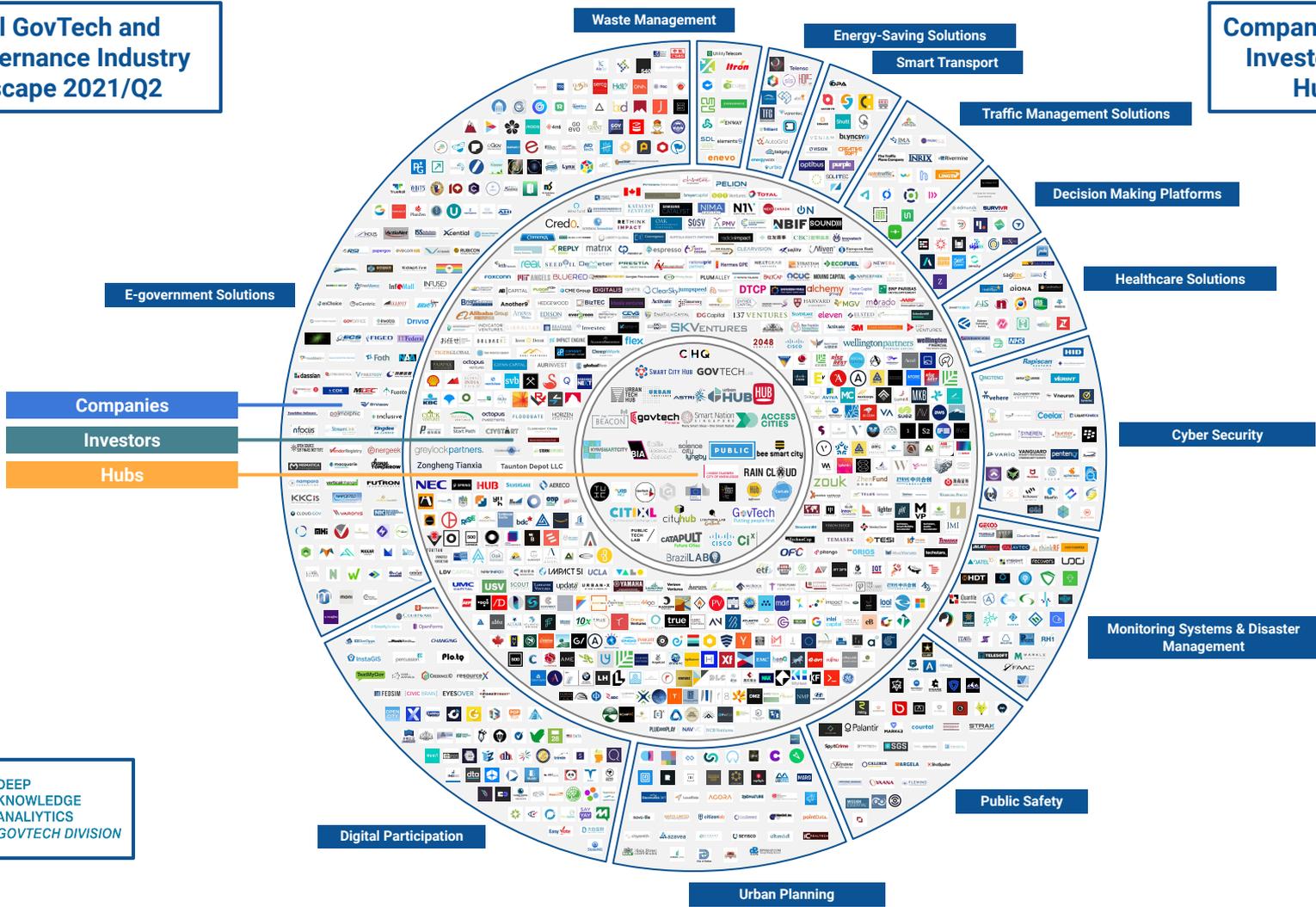
Developed by Deep Knowledge Analytics, **GovTech / E-governance Global Industry Landscape in the Post-Pandemic World 2021/Q2** report contains a comprehensive overview of the global GovTech industry in the public sector. The report focuses on factors driving the ongoing transformation of governments, barriers to this process, ways to overcome them, and the main trends of the industry in the post-pandemic period.

The Covid-19 pandemic has highlighted the need for governments around the world to take technological action to streamline processes and digitize services. Citizens and institutions alike share an urgent need to foster efforts that promise to expand and improve access to public services through technology.

The report also provides information on the main types of technologies used by GovTech, including blockchain, AI and machine learning, IoT, robotic automation, and geospatial data analysis. The main emphasis is placed on the best examples of their implementation on various levels of public management. **The power of GovTech lies in its ability to help governments to govern and innovate more effectively.**

Global GovTech and E-governance Industry Landscape 2021/Q2

Companies - 500
Investors - 500
Hubs - 35+

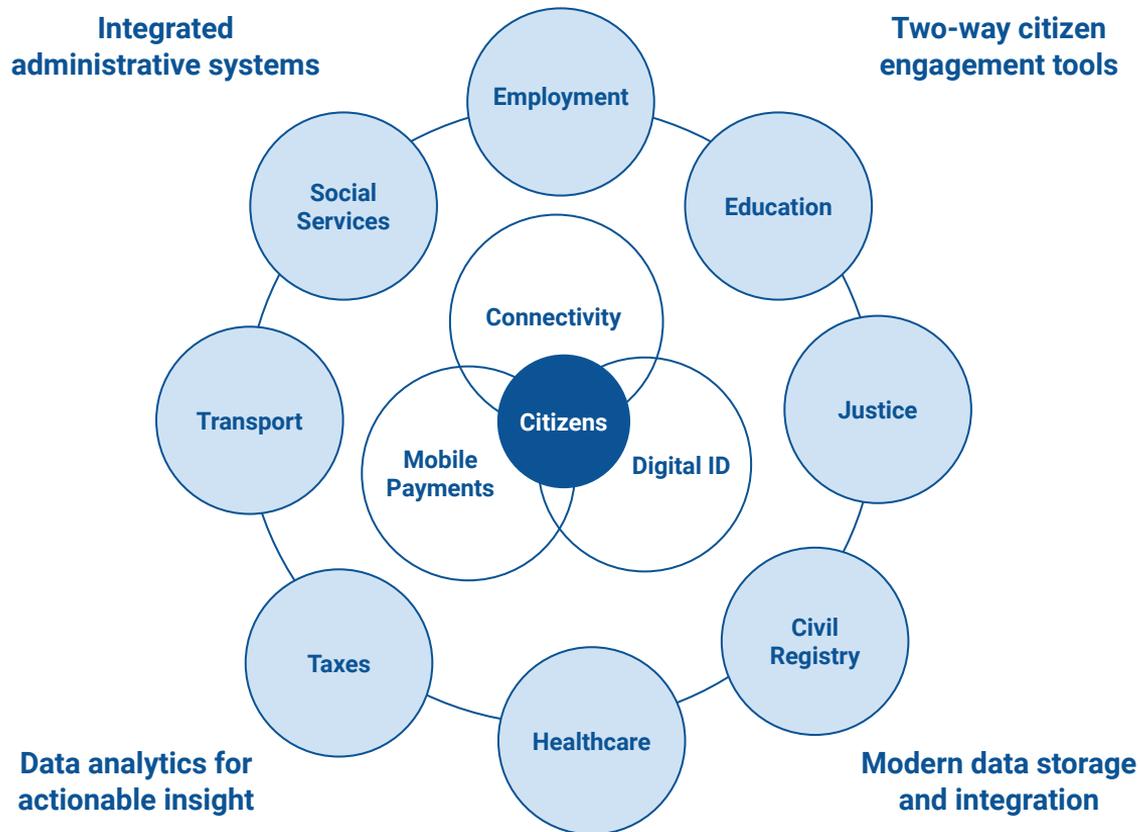


Approach for Integrated Government

Aimed at achieving common goals, an integrated government approach seeks to bridge the gap between different ministries, departments and agencies through better coordination and cooperation between them.

This approach also includes horizontal and vertical integration to deliver seamless e-government services. Horizontal integration stands for interaction between ministries and departments, while vertical one means inter-level management.

During the COVID-19 pandemic, governments have identified the need to introduce citizens-centric tools to improve service delivery and interact with citizens online without social contacts.



GovTech / E-Governance Industry Landscape Framework

E-Government

Digital Participation

Decision Making Platforms

Electronic Identity

Electronic Voting

G2G Systems

G2B Services
(e-tax, e-banking)

Smart City

Monitoring Systems &
Disaster Management

Energy-Saving Solutions

Urban Planning

Waste Management

Smart Transport

Traffic Management
Solutions

CrimeTech

Smart Recognition and
Identification

Cyber Security

e-Courts

Civil Defence

Crime Analysis Platforms

Anti-money Laundering

Other

AgTech
(Agriculture)

Longevity Technologies

e-HealthCare Solutions

Electronic School

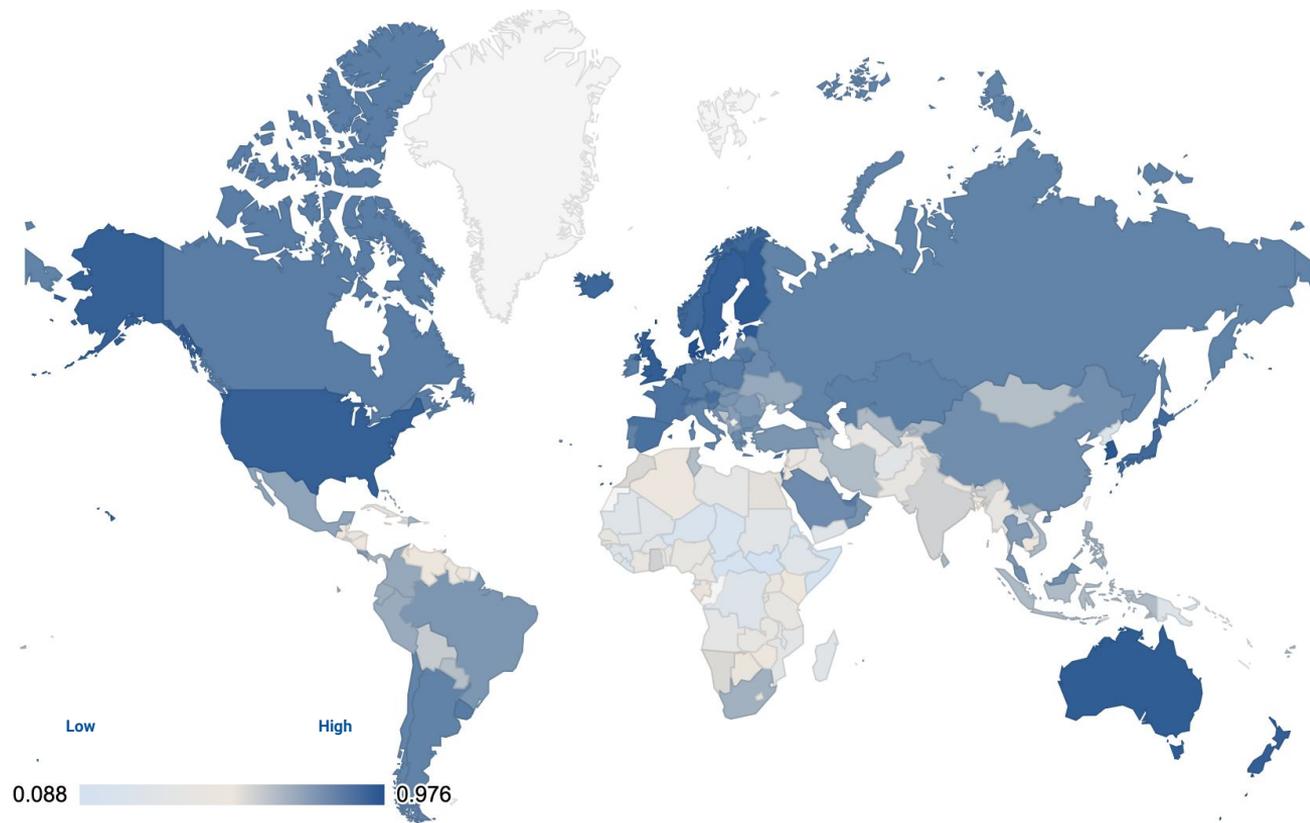
Various Sensors and
IoT Technologies

Sport and Entertainment

E-Government Development Index 2020

According to the UN, **e-government** is a key factor in advancing the **implementation** of the Sustainable Development Goals. Public services should be accessible to all and **e-government** has to harness existing and new technology in order to ensure that. There is a risk of a new digital divide, as low-income countries with insufficient **infrastructure** are lagging behind, leaving already vulnerable people even more at risk of not being able to gain any advantage from **new technologies**.

The importance of **GovTech** during the pandemic is more important than ever, as most citizens are facing the problem of limited mobility. This makes **e-government** services extremely comfortable and safe to use.



Main Trends in GovTech / E-Governance

Many changes in the way people access government services are likely to remain in place even after the pandemic threat recedes, creating tremendous opportunities for software developers specializing in GovTech applications.

Not only has the pandemic demonstrated the importance of developing e-government systems, but it also heightened the need for GovTech solutions using which countries can provide their citizens with an effective way of accessing government services.

Main Trends in GovTech after COVID-19

Remote Collaboration

As tools, processes and software are constantly improving, it is possible to implement large-scale GovTech projects remotely, regardless of their location and time zones.

SMEs and Startups Support

Many governments are pursuing initiatives to eliminate the impact of COVID-19. In such case, SMEs and startups are going to become technological partners in delivering public services more efficiently.

Cloud Shift

The legacy systems limitations drive the shift to the cloud, as storing data on physical servers is no longer secure. Moving to the cloud provides greater resilience, saves money, and spurs innovation.

Confidentiality

Governments use big amounts of private data that need to be kept secure. By creating platforms that promote transparency and protect data, GovTech developers can play an important role in building trust between governments and citizens.

Higher efficiency, lower costs

Governments are looking for platforms that can meet multiple needs and enable them to eliminate high costs. It is, therefore, necessary to find GovTech solutions that are easy to implement, use and maintain.

Growing public expectations

Growing public expectations continue to reshape public service delivery. GovTech startups will have to develop apps capable of connecting citizens to governments and upgrading processes that relied on physical interaction, ineffective manual methods and direct physical interaction.

Charter Cities as a New Direction of Governance

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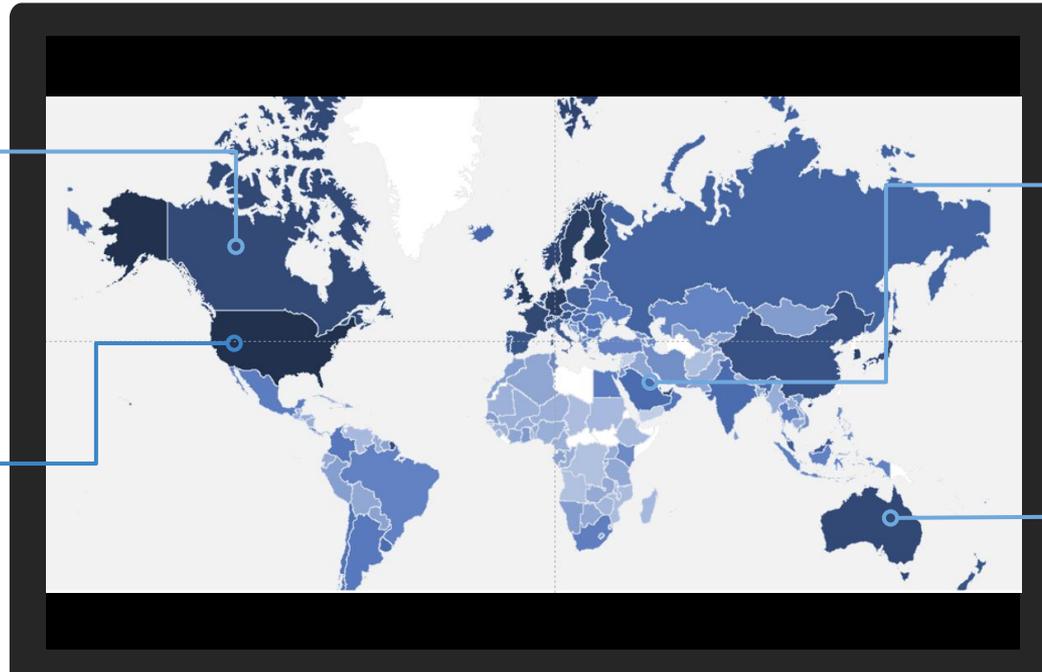
Charter cities are a public policy tool designed to help countries with developing economies put in place institutions that can serve as the foundation for economic success. Thanks to it, they can experiment with new policies meant to attract businesses, foster economic growth, create jobs, empower small business, and support historically disadvantaged groups. By fostering an innovation-friendly environment, charter cities also promote institutional and economic growth.

Common Features of Charter Cities

Greenfield Site	Independent Administrative Entity
<ul style="list-style-type: none">• Building on undeveloped land allows to avoid the political challenges of implementing a new governance system in an existing city• Charter cities are built with exclusively private financing which protects the host country from financial risks	<ul style="list-style-type: none">• Public-private partnership between the developer and the host country• Retains a wide range of freedom to implement and reform commercial law as it deems fit• Taxing authority, including a revenue-sharing agreement with the host country
Blank Slate in Commercial Law under the Independent Administrative Entity <ul style="list-style-type: none">• Business registration• Property registration• Education• Transportation law• Labor law• Energy law• Financial law as it relates to banking, insurance, capital, and securities and derivatives• Healthcare law• Building codes and construction permits	

AI in GovTech in Selected countries

AI Readiness Index 2020



Canada

Implementation of chatbots (virtual assistants) in Surrey Municipal help residents get answers to questions related to municipal infrastructure.

The USA

Predictive analytics in Atlanta Fire Rescue Department accurately predicted 73% of fire incidents in the building.

The UAE

Launch of the 'UAE Strategy for Artificial Intelligence (AI)' by the Government aims to boost government performance at all levels and make the UAE the first in the field of AI investments in various sectors

Australia

Implementation of chatbots (virtual assistants) in Taxation Office helped to resolve 88% of queries on first contact.



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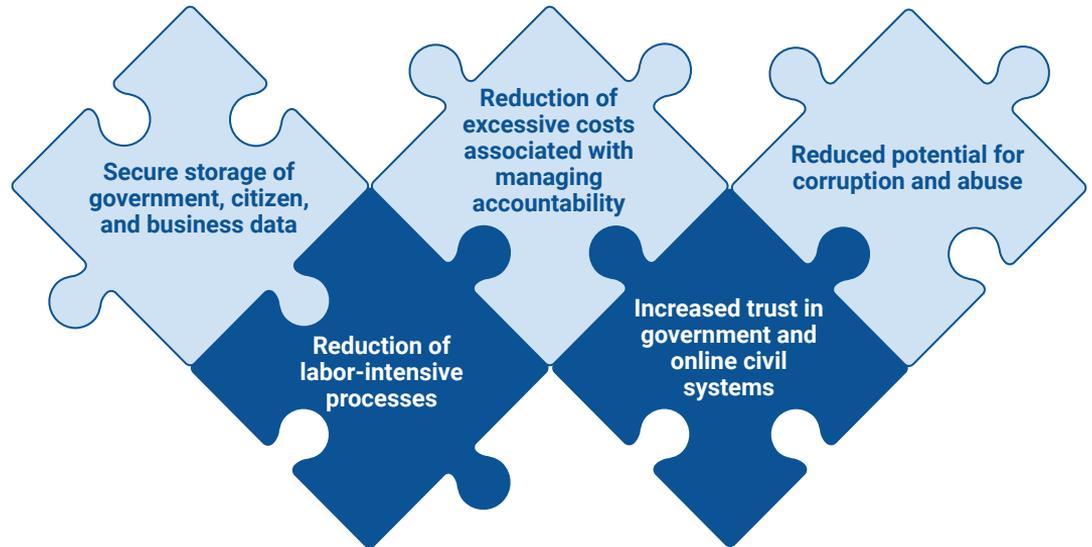
100

Benefits of Blockchain in GovTech

Blockchain-based digital government can protect data, streamline processes, and reduce fraud, waste, and abuse, while increasing trust and accountability. In a blockchain-based model of government, individuals, businesses, and governments share resources in a distributed ledger protected by cryptography. This framework eliminates a single point of failure and inherently protects the sensitive data of citizens and government.

The distributed ledger format can be used to support a variety of government and public sector applications, including digital currency/payments, land registration, identity management, supply chain tracking, healthcare, corporate registration, taxation, voting (elections and proxies), and corporate governance.

Blockchain-based government can solve legacy problems and provide the following benefits:



IT Spending by Governments Worldwide

The rise in IT spending is largely driven by new expectations on the part of constituents. Public health and safety measures, including vaccination of citizens, care causing governments to accelerate their digital transformation. Nowadays, constituents expect digital services delivery, legacy IT modernization, and increased role of technology to be the basis of their day-to-day operations.

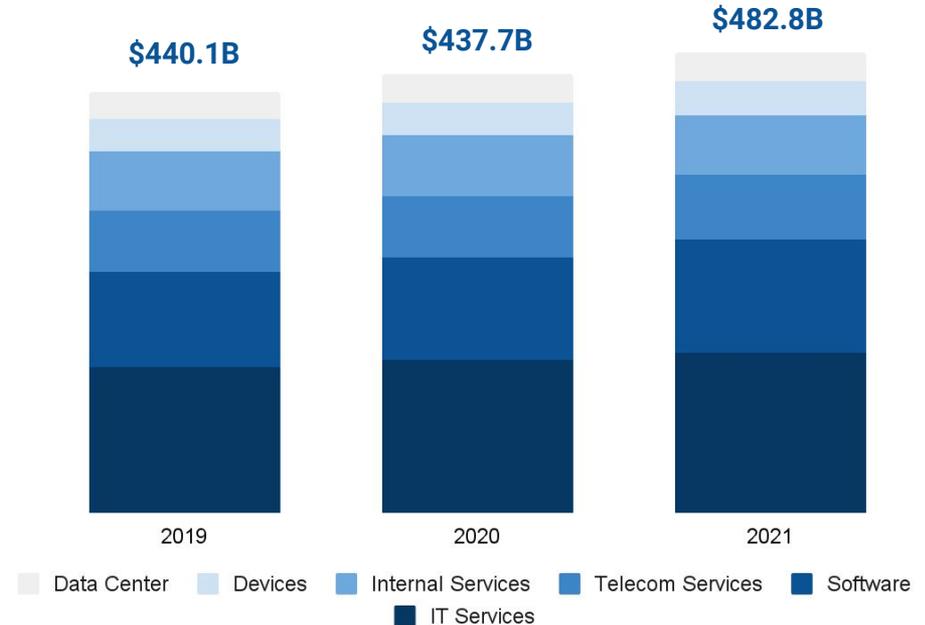
Drivers

- Increased remote work
- Testing and contact tracing
- Vaccine distribution and communication
- Migration to virtual services
- COVID-19 constituent communication

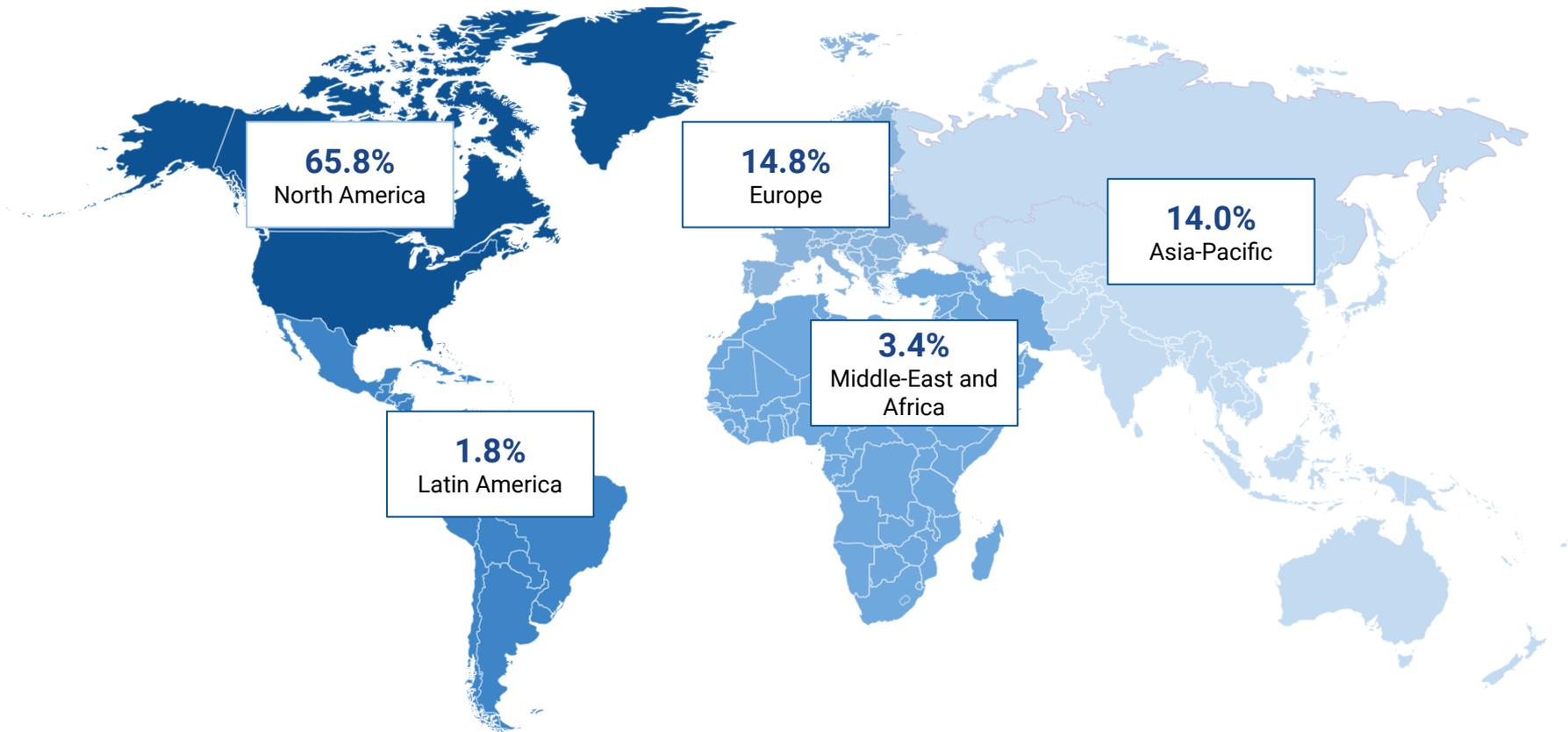
IT Opportunities

- Mobilizing staff for remote work
- Cybersecurity
- Document management and workflow
- An uptick in virtual care technologies and telehealth
- Digitization of citizen-facing services
- Increased use of data

Global IT Spending in 2019-2021



GovTech Companies Distribution by Regions



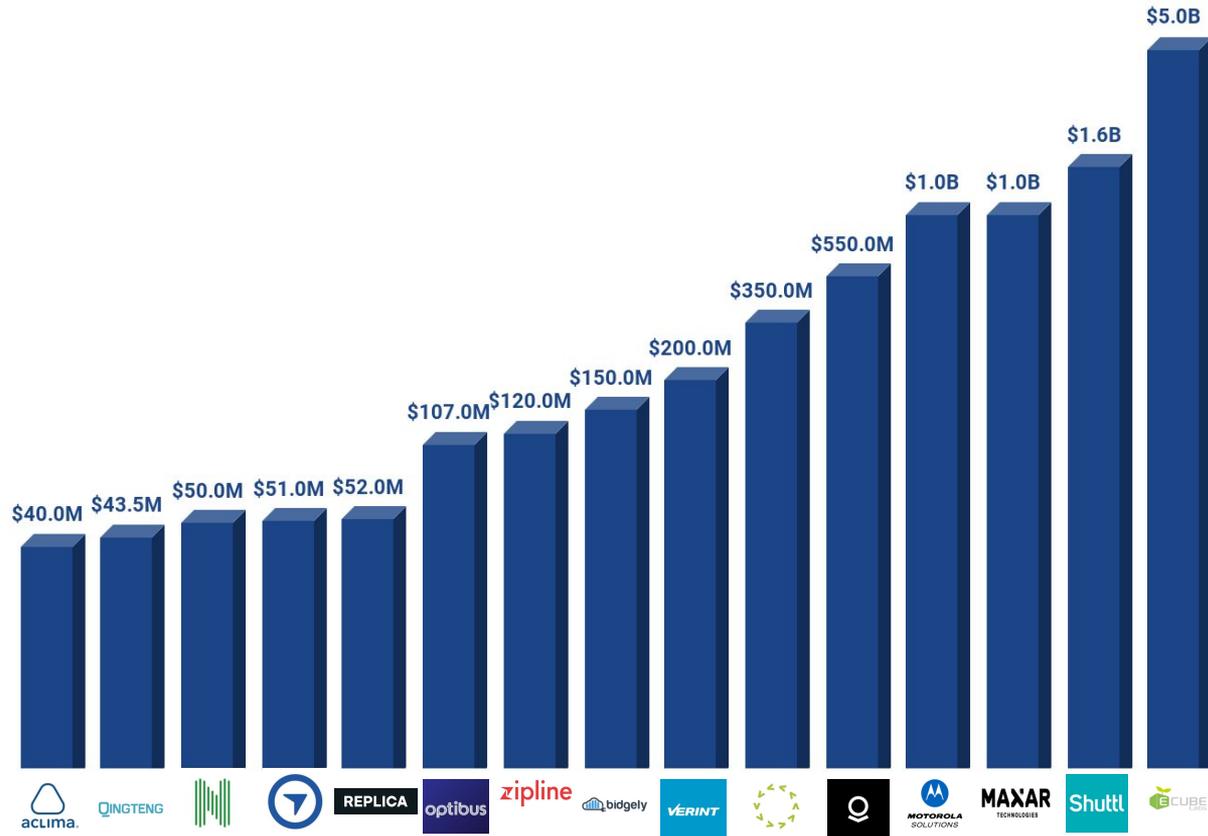
Top-15 GovTech Companies by Funding Amount in 2019-2021

1 More than \$10B was invested in GovTech startups during 2019-2021.

2 Top-15 GovTech companies account for 96% of companies that were invested in.

3 With \$8.4B, North America is the largest region by funding, followed by Europe with \$2.0B.

4 Approximately \$750M was invested in Q1-Q3 2021.



Outlook for Implementation of Technologies for Governments

Digital Government Policy Response to the COVID-19 Pandemic

Time Horizon	Policy Action	Digital Government Response
Short-term	React	<ul style="list-style-type: none">• Using digital platforms for accurate and timely information-sharing• Initiating two-way communication with people and fostering e-participation• Protecting people's privacy and sensitive data and taking into consideration unintended consequences of technologies
Mid-term	Resolve	<ul style="list-style-type: none">• Forming effective multi-stakeholder partnerships (for example, private sector, international organizations, academia) on regional, national and local levels• Drawing on lessons learned from the ongoing crisis
Long-term	Reinvent	<ul style="list-style-type: none">• Investments in innovative technologies (e.g. AI, blockchain, robots, and drones) to increase resilience of healthcare systems and national economies and improve public services delivery• Revisiting the concept of data protection and privacy legislation along with lessons learned

GovTech Influencers - Government



Jeff S. Merritt
World Economic Forum



Timothy Martin
Government Finance Officers Association



Abhi Nemani
City of Sacramento



Ajit Pai
Federal Communications Commission



David A. Bray
Federal Communications Commission



Ashley Mahan
FedRAMP



Bakul Patel
US FDA



Rob Lloyd
City of San José



Jackson Mthembu
South African Ministry



Jake Taylor
US White House



Chi Onwurah
UK Parliament



Dr. Peter Pirnejad
Foster City, USA



Rikke Hougaard Zeberg
Danish Agency for Digitisation



Nadhim Zahawi
UK Parliament



Konstantin Noskov
Russian Ministry



Konstantin Shulgan
Belarusian Ministry



Mohamed Maleeh Jamal
Maldivian Ministry



Hon Kris Faafoi
New Zealand Ministry



Mongi Marzouk
Tunisian Parliament



Danilo Astori
Uruguayan Ministry



Eduard Müller
Austrian Ministry



Francis Suarez
City of Miami, USA



Andy Beale
UK Cabinet Office



Mike Sarasti
City of Miami, USA



Andrea Leadsom
UK Parliament



Anna-Maija Karjalainen
Finnish Ministry



Arturo Herrera Gutiérrez
Cabinet of Mexico

GovTech Influencers - Business



William Eggers
Deloitte



Anne Lochoff
indexable



Stonly Baptiste
Urban Us



Shaun Abrahamson
Urban Us



Julie Lein
Urban Innovation Fund



Clara Brenner
Urban Innovation Fund



Francis Pollara
Urban Movement Labs



Tanya Filer
StateUp



Anne Petersen
18F



Elle Hemen
The Atlas



Sascha Haselmayer
Citymart



Catherine Geanuracos
CityGrows



Ben Gordon
CitizenLab



Frederik Groce
Storm Ventures



Dustin Haisler
eRepublic



Fredrick Hutson
Pigeonly



Tai Huynh
Acta Solutions



Anthony Jamison
CivStart



Niles Friedman
Star Insights



Sarah Kerner
CivStart



Rochelle Keyhan
Collective Liberty



Nick Lyell
CivStart



Chris Offensend
Qwally



Steve Ressler
GovTech Investor
and Entrepreneur



Chris Sosnowski
Waterly



Jimmy Martin
AMCS Group



Julia Glidden
Microsoft

GovTech Influencers - Journalists



David Bicknell
Government
Computing



Derek du Preez
Diginomica
Government



Gary Flood
Diginomica
Government, Think
Digital Partners



Lis Evensted
Computer Weekly



Caroline Donelly
Computer Weekly



Mark Say
UKAuthority



Hannah Crouch
Digital Health



Sam Trendall
Public Technology



Tom Wright
CRN



Martin Veitch
IDG Connect



Mark Chillingworth
Horizon CIO Network



Alice Lipowicz
Set-Aside Alert



Bryan Glick
Computer Weekly



Phil Goldstein
FedTech, StateTech



Alexandra S. Levine
Politico



Noelle Knell
GovTech News



Lauren Harrison
GovTech News



Benjamin Miller
GovTech News



Owen Hughes
TechRepublic



Mark Chillingworth
IDG Connect



Warwick Mansell
Education Uncovered



Jacqueline Poh
GovTech Singapore



Oscar Williams
NS Tech



Nick Golding
LGC



Jane Dudman
The Guardian



Alison Holt
BBC



Karen Hunter
Karen Hunter Show

10 Upcoming GovTech Conferences and Events in 2021



State of GovTech 2021
15-16 June
Online



Viva Technology
17-19 June
Paris, France & Online



The Smart City Event
22-25 June
Miami Beach, USA



ITU Digital World 2021
October
Hanoi, Vietnam



GovTech Virtual Summit
12 October
Online



Tech in Gov
10-11 August 2021
Canberra, Australia



IoT World
2-4 November
California, USA & Online



The Public Sector IT Conference: Integrating and collaborating
4 November
Online

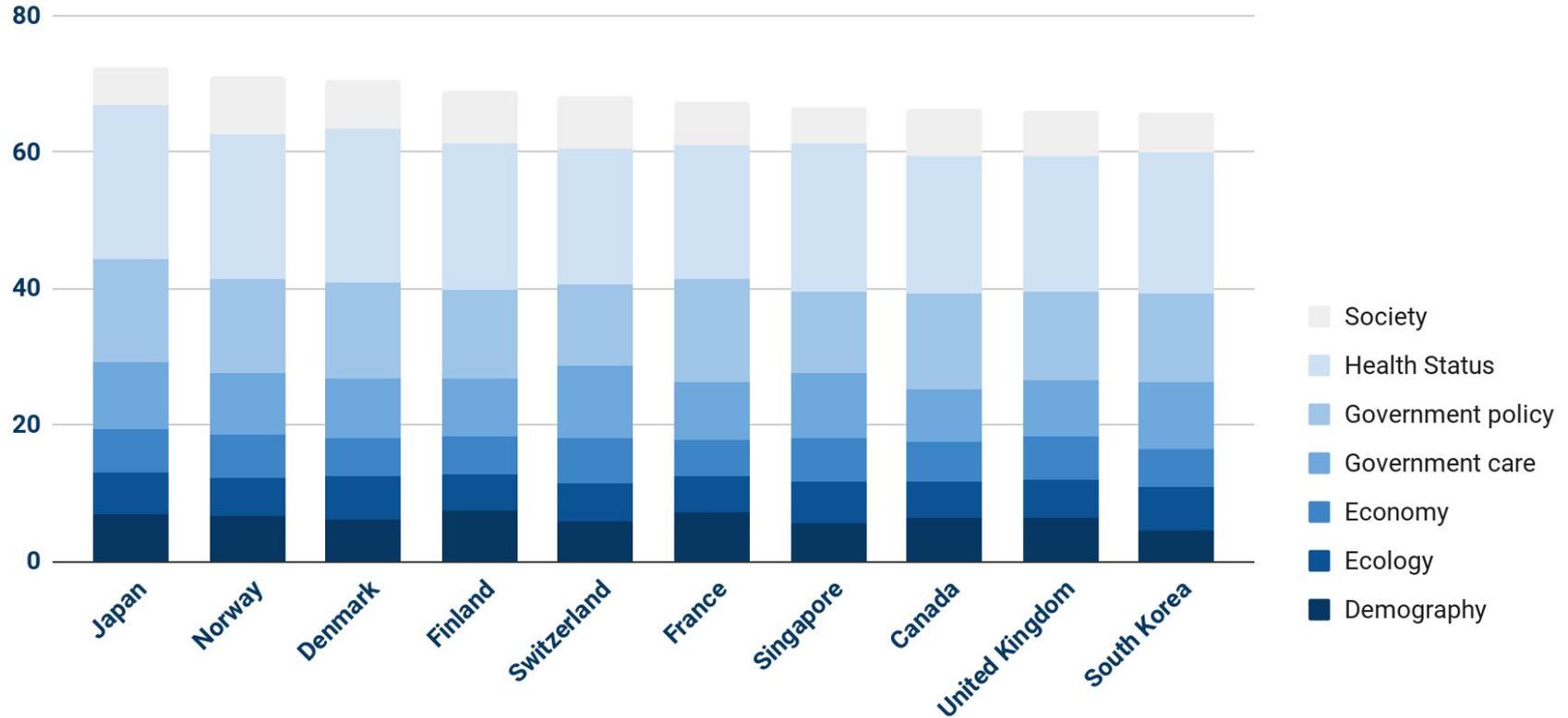


MOVE: Mobility Re-imagined
9-10 November
London, UK



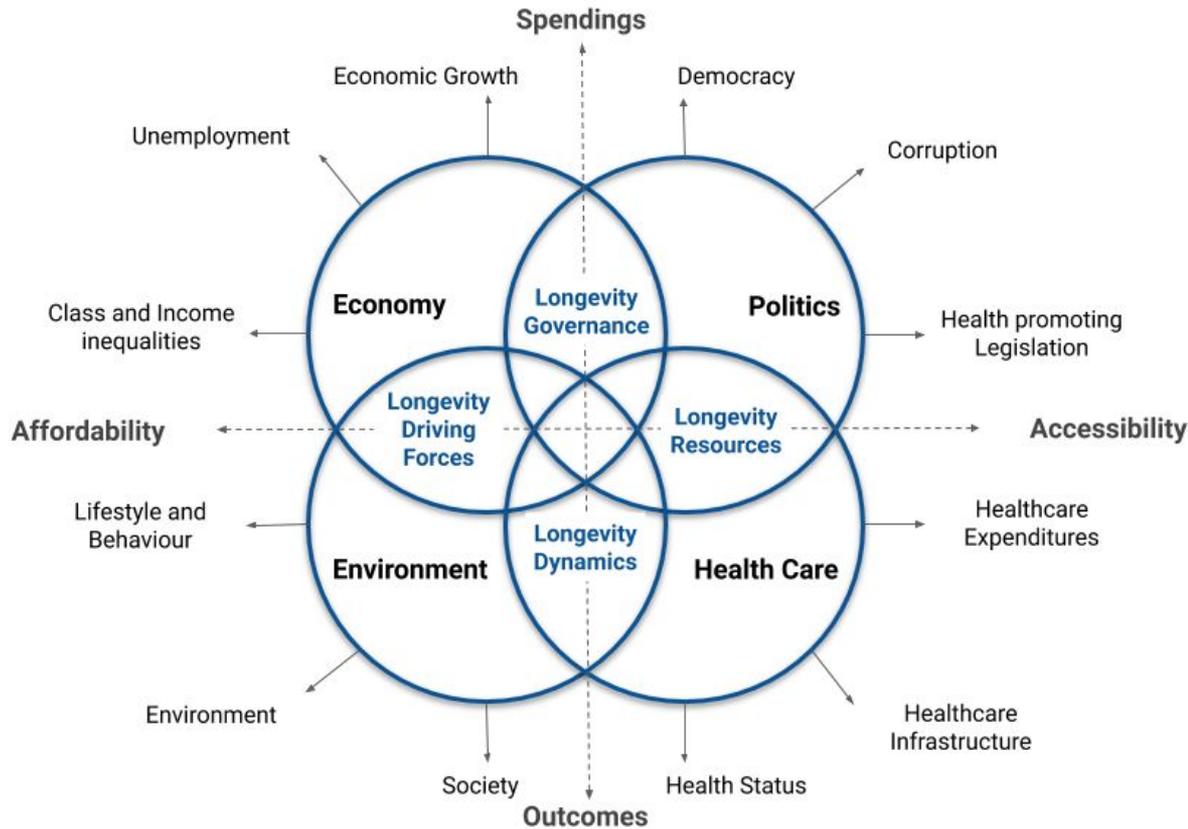
New York City Virtual Technology Forum
30 November
Online

Top-10 Countries by Government Longevity Development



Countries government longevity development directly affect the health-adjusted life expectancy and life expectancy in general.

Longevity Progressiveness as a Part of Longevity Governance



Longevity progressiveness is important for driving economic progress and competitiveness – both for developed and developing economies. Healthy Longevity is affected by many groups of factors such as socioeconomic status, demography, income, wellbeing, the quality of the health system and the ability of people to access it, health behaviours such as tobacco and excessive alcohol consumption, poor nutrition, and the lack of exercise, social factors, genetic factors and environmental factors including overcrowded housing, the lack of clean drinking water and adequate sanitation. Longevity progressiveness should be based on four pillars. They are good health outcomes, cost-efficiency, affordability of healthcare treatment for the population and widest possible access to services and products.

GovTech Predictions 2022-2024

Shift in global paradigm:

- Corona crisis management
- Rising citizens' expectations of governmental efficiency
- Large state budgets exclusively for the implementation of digital services delivery

2021

- Large companies understand the importance and the opportunity to modernize government services
- Democracy mechanisms are exhausted (e.g. possibly manipulated Brexit votes)

2021-2022

Effective public-private partnerships through sharing technologies, expertise and tools

2022-2024

Shift in governmental services:

Contact tracing, e-health, online learning, remote work.

Digital ID, tax simplification.

Agile service management: online people-centric transactional services (e.g. business registration) based on real-time data analytics.

E.g. GovTechStart by Amazon

Online voting, post-election digital audit, **government-only cloud environments.**

Asian GovTech startups will rise dramatically and achieve global prominence.

Extensive usage of **AI, drones, blockchain, robots**, etc. will increase the resilience of national economies, state data, healthcare, educational and security systems.

GovTech Market Size:

\$480B

\$650B

\$1T

Sources: Statista, Accenture, data.europa

Longevity Investment Big Data Analytics Dashboard



Longevity Investment Big Data Analytics Dashboard

Market Intelligence

Longevity Investment Market Intelligence

Major Trends

Network Diagrams

Interactive MindMaps

Interactive Mindmaps



View More

Dashboard Parameters

DATA POINTS

4810866

PERSONALITIES

16107

COMPANIES

19603

INVESTORS

9007

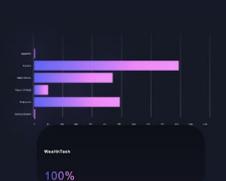
SECTORS

14

SUBSECTORS

140

Dynamic Industry Charts



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Longevity Investment Market Intelligence

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Longevity Investment Ecosystem Investors

Investor Portfolio Search

Investor Competitors Search

Investor Search

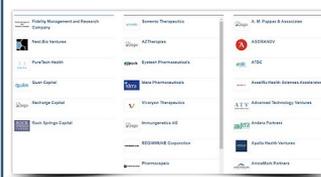
Investor & Company Advanced Search



Find Investors

Find Companies

Competitor Search



Company Competitors

Investor Competitors

Interactive Network Diagrams



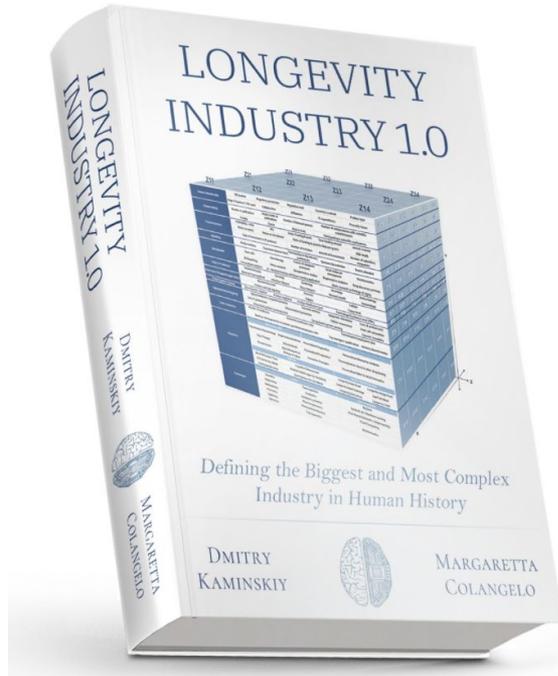
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Longevity Investment Ecosystem Companies

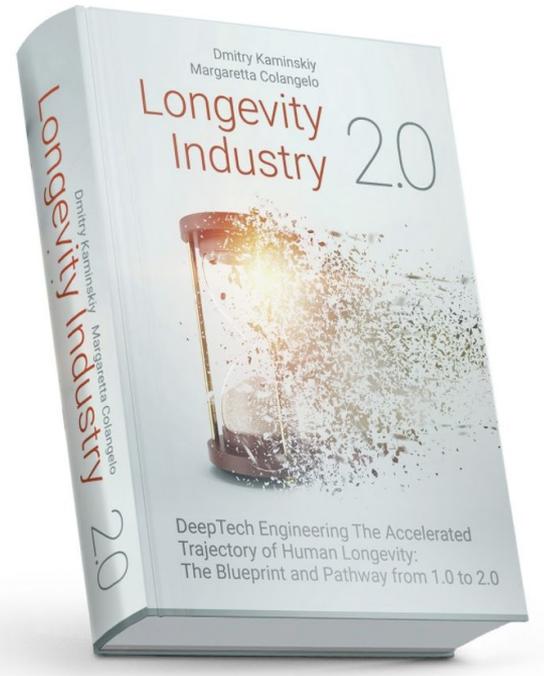
Company Investor Search

Company Competitors Search

Entrepreneur Search



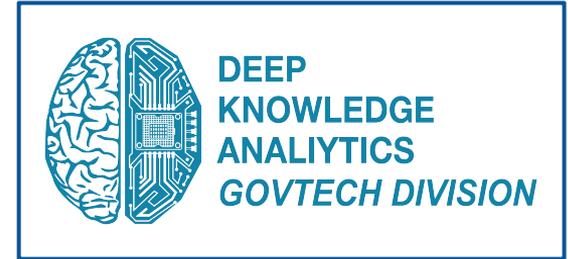
Longevity Industry 1.0
Defining the Biggest and Most
Complex Industry in Human History



Longevity Industry 2.0
DeepTech Engineering The Accelerated
Trajectory of Human Longevity
The Blueprint and Pathway from 1.0 to 2.0

About GovTech Division of Deep Knowledge Analytics

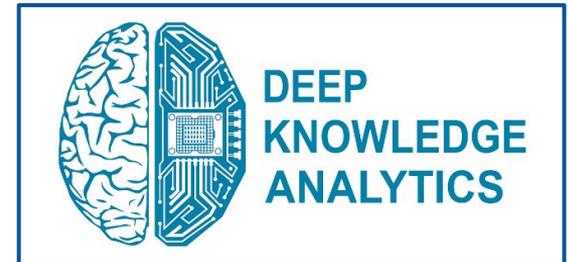
[GovTech Division of Deep Knowledge Analytics](#) is researching the trajectory of the GovTech industry by focusing on factors driving the ongoing transformation of a state, main sectors to be changed, barriers to this process and ways to overcome them. It also provides information on the main types of technologies used by GovTech including AI and machine learning, IoT, blockchain, robotic automation, and geospatial data analysis, with emphasis on the best examples of their implementation including decrease of time and complexity in public-private information exchanges, reduction of bureaucracy and corruption, improvement in automation, transparency, and accountability of information.

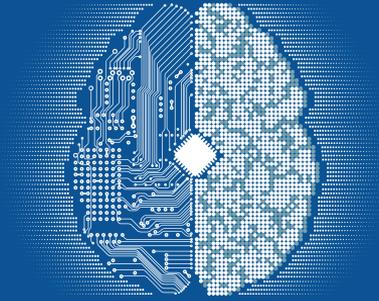


About Deep Knowledge Analytics

[Deep Knowledge Analytics](#) is a DeepTech focused agency producing advanced analytics on DeepTech and frontier-technology industries using sophisticated multi-dimensional frameworks and algorithmic methods that combine hundreds of specially-designed and specifically-weighted metrics and parameters to deliver sophisticated market intelligence, pragmatic forecasting and tangible industry benchmarking.

It is an analytical subsidiary of [Deep Knowledge Group](#), an international consortium of commercial and non-profit organizations focused on the synergetic convergence of DeepTech and Frontier Technologies (AI, Longevity, MedTech, FinTech, GovTech), applying progressive data-driven Invest-Tech solutions with a long-term strategic focus on AI in Healthcare, Longevity and Precision Health, and aiming to achieve positive impact through the support of progressive technologies for the benefit of humanity via scientific research, investment, entrepreneurship, analytics and philanthropy.





Link to the Report: www.govtech.global/govtech-global-industry-landscape

E-mail: info@govtech.global

Website: www.govtech.global

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