LONGEVITY **FINANCIAL** CLUB

London, 21 June 2022

Oxford and Cambridge Club

www.longevity.network

London Longevity Financial Club, 21st June 2022



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LONGEVITY FINANCIAL CLUB

Welcome and Introduction

Dominic Jennings
Longevity Financial
Advisors

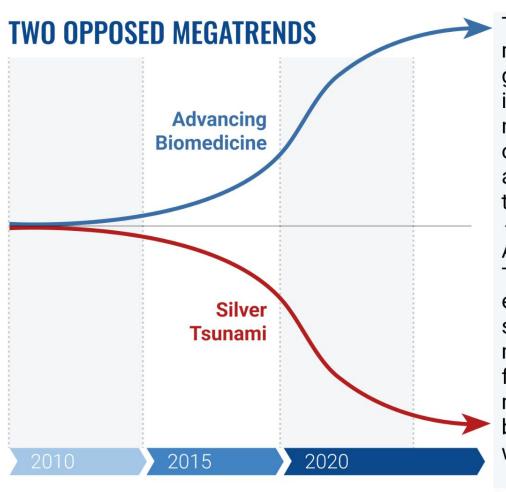
- Longevity Financial Industry and the New Asset Class
- Private Equity, Venture Capital, Public Markets
- Commoditization of DeepTech and Longevity
- De-Risking and Optimization of Investments
- Novel Financial Products and Derivatives

A purpose driven group of top tier industry professionals, discussing investments and finance in Longevity, Insurtech and innovations in Fintech.

AGENDA

5.00pm - 5.45pm	Reception
5.45pm - 5.50pm	Dominic Jennings, Longevity Financial Advisors: Welcome and Introduction
5.50pm - 6.05pm	Dmitry Kaminskiy, Deep Knowledge Group: Longevity Industry Overview
6.05pm - 6.20pm	Steven Baxter, Club Vita: Longevity InsurTech, Converting Longevity
	Risk into New Asset Class
6.20pm - 6.35pm	Paul Kitson, PwC: Pension Funds - where do they fit in the Longevity
	Risk ecosystem
6.35pm - 6.45pm	Cecilia Yu, Longevity.Capital: Structured Financial Products and Modern
	Investment Strategies in the Longevity Industry
6.45pm - 6.55pm	Talgat Takiev, Longevity Financial Advisors: Innovative approaches in
	Private Equity to Bridge the Liquidity Gap in the Longevity Industry
6.55pm - 7.15pm	Panel Discussion
7.15pm - 7.20pm	Dominic Jennings, Longevity Financial Advisors: Thanks and Closing Words
7.20pm - 8.30pm	Networking

- We are witnessing global trend of aging population, which is especially evident in the most economically developed countries including UK
- For some financial institutions and even nations, this creates so-called problem of aging population
- The total liabilities of pension funds, by different estimations, has already reached \$100 Trillion
- On the other hand, we are witnessing the tremendous rise of advanced biomedicine and aging research (including preventive medicine)
- This creates also multi trillion dollar opportunity for progressive financial institutions and investors
- We are launching this club as a collaborative platform to initiate and maintain discussion on these challenges and opportunities, with the aim of reaching actionable conclusions and insights for all participants
- We will proceed to organize these meetings regularly, aiming to establish systematic collaborative Think Tank on the Longevity Financial Industry



The acceleration of biomadicine has been mainly spurred by advances in the collection, gathering, and analysis of data. The industry is poised to witness a quantum leap in the near future, particulary because of the impact of Artificial Intelligence in biomedicine R&D and the upcoming paradigm shift from tratment to prevention.

At the same time, the inevitable Silver Tsunami (demographic aging) poses major economic burdens not just for the healthcare systems of developing nations but also for major financial institutions, including pension funds, insurance companies, asset management firms, and retail/private wealth banks. An increase in the costs associated with old age is expected.



Dominic Jennings

Head of Strategic Partnerships Deep Knowledge Group





Website: www.longevity.finance

Website: www.dkv.global

Investment and Finance Longevity Thematic Series of Conferences



www.longevity.network



Longevity Industry 2022 Overview

Dmitry Kaminskiy
Deep Knowledge Group

My Scientific Godfathers / Year 2013



Health is The New Wealth



Making Longevity Industrialization My Life's Work

Aging Analytics Agency

was established in London in 2013

www.aginganalytics.com

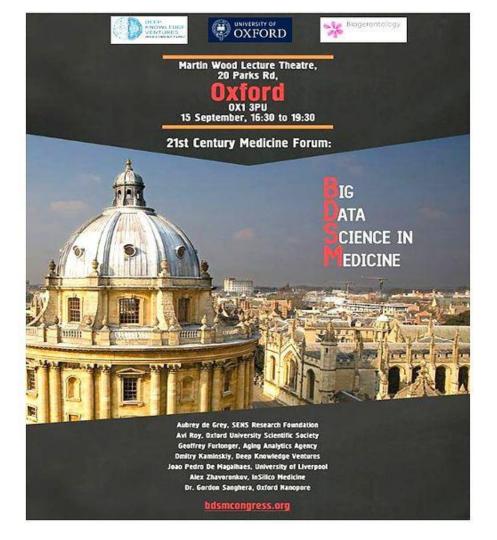




Produced by Aging Analytics
Agency in 2014



www.aginganalytics.com



Dmitry Kaminskiy Presents
and Deep Knowledge Group
Co-Hosts Big Data Science in
Medicine 2014 at Oxford
University



\$1 Million Prize for Person to Beat the Current Human Longevity Record

With the aim of getting the ball rolling in the emerging longevity industry, Dmitry Kaminskiy announced a \$1 million prize for the first person to reach the age of 123 - just 6 months longer than the current record holder, Jeanne Calment, who achieved 122 years and 6 months age.

Life record of 122.5 by Jeanne Calment







November 2016, London

The Economist Conference Aging Societies

Panel Discussion with Lombard Odier and Generali

Longevity Conferences by Top-Tier Financial Corporations and Brands









Longevity Conferences by Top-Tier Financial Corporations and Brands









Longevity Industry: Multi-trillion Dollar Opportunity

Longevity, AgeTech & WealthTech Market

Globally

1 Billion in Retirement

In the UK

10 Million in Retirement

"The one billion retired people globally are a multi-trillion dollar opportunity for business"

~ Dmitry Kaminskiy, <u>interview in the Financial Times</u>



"The global spending power of those aged 60 and over will reach \$15 trillion annually by 2020"

~ Bank of America Merrill Lynch



Top-Tier Financial Institutions and Business Analytics Firms Show Interest in Longevity Through Conferences and Reports



Credit Suisse featured Health and Aging as one of four main themes in their 2018 Global MegaTrends Conference



Julius Baer held a major forum on the topic of "Investing in Longevity" featuring a keynote presentation by Aging Analytics Agency Founder Dmitry Kaminskiy





UBS featured "Living to 150" as one of six major topics in their 2018 Healthcare Summit, featuring a keynote presentation by prominent Longevity entrepreneur Alex Zhavoronkov





UBS also issued a report on the "largest survey of wealth investors in the world to date", concluding: "Don't let skepticism about living to 100 keep you from planning for it. Life expectancies are rising, and it's a real possibility. In fact globally, nine in 10 investors are already adjusting how they are planning for their life and their legacy."



CitiBank released a landmark report detailing the rise of the Longevity Industry, and highlighting it as one of the quickest-rising sectors being driven by disruptive innovation today.



FROST & SULLIVAN

Frost and Sullivan also released two prominent reports on the emerging Longevity Industry, and in 2018 created the "Award for Innovation in Artificial Intelligence for Aging Research and Drug Development"

2017-2019 was a period of massive on-boarding of the topic of Longevity by top-tier financial corporations and brands, with numerous conferences on the Longevity Industry by The Economist, Financial Times, Deloitte, Julius Baer, UBS and others

FINANCIAL TIMES LIVE

12:10pm A

Aging and Longevity

Dmitry Kaminskly, Co-Founder and Senior Partner, *Deep Knowledge Ventures*

Alex Zhavoronkov, CEO, Insilico Medicine

Joseph Antoun, Chairman & CEO, L-Nutra; Chairman, Global Healthspan Policy Institute

Aubrey de Grey, Vice President of New Technology Discovery, AgeX

Therapeutics



Julius Baer Bank Forum "Investing in Longevity"



Dmitry Kaminskiy

Deep Knowledge Ventures
Aging Analytics Agency



6th December 2018, London

International Longevity Policy Activities

Dmitry Kaminskiy provided the initial financial and organizational support for the formation of the UK All-Party Parliamentary Group for Longevity (the world's first Longevity-focused parliamentary group) and Served as a Co-Founder of the APPG Secretariat from 2019-2021





Official Launch All-Party Parliamentary Group for Longevity House of Lords, London, UK

All Party Parliamentary Group for Longevity Inaugural Meeting House of Lords, London, UK

Aging Analytics Agency was the First to Formulate in 2018 the Term 'Longevity Industry'





Deep Knowledge Group's work toward creating a truly comprehensive, actionable and relevant Longevity Industry Framework began in earnest through the release of its first formal industry Framework in 2017/2018 through the publication Aging Analytics Agency's 1000+page Longevity Industry Landscape Overview 2018 (<u>Volume I: The Science of Longevity</u> and <u>Volume II: The Business of Longevity</u>),

Defining the Longevity Industry for the First Time



Aging Analytics Agency also contributed the **official definition** and entry of the '<u>Longevity</u> <u>Industry</u>' in the **Encyclopaedia of Gerontology and Population Aging**, the world's largest and most definitive encyclopaedia on aging and Longevity compiled and edited by Danan Gu (**Population Division of the United Nations**, Department of Economic Social Affairs Population Division, New York USA).

Dmitry Kaminskiy

LONGEVITY INDUSTRY 1.0

Second Edition

Defining the Biggest and Most Complex Industry in Human History

www.longevity-book.com/one

Most Comprehensive Longevity Industry Framework 2021



Longevity	Medicine
Personalized Diagnostics	Personalized HALE and QALE Estimation
Personalized Prognostics	Personalized In Vivo and In Silico Drug Testing
Preventive Therapies	Participatory Medicine

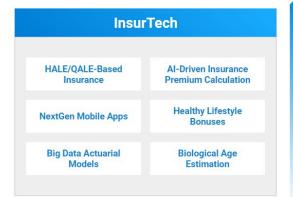
AgeTech		
Cognitive Enhancement		
NextGen Mobile Apps for the Elderly		
Entertainment for the Elderly		

Longevity	y Finance
Longevity Index Fund	Longevity Hedge Fund
Longevity Stock Exchange	AgeTech Bank
Longevity Derivatives	Longevity Investment Bank

Longevity Governance	
Pension Plans	National Healthcare Budgets
Longevity Development	Elderly Care Programs
Strategies	
National Insurance	Elderly Education



LONGEVITY FINANCIAL INDUSTRY FRAMEWORK



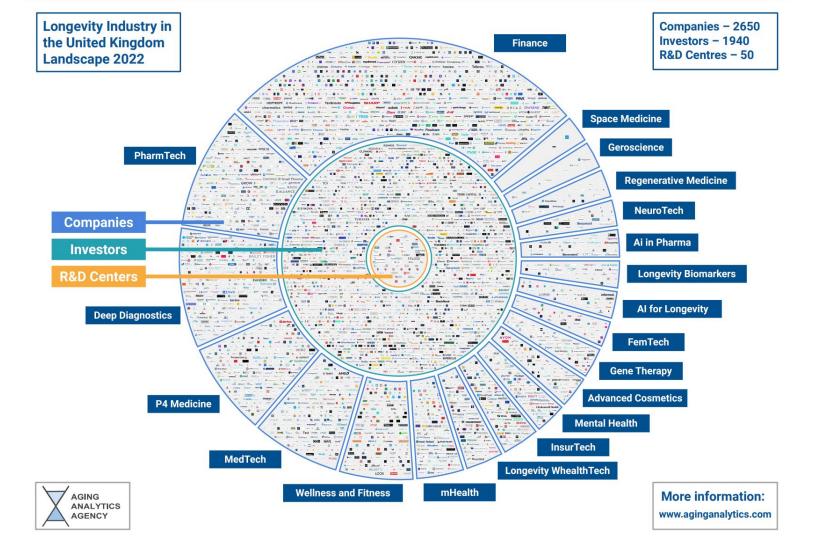


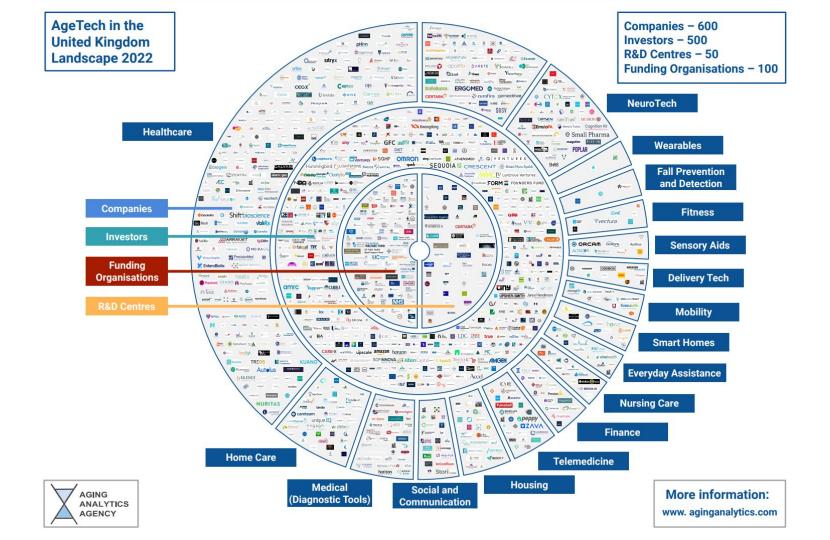
InvestTech		
Longevity Biomarkers	Longevity Investment	
for De-Risking	Bank	
Longevity Stock	Longevity Exchange	
Exchange	Traded Funds	
InvestTech Bridge to	Longevity Innovation	
Neutralize Liquidity Gap	Marketplace	

AgeTech		
Integration of AgeTech/HealthTech/W ealthTech	Longevity Gamification	
Cognitive Enhancement and NeuroTech	Technologically Empowering Largest Voter Demographic	
Advanced IT-Solutions	Combating Ageism with AgeTech	

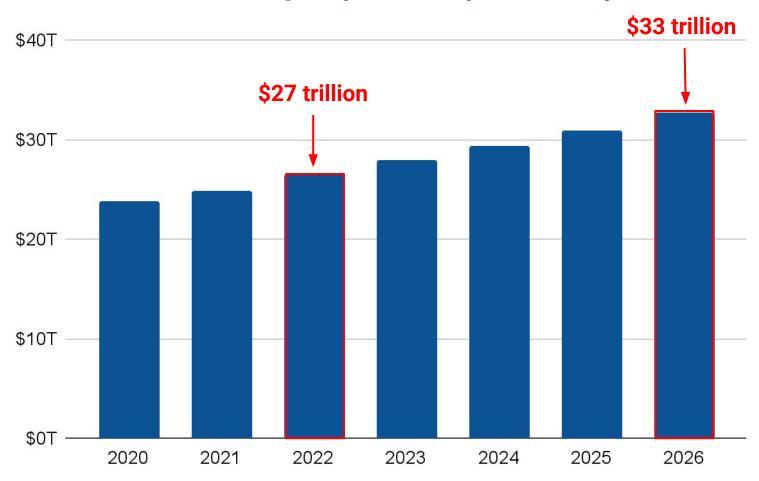


Novel Financial System		
Longevity Index Fund	Longevity Hedge Fund	
Strategies Diversification	Age-Friendly Banks	
Longevity Derivatives	Pension Planning	

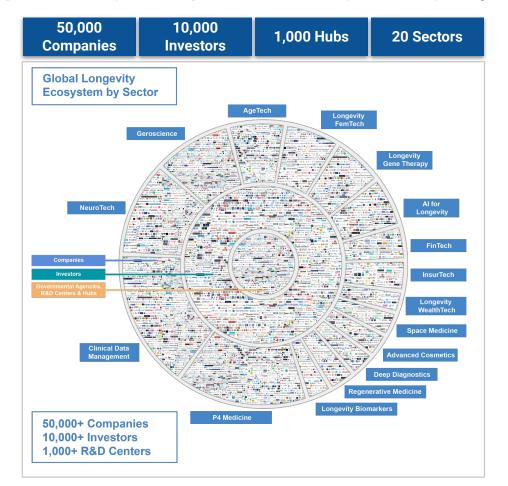




The Global Longevity Economy Scale Projection



Deep Knowledge Group Owns the Largest Longevity Industry Database in the World





www.longevity.international

Global Longevity Ecosystem - 50 000 Companies

Longevity Science



Longevity Biomarkers



Al for Longevity



NeuroTech



PharmTech



Longevity WealthTech



FinTech



InsurTech



AgeTech



Wellness & Fitness



Space Medicine



Longevity FemTech



Advanced Cosmetics



Clinical Data Management



Mental Health



Deep Diagnostics



Regenerative Medicine



Longevity Gene Therapy



Longevity Medicine



Telemedicine

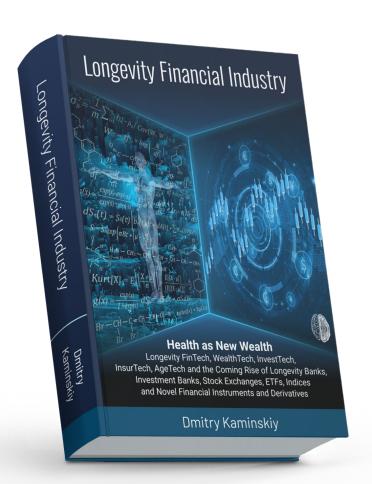






www.longevity-book.com

Longevity Financial Book



2022-2030: Health as New Wealth. Longevity FinTech, WealthTech and the Coming Rise of Longevity Banks, Investment Banks, Stock Exchanges, ETFs, Indices, and Novel Financial Instruments and Derivatives

- Engineered InvestTech and FinTech Solutions to Bridge the Big Liquidity Gap
- Longevity Futures, Shorting, Exchange-Traded Funds and Technology Marketplaces
- Longevity Stock Exchange, Investment Bank, Index Fund, and Financial Derivatives
- Financial Futurism: Derivatives Tied to National Healthcare Systems, Pension Systems, National Healthy Longevity, and Longevity Economies

www.longevity-book.com/finance

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Longevity InsurTech, Converting Longevity Risk into New Asset Class

Steven Baxter Club Vita

- High level intro of how pension schemes and insurance companies are exposed to longevity "risk"
- Brief overview of how they view this risk, and manage it (this will include the potential appetite to be investors in longevity BioTech as an offsetting asset class)
- Why there is a need for new financial products to standardise elements of the risk insurers hold but can only manage by holding large reserves against
- Some of the emerging ideas for packaging that risk in a way which will be attractive to parts of the investor community as an alternative diversifying asset class

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Pension Funds: Where do they fit in the Longevity Risk Ecosystem

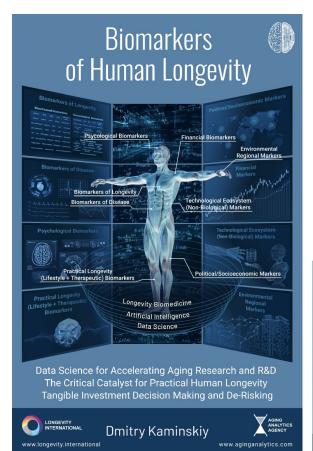
Paul Kitson
PwC

- What is the UK defined benefit pension fund longevity landscape and where might this fit into the longevity finance ecosystem? Are they buyers or sellers?
 Or may they be both? Is £2 trillion cool, or too much?
- Will UK DB pension funds only ever trade with (re)insurers?
- How might technology impact on how long we live? Is "escape velocity for death"
 a real thing? Should traders of longevity risk and longevity financial markets
 worry about this sort of stuff?
- How might technology help us solve the longevity risk conundrum? Could technology be the cause of, but also the answer to, all the challenges of potentially significantly longer live?
- Finally, my observations on the challenges on creating a viable tradable market in longevity risk with a focus on UK DB pension funds. If what people really want is a lemon, can you sell them an orange?



Practical Longevity

Dmitry Kaminskiy
Deep Knowledge Group



www.longevity-book.com

www.longevity-book.com/biomarkers



Biomarkers of Human Longevity: Data Science for Accelerating Aging Research and R&D The Critical Catalyst for Practical Human Longevity Tangible Investment Decision Making and De-Risking Kindle Edition

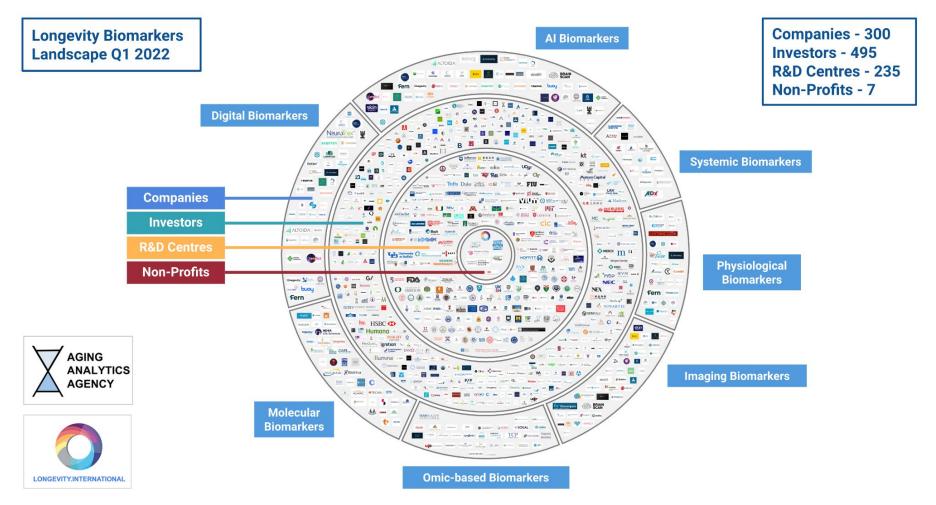


There is perhaps no other single technology or industry subsector, with the exception of AI, that has more potential to accelerate the realization of real-world impacts in Longevity across the full scope of its sectors and domains - industry, policy, investment, entrepreneurship, policy, and governance - than Biomarkers of Human Longevity.

The Critical Catalyst for Practical Human Longevity

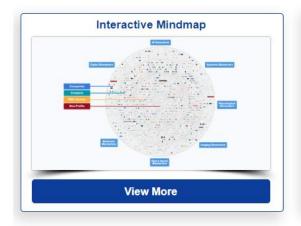
Data Science for Accelerating Aging Research and R&D

Tangible Investment Decision-Making and De-Risking



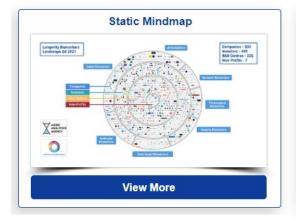
www.longevity.international/biomarkers

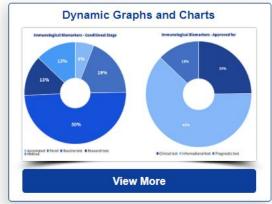
Longevity Biomarkers Ecosystem









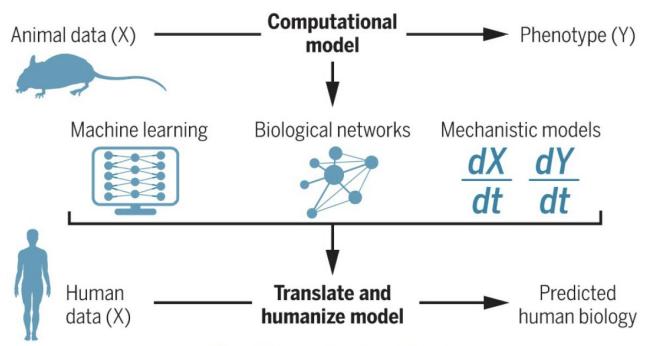




www.longevity.international/biomarkers

Systems model-based cross-species translation

Translating computational systems models of molecular (X) to phenotypic (Y) associations from animal models to humans provides a powerful framework for translating therapeutic concepts from preclinical to clinical stages.



Source: Translating preclinical models to humans

Digital Human Avatar Framework: 1.0, 2.0, 3.0 and 4.0

Efficient integration and synthesis of different data types and sources

Comprehensive panels of biomarkers of health, disease and Longevity

Technologically-sophisticated data storage (blockchain, cybersecurity, etc.)

Capable of providing whole-organism model of individuals

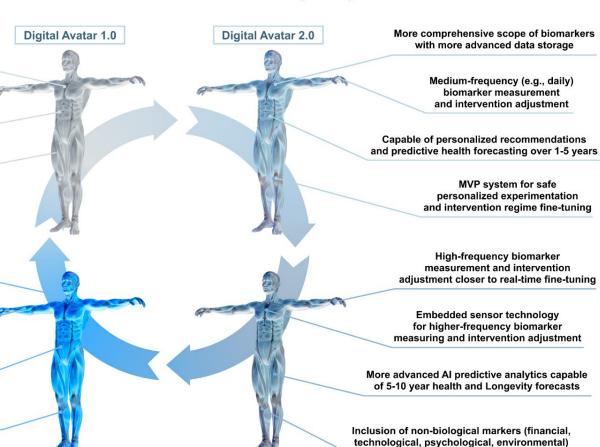
Highest frequency (real time) biomarker measurement, intervention adjustment and personal recommendations

Incorporation of regional political and infrastructural markers (healthcare, economy, Longevity policy)

Capable of personalized recommendations and predictive health forecasting over 10-25 years

Capable of providing and maintaining Longevity Escape Velocity for users under 60 years of age

Digital Avatar 4.0



Digital Avatar 3.0

Practical Longevity

- Life Extension
- Enhanced Performance
- Extension of Healthy Productive Period of Life

Preventive
Predictive
Personalized
Longevity Medicine

Ultimate Goal - Precision Health

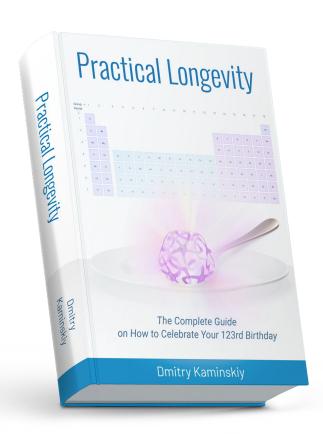
Longevity Escape Velocity

Proprietary Analytics: Practical Longevity

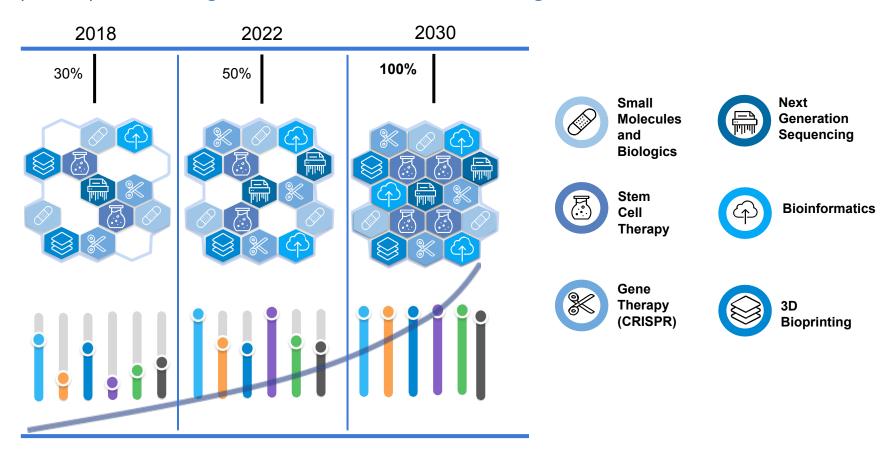
The Complete Guide on How to Celebrate Your 123d Birthday

Practical Longevity Book Features

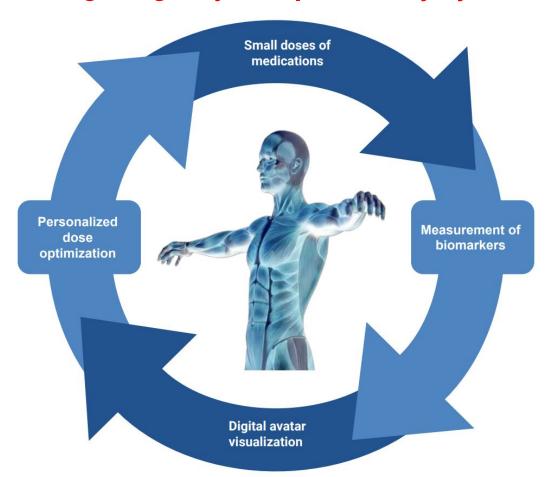
- Practical Longevity Book is divided into 5 qualitative layers, increasing in levels of effectiveness (in terms of Practical Longevity), and technological sophistication.
- Each of the **5 layers** include technical add-ons containing practical recommendations on how to behave in specific situations in order to move to the next Longevity layer.



De-Risking Longevity Investments via Technology Readiness Levels (TRLs) and Tangible Validated Forecasting of Market Readiness

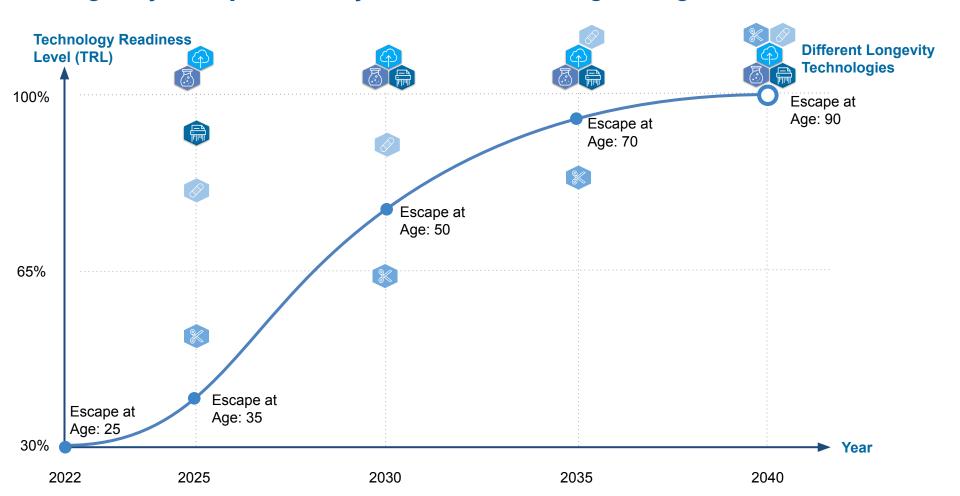


Achieving Longevity Escape Velocity by 2030





Longevity Escape Velocity at Different Biological Age Landmarks



Practical Longevity

Intermittent Hypoxic Training - Key Technology

Scientifically validated and practically proven method to:

- enhance performance for olympic champions
- prepare austranovats for the space flight
- prepare professional alpinist
- efficient rehabilitation after Covid-19
- eliminate dysfunctional mitochondria and senescent cells
- rejuvenate mitochondria and cells
- improve cognitive function in young and elderly

Intermittent Hypoxic Training - Key Technology



3-months course of Hyperbaric Oxygen Therapy in Aviv Clinics

Source: Aviv Clinics

Research Paper

Hyperbaric oxygen therapy increases telomere length and decreases immunosenescence in isolated blood cells: a prospective trial

Yafit Hachmo^{1,*}, Amir Hadanny^{2,3,4,*}, Ramzia Abu Hamed¹, Malka Daniel-Kotovsky², Merav Catalogna², Gregory Fishlev², Erez Lang², Nir Polak², Keren Doenyas², Mony Friedman², Yonatan Zemel ², Yair Bechor², Shai Efrati^{1,2,3,5}

ABSTRACT

Introduction: Aging is characterized by the progressive loss of physiological capacity. At the cellular level, two key hallmarks of the aging process include telomere length (TL) shortening and cellular senescence. Repeated intermittent hyperoxic exposures, using certain hyperbaric oxygen therapy (HBOT) protocols, can induce regenerative effects which normally occur during hypoxia. The aim of the current study was to evaluate whether HBOT affects TL and senescent cell concentrations in a normal, non-pathological, aging adult population.

Methods: Thirty-five healthy independently living adults, aged 64 and older, were enrolled to receive 60 daily HBOT exposures. Whole blood samples were collected at baseline, at the 30th and 60th session, and 1-2 weeks following the last HBOT session. Peripheral blood mononuclear cells (PBMCs) telomeres length and senescence were assessed.

Results: Telomeres length of T helper, T cytotoxic, natural killer and B cells increased significantly by over 20% following HBOT. The most significant change was noticed in B cells which increased at the 30th session, 60th session and post HBOT by 25.68%±40.42 (p=0.007), 29.39%±23.39 (p=0.0001) and 37.63%±52.73 (p=0.007), respectively.

There was a significant decrease in the number of senescent T helpers by -37.30%±33.04 post-HBOT (P<0.0001). T-cytotoxic senescent cell percentages decreased significantly by -10.96%±12.59 (p=0.0004) post-HBOT.

In conclusion, the study indicates that HBOT may induce significant senolytic effects including significantly increasing telomere length and clearance of senescent cells in the aging populations.

Aviva Clinic in Israel published a paper in late 2020 claiming to have achieved human healthspan extension via Hyperbaric Oxygen Therapy.

They demonstrated this via 2 specific biomarkers, increasing telomere length by 20% and a ~35% clearance of senescent immune cells.

IHHT - Intermittent Hypoxic-Hyperoxic Training (Mitopro)

Portable, user-friendly equipment. May be used at home as a high-tech wellness option.





Longevity Personal Trainings

While my highest result to date was an HTI of 819, typically I am doing intensive trainings in the range of 300-500 HTI, which is a standard level for professional alpinist, high-performance athletes and marathon runners, and in a more relaxed daily mode I am doing trainings in the range of 170-250 HTI.





More on this topic could be found in my new book "Practical Longevity".

Longevity Escape Velocity



2022

My chronological age: 46 My biological age: 45

2030

Longevity Escape Velocity

My chronological age: 54 My biological age: 54

2040

My chronological age: 64 My biological age: 54 C LONGEVITY FINANCIAL CLUB

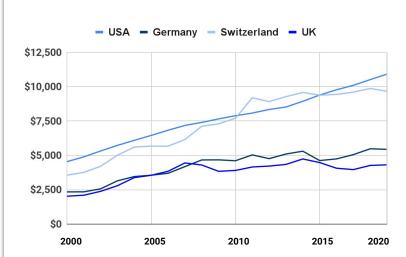
Structured Financial Products and Modern Investment Strategies in the Longevity Industry

Cecelia Yu
Longevity.Capital

- General Macro Trends in BioTech and Healthcare 10 years horizon done
- Publicly Traded Companies Related to Longevity Industry done
- Structured Financial Products (AMC's and Performance Trackers vs ETF's)
- DKG AMC's Cancer Vaccines, Al Pharma, Longevity Industry
- Longevity Industry Index done
- Longevity Investment and Finance Big Data Analytics System done
- Longevity Industry Investment Bank
- Longevity Stock Exchange
- Longevity Financial Advisors Activities / Liquid Strategies

General Macro Trends in BioTech and Healthcare 10 years horizon

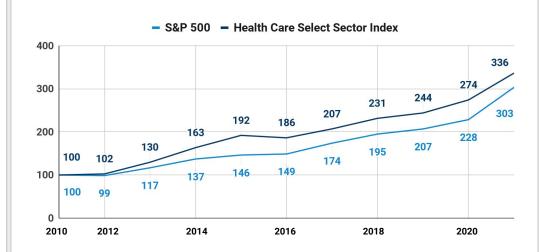
Healthcare Spending per Capita



Source: The World Bank

Healthcare spending per capita has increased **x2.5** over the last two decades.

Comparison of Healthcare Sector Index and S&P Index Dynamics

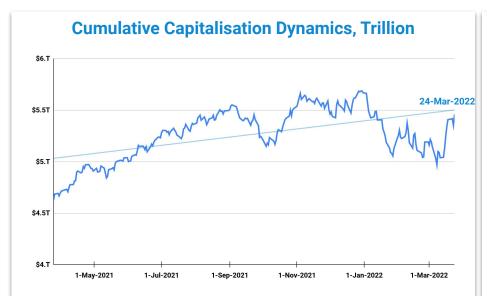


Source: Yahoo Finance

Healthcare sector has been demonstrating the lasting growth trend over the past decade, outperforming market benchmarks.

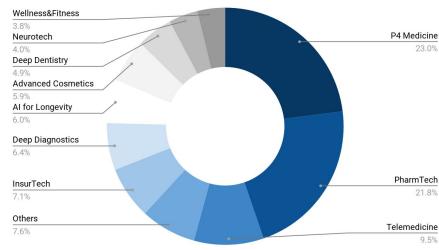
Aging Analytics Agency 5

Publicly Traded Companies Related to Longevity Industry



At the beginning of 2022, the market capitalisation of 500 publicly traded companies was almost **5.5 trillion USD**, making a 18% growth since the beginning of 2021.

Distribution of Public Companies by Longevity Sectors



Among 500 Longevity-focused public companies, **P4 Medicine**, **PharmTech** and **Telemedicine** are the most represented sectors by a number of companies.

InvestTech Advanced Solutions 66

Structured Financial Products

Actively Managed Certificates

Over the course of 2022, DKG and LFA are planning to launch between 5 and 10 similar AMCs across the UK and EU.

Actively Managed Accounts

More information / specifics on this will be available in Q3 2022.

Hedge Funds / Exchange Traded Funds

The LFA team negotiate with several counterparties the set-up of a potential Longevity Hedge Fund during 2022.

Performance Trackers

The LFA team is exploring the possibility of launching a Performance Tracker in the UK over the course of 2022

Special Purpose Vehicles

LFA will structure SPVs that will co-invest with DKG in carefully selected companies.

Venture Capital Funds

LFA will expand its product offering to VC Funds over the course of 2023 - 2024.



InvestTech Advanced Solutions 67

DKG AMC's - Cancer Vaccines, AI Pharma, Longevity Industry

Cancer Vaccines AMC and NASDAQ Biotechnology Index performance



Cancer Vaccines AMC and iShares Genomics Immunology & Healthcare ETF performance



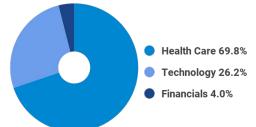
The performance of the Cancer Vaccines AMC in comparison to key industry benchmarks: NASDAQ Biotechnology Index and iShares Genomics Immunology & Healthcare ETF.

Deep Knowledge AI Pharma Index

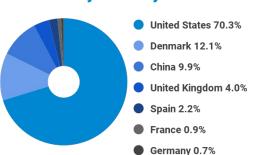
Ariane Deep Knowledge AI Pharma Index

- Reflects the development of the AI in Pharma market
- Developed by experts in the AI in Pharma sector
- Allows objective evaluation of the underlying assets
- Backed by cutting-edge analytical tools

Equity Allocation by Industry Sectors



Equity Allocation by Country



The Structure of the Ariane Deep Knowledge Al Pharma Index



LONGEVITY AMC

Problems

- Extreme structural complexity
- O Low liquidity (long capital lock-up periods)
- O Unqualified investor due diligence processes
- Outdated scientific approaches (mice vs. humans)

Most businesses operating in the Longevity Industry use next-generation technologies, which are difficult for investors to underwrite in a qualified manner.

Solution

Longevity Actively Managed Certificate

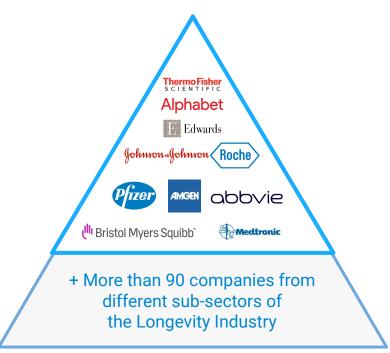
Advanced Al-driven investment techniques	Operational optimisation
Risk reduction (diversification)	Expenditure optimisation
Low entry cost (retail investors)	Tax benefits
Highly liquid	Enhanced returns

Longevity Industry Index

Market cap growth of Longevity Index Vs Healthcare index and S&P 500, BPS



The Structure of the Deep Knowledge Longevity Industry Index



Longevity Investment and Finance Big Data Analytics System

We provide profound investment and data science insights on the private and public markets via customized IT-Platforms called Dashboards.

75,000	Companies
70,000	Investment Deals
40,000	Investors
15,000	Funds
18 million	Data Points



Tools

Portfolio Constructor

Competitors Analysis

Mindmaps

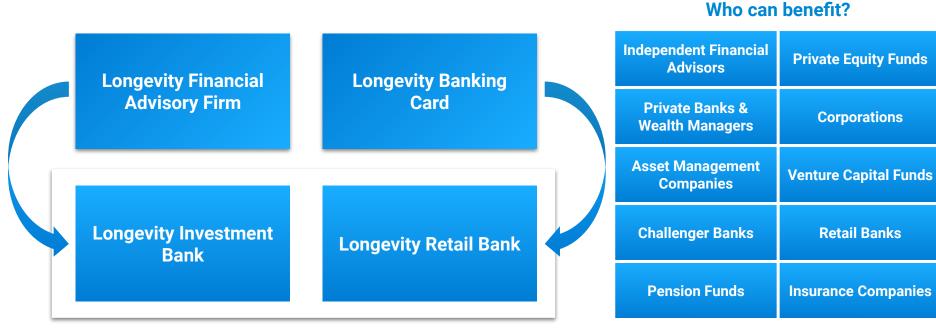
Comparative Analysis

Network Diagrams

Statistics

Longevity Industry Investment Bank

On the next stage Longevity Financial Advisors plans to evolve into a broader investment banking business expected by year 2024



Longevity Industry Investment Bank





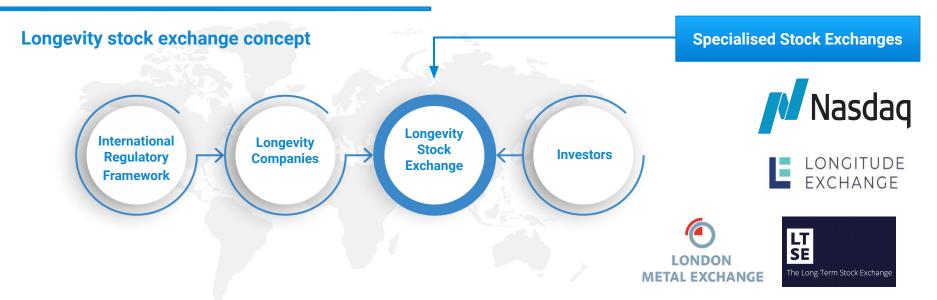


Investment management		
Portfolio management and optimization	Diversification	
Investment targets selection	Performance measurement	
Wealth management	Risk optimization	

Research		
Macroeconomic and industry research	Buy-sell recommendations	
Credit risk assessment	Corporate finance analysis	
Quantitative and econometric analysis	Financial data management	

Financial Engineering		
Structured products	Stock futures and options	
Swaps	HALE/QALE derivatives	
Performance trackers	Biomarkers derivatives	

Longevity Stock Exchange



Hasier Trading Lower Trading Costs for Investors Exchanges No Conflict of Interest with Individual Traders MTF Benefits Lower Trading Costs for Investors Exchanges Competitive Pricing of Financial Securities Additional Trading Markets

Longevity Financial Advisors Activities / Liquid Strategies

Longevity Financial Advisors is providing a range of next-generation advisory services to companies and investors operating in the Longevity Industry and facilitate the creation of a safe, liquid investment and fundraising environment to contribute to the industry's sustainable growth.

WealthTech	M&A Advisory	InvestTech	Structured Financial Products
RegTech	LegalTech	Ergonomic IT-Platform	Big Data Investment Analytics
Automated Completion Mechanics	Private Placement Advisory	Portfolio Performance Metrics	Industry Research
Instantaneous Multiparametric SWOT Analysis	Risk Optimisation	Investment Target Selection	Automated Technical & Scientific Due Diligence

LONGEVITY INDUSTRY: MULTI-TRILLION DOLLAR OPPORTUNITY

Longevity, AgeTech & WealthTech Market

Globally

1 Billion in Retirement

In the UK

10 Million in Retirement

"The one billion retired people globally are a multi-trillion dollar opportunity for business"

- Dmitry Kaminskiy, <u>interview in the Financial Times</u>



"The global spending power of those aged 60 and over will reach \$15 trillion annually by 2020"

- Bank of America Merrill Lynch, interview in Forbes



CURRENT STAGE OF THE LONGEVITY INDUSTRY - PROBLEMS & OUR SOLUTIONS

Problems Confronting the Longevity Industry



Most companies operating in the Longevity Industry use deep tech technologies, which are difficult for investors to underwrite in a reasonable manner

The current stage of development of financial and investment activities in the Longevity Industry does not yet match the its development. due to the lack of liquid tradable instruments related to the Longevity Industry owners and managers of assets prefer to avoid any significant investments into the sector (for now).

Solutions Developed by Deep Knowledge Group

We have been working on the development of more robust, advanced, sophisticated financial solutions:

Deep Knowledge Group's SPVs

Longevity Banking Card

Actively Managed Certificates

Al in Pharma & Longevity ETF

Longevity Financial Advisors Firm

Next Gen. Analytics

Longevity Investment Bank

DKG Longevity-Related Projects

Big Data Investment Analytics

Dashboard

Longevity Financial Advisors

Al in Pharma Exchange Traded Fund

Longevity Exchange Traded Fund

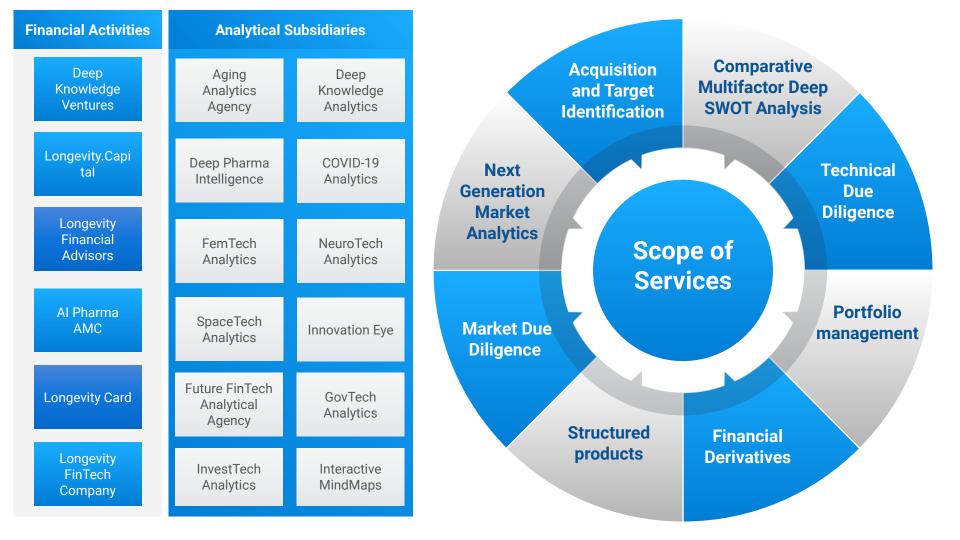
Longevity Banking Card

Longevity US/UK SPV

Deep Pharma Intelligence Big
Data Analytics Dashboard

Structured Financial Products

Longevity Investment Bank











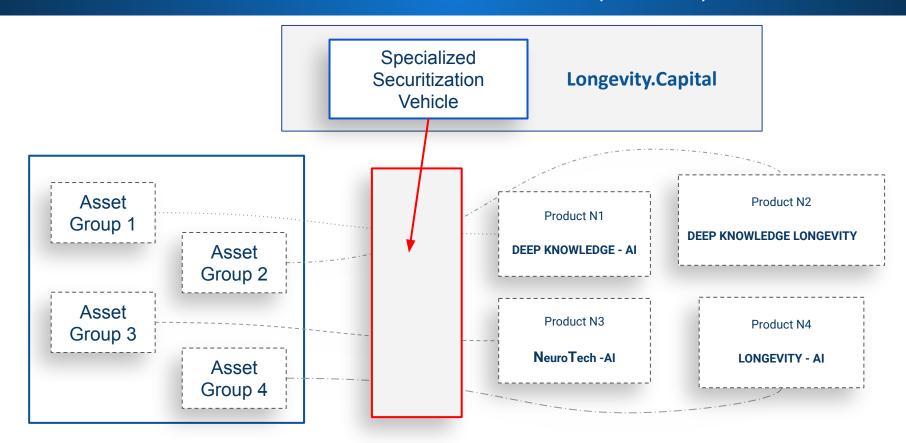
SPV, launched in the US. focused on FemTech women's healthcare market.



Deep Knowledge Longevity SPV providing exposure to DKG investments in the Longevity space.



Syndication in SPV DeepTech & Al **Technologies** providing exposure to DKG investments in the AI space.

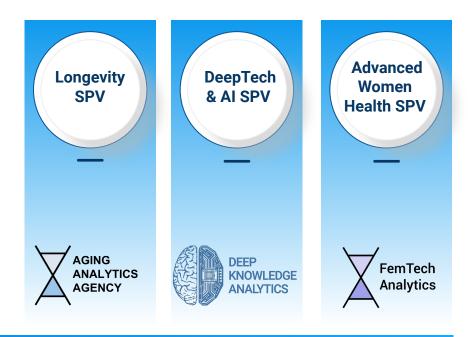


Investment solutions for advanced DeepTech startups with partially illiquid assets, providing them with liquidity similar to traditional commodity assets, making them Tradeable and Bankable.

DEEP KNOWLEDGE GROUP SPVs

With SPVs, Deep Knowledge Group creates a unique value proposition, achieved through synergistic combination of:

- Exceptionally deep and sophisticated expertise of DKG analytics subsidiaries
- 2 Investment track record of DKG in DeepTech domains
- Specific advantages of SPVs in general, such as deal-by-deal basis and trackability
- Explosive growth of DeepTech Industries, including Longevity and SpaceTech.



Each SPV is backed by a specialist analytical unit of Deep Knowledge Group focused on a particular sector with extremely deep expertise and many years of experience

Deep Knowledge Group Longevity AMC: Composing Process

AMC reflects the development dynamics of the most advanced and promising publicly traded companies in the Longevity market selected by Aging Analytics Agency and InvestTech Advanced Solutions

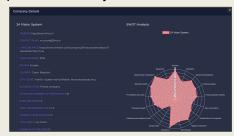
Multilevel Assessment of the Companies Performance

Companies were divided into three groups: stabilizers, performers, and promising companies.



Technological and Financial Analysis

- fundamental analysis
- portfolio optimization
- R&D analysis
- prediction analysis



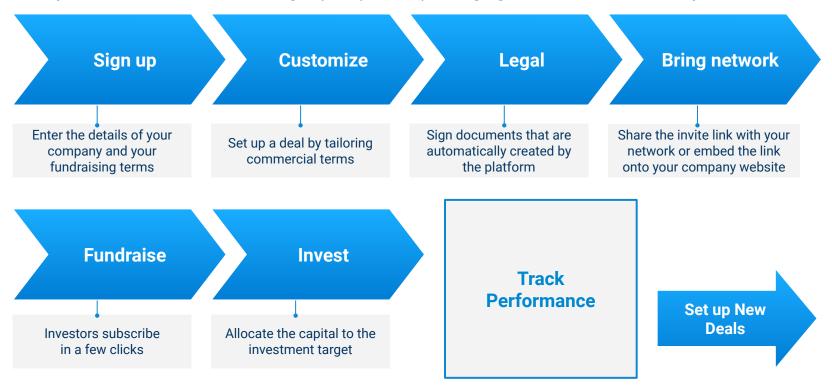
Weights Calculations

The final weights of the AMC are adjusted on a quarterly or yearly basis, depending on the actual performance, market news, and other macro- and microeconomic factors.



CUSTOMER JOURNEY

The process of a drawing up a deal via our **SPV Structuring and Fundraising Platform** will be easy and fast. Our platform will have as many **automated processes** on each of the fundraising steps as possible, providing **digital solutions**, **document templates** etc.



DEEP KNOWLEDGE GROUP AMC

The Advantages of the AMCs

- Have passporting rights in Europe
- Low regulatory and legal costs
- Minimum public subscription amount of EUR 1000
- Investment strategies' flexibility

Ariane Deep Knowledge AI Pharma Index

- Reflects the development dynamics of the AI in Pharma market
- Allows objective assessment of the underlying assets
- Developed by seasoned experts in the Al in Pharma sector
- Backed by and developed via cutting-edge analytical tools



Ariane Deep Knowledge AI Pharma Index is an Actively Managed Certificate developed by Deep Knowledge Group. Ariane Deep Knowledge AI Pharma Index is designed to reflect the dynamics of AI in Pharma sector. The outstanding performance of this industry has shown a clear need in the creation of the financial products that will allow its supporters to benefit from the development of the sector and will propel AI in Pharma industry to the broader financial scene.

STRUCTURED FINANCIAL PRODUCTS







All these structured products are designed in such way that participants will have enhanced access to secondary market transactions (partial liquidity for alternative venture investments)

Structured Financial Products are tradable and bankable tailored-made derivatives providing exposure to proprietary sets of AI-Pharma and SpaceTech companies, and also some other DeepTech sectors

Actively Managed Certificates and Performance Trackers are tradeable and bankable financial products.

We are using Swiss legal framework for structuring Actively Managed Certificates and Performance Trackers. These financial products are designed for enhanced trackability. Considering our Al and Big Data-centered approaches, they become even more reliable and well-tailored for securitisation.

These structured financial products utilize in-depth market and investment expertise developed by Deep Knowledge Group analytics subsidiaries and provide exposure to proprietary selected portfolios of DeepTech companies.

Deep Knowledge Group is currently is working on the launching new structured financial products in other jurisdictions besides Switzerland

DEEP KNOWLEDGE GROUP ETF

We are launching Deep Knowledge AI in Pharma & Longevity ETF, which is tied to a basket of 100 publicly traded Longevity companies.

The list of these companies includes but is not limited to Big Pharma and AI in Pharma companies, as well as companies participating in the Aging Healthcare industry, aging-related chemical and manufacturing companies, IT companies that provide technological solutions for aging-related sectors and others.

Key Features of Deep Knowledge AI in Pharma & Longevity ETF

- Analyzed 3000+ Longevity-related companies
- Conducted fundamental and technical analysis in cooperation with Deep Pharma Intelligence
- Created the diversified portfolio strategy
- Applied AI for portfolio optimization, Geometric Brownian motion (GBM) for advanced predictions, created structuring system for the categorization of companies

Longevity & AI Pharma ETF



BIG DATA ANALYTICS DASHBOARDS



Deep Knowledge Group's analytics subsidiaries (including Aging Analytics Agency, Deep Pharma Intelligence and Deep Knowledge Analytics) have developed a system of big data analytics dashboards providing advanced quantifiable automated data-driven investment recommendations for all longevity-related industry sectors, including Al-Pharma, Finance, Investment, and Government. Separate dashboards are also dedicated to longevity finance and longevity governance.

The dashboards are fueled by an unprecedented database, covering more than 30 000 companies and 15 000 000 data points in total that are being updated on a regular basis.

Longevity Investment Big Data Analytics

AGING ANALYTICS AGENCY



Aging Analytics Agency in cooperation with InvestTech Advanced Solutions developed Big Data Analytics System that delivers an effective SWOT analysis and due diligence for Longevity companies and investors, and real-time financial analytics.

Longevity Investment Finance Big Data
Analytics System



Main Features

- Portfolio constructor
- Interactive Network Diagrams
- Stock price predictions
- Companies database

- Institutional investors database
- Comparative SWOT analysis
- Interactive Mindmaps
- Portfolio risk metrics

Under Development Deep Knowledge Group Target Milestones in 2023-2024:

- Longevity Hedge Fund
- Longevity Investment Bank
- Longevity Stock Exchange

LCLONGEVITYFINANCIALCLUB

Innovative Approaches in Private Equity to Bridge the Liquidity Gap in the Longevity Industry

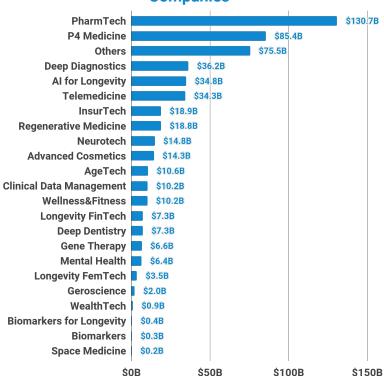
Talgat Takiev
Longevity
Financial Advisors

- Private Equity Trends in BioTech and Healthcare
- Landscape Overview of Private Equity Market in the Longevity
- This rapidly growing industry currently comprises of 50,000 companies in total, with 500 of them listed, and 3000 companies in growth and late stage
- Bridging the Liquidity Gap Emma?
- InvestTech Longevity Platform
- Longevity Banking Card
- Longevity Financial Advisors Activities / Private Equity
- Longevity FinTech, InsurTech, InvestTech

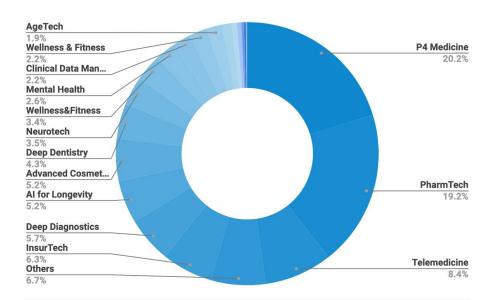
Private Equity Trends in BioTech and Healthcare

PRIVATE INVESTMENTS IN LONGEVITY BY SECTOR

Total Investments Raised by Private Longevity Companies



Companies Distribution by Longevity Subsectors



PharmTech and **P4 Medicine** are Longevity subsectors involving the largest number of companies and receiving the highest volume of investments. The subsequent pages outline the key trends of private investing into top 5 Longevity subsectors.

InvestTech Advanced Solutions 95

Investments Trends 2010 - 2022

- 1. Over the last 10 years 'Startups Venture' industry evolved into Tech industry;
- 2. Over the last 2-3 years Tech industry is gradually evolving into DeepTech industry;
- 3. Significant fusion of venture funds, family offices, private equity firms;
- 4. Establishment of investment and crowd-investment platforms such as Angel List or Seeders;
- 5. The price and complexity of getting listed on a stock exchange with significant liquidity was systematically increasing;
- 6. Phenomen of SPAC's model rise and then decline (evidence of significant unsatisfied demand for liquidity by matured, not non listed companies).

Problems in Private Equity in 2022

- 1. Founders of Tech & Science-driven startups in 2022 the same way as it was in 2010 have to spend enormous amount of time and efforts to get in front of relevant potential investors;
- 2. There is pattern of Death Valley in DeepTech industry, as DeepTech startups has critical need to get financing between Seed and A rounds, so they can deliver MVP, which typically can take 3-5 years in the case of DeepTech;
- 3. Investment funds in most cases are using almost the same techniques for deal sourcing and due diligence as they dead in 2010-2015;
- 4. LP's (actual investors into venture funds) in case of investing through venture funds locking up their money and can't withdraw them unless the liquidity event will be reached;
- 5. Investors in private equity at the early stages are having limitations with the secondary market transactions because of ROFR procedure.

Deep Knowledge Group Longevity Industry Database (The Largest in the World)

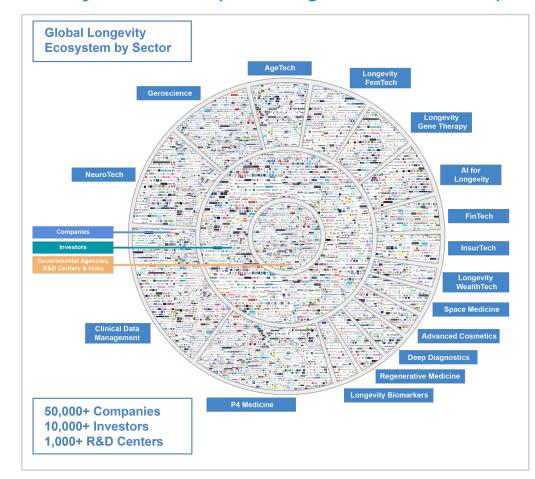
50,000 Companies (incl. 500 listed)

1,000 Hubs

20 Sectors

10,000 Investors

Longevity Industry has emerged intersectional synergies between a broad quantifiable range of specific DeepTech and Frontier Technology domains, encompassing all biomedical. non-biomedical (tech and IT based), governmental and financial sectors have an impact on population healthspan (period of life free from age-related disease and dysfunction), wealthspan (duration of financial stability across the lifecycle) and quality of life, as well as the integrity and stability of national economies at the intersection of the opposed Longevity Industrialization megatrends (increases in population healthspan) and Aging Population (increase in proportion of populations above the age of 60). The Longevity Ecosystem currently contains more than 50,000 companies among 20 sub-industry sectors.



Global Longevity Ecosystem - 50 000 Companies by 20 Sectors



Geroscience



Longevity Biomarkers



Al for Longevity



NeuroTech



PharmTech

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Longevity WealthTech



FinTech



InsurTech



AgeTech



Wellness & Fitness

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Space Medicine



Longevity FemTech



Advanced Cosmetics



Clinical Data management



Telemedicine

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Deep Diagnostics



Regenerative Medicine



P4 Medicine



Longevity Gene Therapy



Mental Health



• Bridging the Liquidity Gap

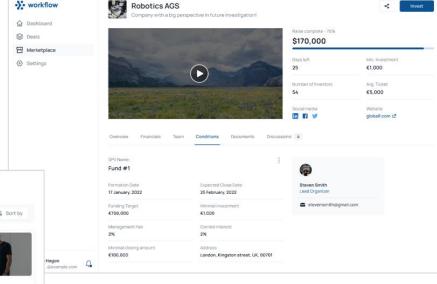
World Venture Fundraising Dynamics There are no **Invest Tech** providers based Global Regional Comparison, Q3 2021 in EU / covering **EU Market** Europe \$24.2B Asia **USA** 1590 Deals \$50.2B \$72.3B 3815 Deals 3210 Deals **SPV** Volume \$5.3B **Provider Transacted Assure** \$8.5B Flow \$3.5B **AngelList** \$3B Volume **Allocations** \$250M **SPV Provider Transacted** Vauban (The UK) \$700M

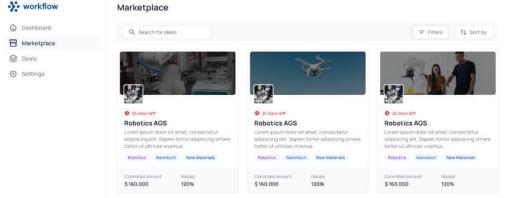
Longevity Financial Advisors

101

InvestTech LegalTech IT-Platform

DKG SPV LegalTech IT- Platform take the best parts from SPV and LegalTech platforms and integrate those into an efficient solution that would benefit both investors, project owners, intermediaries or other professionals in the field by providing a one platform for setting up of special purpose vehicles and implementation of corporate infrastructure, easy corporate governance interface with record tracking options, and marketplace to communicate with other counterparties and negotiate deals.





Our platform is unique set of actual LegalTech, SPV and IT solution for private investing and fundraising.

Platform Overview

Key Features of DKG In legalTech IT-Platform

Clear investment trajectory with enhanced trackability

Safeguard from compliance risks

Investing on a deal-by-deal basis

Enhanced Risk Management

Able to conduct in-depth performance analysis

Alignment with initial investment vision/thesis benefits

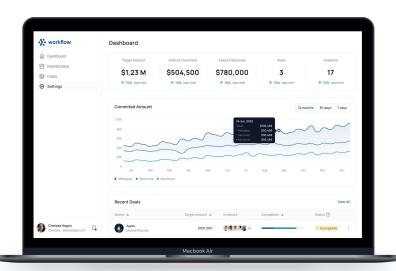
Tailoring it for the immediate needs of the investor

Appropriate for Family
Offices and Angel Syndicates

Deep Knowledge Group SPV LegalTech IT-Platform allows investors make investments easily in a time-efficient way and startups to fundraise and keep on growing.

Comprehensive Investment Infrastructure

- end-to-end solution to syndicate investment opportunities
- · state of the art investment platform
- automated processes
- legal coverage, documents templates



LONGEVITY FINANCIAL ADVISORS INVESTTECH IT-PLATFORM

The Longevity Financial Advisory Firm is supported by sophisticated and ergonomic IT-Platform

The IT-platform will allow investors to easily navigate the process of identifying private investment targets and leverage Deep Knowledge Group's proprietary next-generation big data analytical systems, which are capable of instantaneously generating preliminary due diligence results and SWOT analyses based on multiple parameters.

The IT-platform's principal goal is to create a convenient and effective way for investors to allocate capital quickly and safely into businesses operating in the Longevity Industry. Besides the benefits listed above, the IT-platform also enables private companies to easily access a diverse pool of capital by aggregating funding from multiple sources. The platform also facilitates participation of investors with different allocation capabilities, thereby increasing overall capital flow into the Longevity Industry as a whole.



Key Services and Features

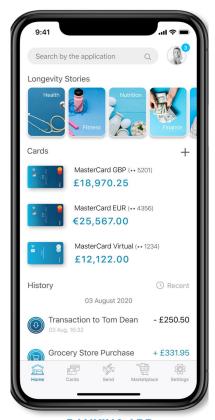
Incorporation	Cap Table Management	Open-ended Vehicle	Multi Investment
Multi-Close	Public Fundraising	Management Fee	Carry Fee
Document Templates	КҮС	Secondary Market Transactions	Automated Capital Calls
IT Platform	Digital Dashboards	Pro-rata Right	Back Office Automation

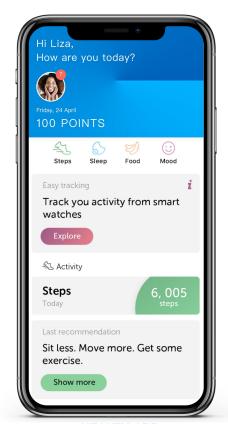
Deep Knowledge Group creates an accessible investing infrastructure platform that matching startups with investors, fulfilling at the same time full legal coverage on the organization of the investment transaction through the SPV mechanism providing an up-to-date, easy-to-use investment environment for the clients.

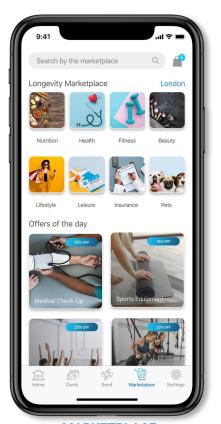
Competitive Features:

- No capital requirements for the owner; costs can be split among investors each SPV
- Compliance and regulatory filings, entity creation and bank account setup
- Online dashboard: distribute reports, capital calls and investor updates
- Cap table management on the platform, including pro-rata rights
- Distribution after liquidity event
- Personal experience: individual manager and 27/4 support

Longevity Banking Card







BANKING APP

HEALTH APP

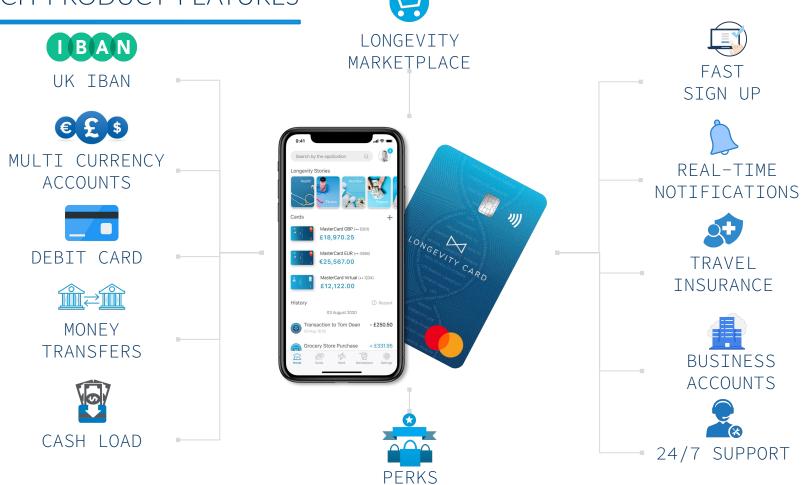
MARKETPLACE

LONGEVITY CARD | VIDEO



CLICK TO WATCH THE VIDEO

FINTECH PRODUCT FEATURES



Investment Analytics

- Deep Market Intelligence
- Analytical Dashboards
- Al-driven SWOT Analysis

Transaction Process

- Target Identification
- Deal Structuring
- LegalTech Deal Completion

Proprietary Projects

- DKG Longevity Projects
- Structured Financial Products
- Longevity Venture Capital Fund



LONGEVITY INSURTECH

Longevity InsurTech encompasses progressive and modern insurance solutions that are designed to meet the needs of individuals who plan to actively expand their healthspan and maintain prolonged periods of healthy Longevity.

Longevity InsurTech aims to offer discounted insurance rates in proportion to clients' decreased risk of ill health and disease, and supporting coverage for a broader array of products, services, and tools to help them maintain their health and wellness.

Most InsurTech companies are distributors. Comparison sites and apps offer consumers an easy, real-time way to compare coverage and price options.



management tools for

distributors/insures

claims processing

client needs, define

appropriate pricing

structures

MARKET TRENDS

Insurance providers will closely partner with seniors caregivers
Using innovative digital solutions such as non-invasive tools and
devices or by improving home care aspects, insurers can become
real partners to patients and caregivers by sharing the burden of care
and helping patients increase their quality of life.

Insurers have to become simple and digital

Life and health insurers have woken up to the need to simplify and digitalise their businesses. Simplifying complex products, identifying, alleviating customer pain points and episodes, and creating a seamless customer experience across all channels is critical.

Embracing advanced analytics tools

Longevity InsurTechs are mastering processes such as underwriting, which were formerly the sole domain of incumbents, through leveraging data and advanced analytics.

InsurTech companies ease the burden of the insurance industry Older people are deemed more costly to the insurance system. Insurers make the decisions based on aggregate profiles that include gender and age. Using data from wearable devices and through tracking the health conditions, insurers can create more insightful individual profiles and provide personalised services leveraging behavioural analytics.

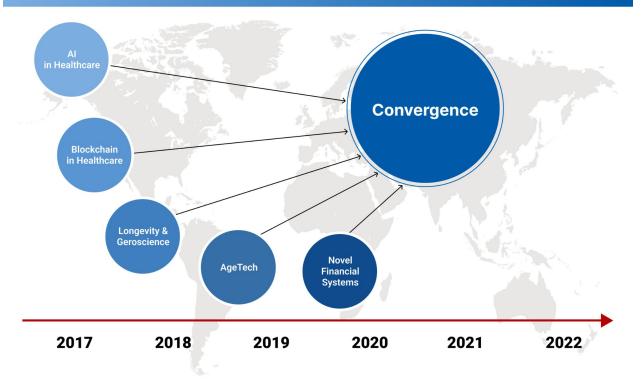
LONGEVITY FINTECH

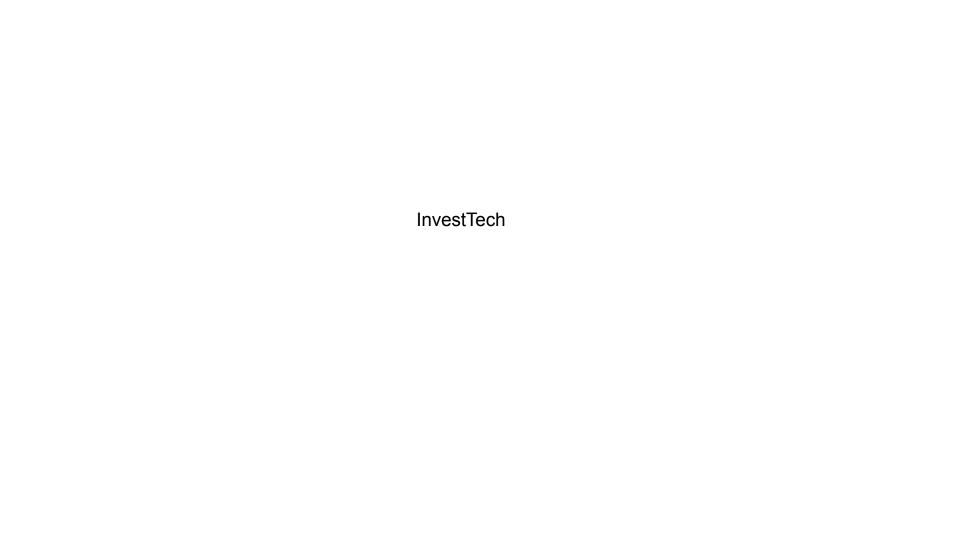
Both traditional banking and the global Financial Industry is in a state of rapid evolution, and Longevity is at the heart of that transformation, accelerated by the synergetic intersection of financial technologies.

Deep Knowledge Group is working on the frontlines of the coming shift toward Longevity FinTech and the rise of FinTech 2.0, and in an unparalleled position to offer strategic guidance, SWOT analysis and competitive landscaping, technological benchmarking and forecasting, and strategic consultancy services on the full scope of Longevity Financial Industry activities and technologies.

FinTech 2.0 =

AI + FinTech + LegalTech + RegTech + MarTech + HealthTech





Longevity Investment Big Data Analytics Al-driven System and Dashboard



www.deep-innovation.tech

Longevity Publicly Traded Companies Big Data Analytics Dashboard



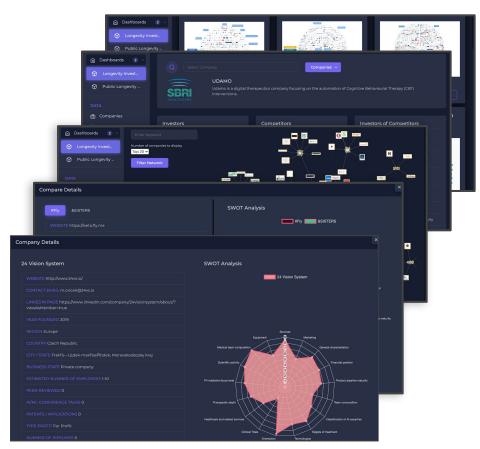
www.deep-innovation.tech

Longevity Investment Dashboard Platform Features Overview

Deep Knowledge Group dashboard platform analyzes millions of data points on investors, public & private companies including startups, sectors & subsectors and provides tools of swot analysis, competitors, comparative analysis, portfolio construction, mindmaps, statistics to help you analyze opportunities.

50,000+ Companies 10,000+ Investors 160+ Subsectors





www.deep-innovation.tech

Deep Knowledge Group

Building Financial Infrastructure for Emerging Longevity Industry







Deep Knowledge Group's Longevity Finance Activities

Data Science-Driven Financial and Investment Projects







Built by Deep Knowledge Group:

- Longevity.Capital
- Longevity Banking Card
- Longevity Financial Advisors
- AMCs and Performance Trackers
- Longevity Investment IT Platform
- Big Data Investment Analytics Dashboard
- Longevity-Focused Structured Financial Products
- Automated Due diligence, SWOT analysis, De-risking

Longevity Card

Longevity Card Marketplace Partners:















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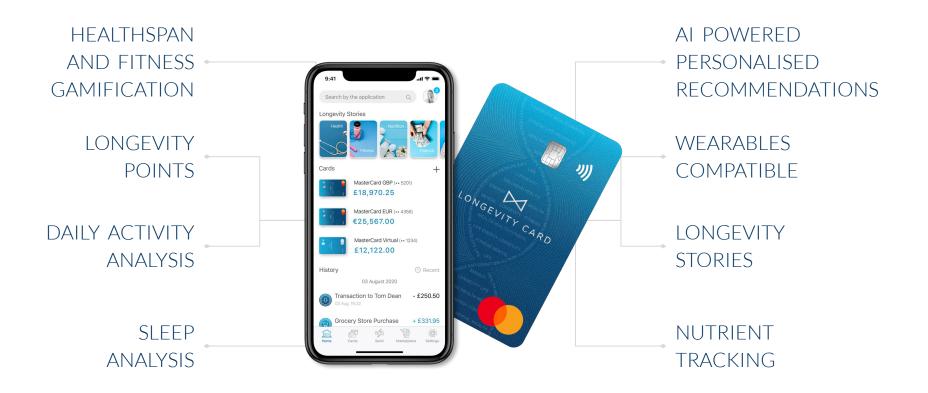






www.longevity.cards

Longevity Card: HealthTech Integration



www.longevity.cards

Longevity Club Card + Banking Card





FITNESS UPE WELLNESS AND LONGENTY WEALTH MENTAL AND MEN

Longevity Banking Card

Longevity Club Membership Card

Longevity Card's **second** product in pipeline, focused on 65+ Generation was mentioned in the landmark report produced by Mastercard and Emerging Payments Association "All Aboard. The role of the Fintech industry in solving the problems of financial exclusion".

"The buying power of wealthy individuals in this age group makes it too lucrative to ignore, and start-ups such as the Longevity Card have the chance to provide relevant and profitable products for these consumers." tells the report.







While 'carer cards' joint accounts and power of work with a bank or thirdattorney, for example, can party payment services, i.e. support those suffering to take spoken instructions cognitive decline. Dave Birch of Consult Hyperion feels that digital wallets could use voice recognition to make digital services oldest age group. His 93 year old father, for

from the consumer his smartphone but could ask his voice interface if a utility bill had been paid. And consumers can already

(especially during the

The Post Office Card Account (POca) provides its users, who are 75% nensioners and many aged 75-90, with a vital source of cash. However, the DWP is ending the contract and encouraging POca customers to move to a different account. Anne Foundation suggests that with increasingly fewer

pandemic), we should be what they need to do with the cash. This may provide an opportunity to help some of this group to understand and move to other safer and equally convenient methods of payment that still meet their needs and give them more sight of where their money is going. The Access to Cash Review report¹⁵ demonstrated that this is not it is an option for a sizeable proportion of this group.

narket is the Longevity with over 65s as its core audience. Hot on the heels targeting consumers interested in health and launch before the end of 2020, Sergey, CEO of Longevity Card, discussed its Agetech financial product for launch in April 2021 targeted at people aged over 65 years old. This will offer the user a current account and debit card alongside access to discounted products and services relevant to that age group through its

attention has been given to the user experience and behavioural aspects of this age group, using particularly around digital skills and cognitive decline. As a result the product support to enable human interactions just like a controls will help people them to a marketplace of relevant products and strong focus on protecting triggering an SMS message member for review and

The buying power of wealthy individuals in this age group makes it too lucrative to ignore, and start-ups such as the Longevity Card have the chance to provide relevan and profitable products for these consumers. However solution, as those with the least buying power often have the greatest needs.

approval or decline.

"I feel that digital wallets could use voice recognition-based authentication, such as Siri and Alexa, to make digital services more accessible to





emergingpayments.org



Panel Discussion

LCLONGEVITY FINANCIAL CLUB

Closing Words

Dominic
Jennings
Longevity
Financial Advisors

L F

LONGEVITY FINANCIAL CLUB

London, 21 June 2022

Oxford and Cambridge Club

www.longevity.network

Investment and Finance Longevity Thematic Series of Conferences



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