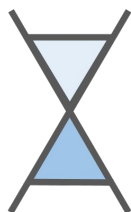# AGING ANALYTIC AGENCY

The World's Premier Longevity Analytics Provider
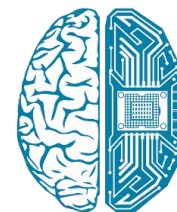
Deep Knowledge Group

Aging Analytics Agency - the world's premier Longevity Analytics provider, dedicated to the production of analytical reports on the topics of Longevity, Precision Preventive medicine and AgeTech. Operating for over five years, it began producing in-depth reports on Longevity long before it emerged as an industry. The company also provides strategic consulting in the fields of Longevity and Economics of Aging.

Deep Knowledge Analytics - the analytical arm of Deep Knowledge Ventures, specialising in forecasting on the convergence of technological megatrends, conducting special case studies and producing advanced industry analytical reports on the topics of Artificial Intelligence, DeepTech, GovTech, Blockchain, FinTech and Invest Tech.
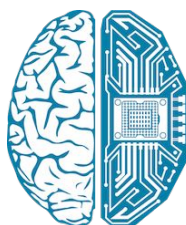
Deep Knowledge Ventures - A data-science driven investment fund focused on the synergetic convergence of specific DeepTech verticals. Investment sectors include AI, Precision Medicine, Longevity, Blockchain and Invest Tech.

Aging Analytics Agency:

Producing Longevity Industry Reports Since 2013

Aging Analytics Agency is the only analytical company focused exclusively on Longevity, Ageing, Geroscience, Preventive Medicine and AgeTech. Operating for over five years, it began producing reports on Longevity long before it emerged as an industry. The company also provides strategic consulting in the fields of Longevity and the Economics of Ageing.

Their most recent reports include:

- Global Longevity Industry Landscape Overview Volume I "The Science of Longevity" 750 pages

- Volume II "The Business of Longevity" 650 pages

- Special case study "Longevity Industry in UK 2018" Landscape Overview 850 pages

- "Longevity Industry in Israel 2019" 369 pages

- "Longevity Industry in Singapore 2010" 577 pages

Their advantage over other analytics agencies is their specific focus on the emerging Longevity Industry and Personalized & Preventive Medicine.

Since its establishment in 2013, AAA has been systematically producing reports to document the rise of Longevity and Geroscience since.

Aging Analytics Agency's Unique Approach

The use of advanced infographics to distil complex industry landscapes into unified frameworks, enabling comprehension of pertinent data at a single glance.

The use of tangible, quantifiable, and proven metrics to conduct near-future industry forecasts, including Technology Readiness Levels (TRLs), to examine a given technology's market-readiness.

A strong focus on the convergence of multiple industries and technologies enables the identification of indiscernible mega-trends and provides a birds-eye view of industry developments as a whole.

AAA are the only analytical agency focused exclusively on the topics of Aging, Geroscience and Longevity. Operating for over five years, they began producing in-depth reports on Longevity long before it emerged as a recognized industry. In 2014, they successfully predicted the boom in industry development and financing rounds of 2017, at a time when the vast majority of investors, business analysts, and even geroscientists believed its emergence to be in the next decade.

Aging Analytics Agency Predicted the Rise of the Longevity Industry 3 Years in Advance

Aging Analytics Agency is the only specialized analytics agency in the world that focuses exclusively on the emerging Longevity Industry. They are recognized internationally as the premier analytics agency for advanced data analysis, industry reports and next-generation infographics on the topics of Aging and Longevity.

Now in its 5th year, Aging Analytics Agency has been on the frontlines of Longevity Analytics since the inception of the industry.

Dmitry Kaminskiy, co-founder of Aging Analytics Agency, boldly predicted in 2014 that the Longevity Industry would see an inflection point in its development in 2017, becoming a recognized industry in the eyes of conservative investors, business analysts and top business media. This was at a time when investors and geroscientists alike were highly skeptical of the industry's emergence within the next decade.

This prediction turned out to be true. 2017 witnessed an unprecedented rise in the number of Longevity-focused companies and investment deals, the emergence of half a dozen of geroscience-focused VC firms, coupled with widespread coverage of Longevity as a topic by mainstream media including The Economist, Financial Times and Bloomberg.

Uniquely Positioned to Provide World-Class Longevity Analytics Reports and Services

Aging Analytics Agency not only forecast the true dawn of the Longevity Industry years before its mainstream recognition, but was willing to put its reputation at stake with a bold yet precise prediction when no one else saw it coming. Their confidence stems from their reliance on tangible and quantitative predictive metrics, including the use of cross-disciplinary and synergetic analytical tools and frameworks to map the enormous diversity and complexity of the Longevity Industry.

Today, the fruits of their labor significantly contributed to the exponential growth of Longevity as a topic in the mainstream, including its acceptance by business experts, media and even governments. The UK, for example, has listed Aging Population as one of its four grand challenges and launched a government-backed Healthy Aging Industrial Strategy Challenge Fund. Other governments have also launched similar strategic national development plans devoted to Longevity. Leading media brands, including TIME, Forbes, Bloomberg and others regularly publish Longevity-oriented cover stories. High-profile conferences on the subject of Longevity are more numerous than ever before.

Aging Analytics Agency has been involved in charting the rise of the Longevity sphere since its inception and remained at the forefront throughout the past half decade. Thus, they are uniquely positioned to produce both broadly-accessible reports and specialized case studies for specialized clientele including companies, investment firms, family offices and government agencies.

EXECUTIVE TEAM

Eric Kihlstrom
Director

Eric Kihlstrom is the Director of Aging Analytics Agency and the former Interim Director of the £98 million Healthy Ageing Industrial Strategy Challenge Fund.

Dmitry Kaminskiy
Founder

Dmitry Kaminskiy is the Founder of Aging Analytics Agency, Managing Partner of Deep Knowledge Ventures, and a prominent Longevity Investor and Thought-Leader.

Franco Cortese
Deputy Director

Franco Cortese is the Deputy Director of Aging Analytics Agency. Having joined the team in 2015, he has overseen the production of the majority of the agency's Longevity Industry Reports.

Kate Batz
Business Development Director

Kate Batz is Vice President of Business Development of Aging Analytics Agency. She is a corporate attorney by background with extensive sales and marketing experience.
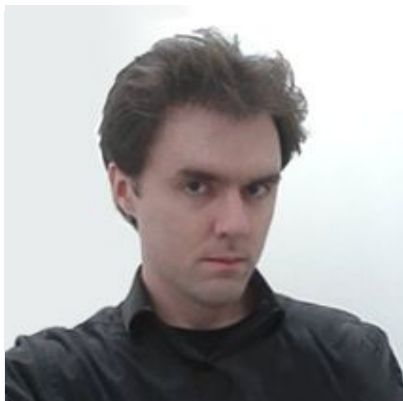
Ian Inkster
Senior Analyst

Ian Inkster has worked across multiple biotech companies since 2009 with an emphasis on giving definition to the rejuvenation biotechnology industry. He had a hand in the SENS Research Foundation since its inception, and his previous role was as a public relations officer for Deep Knowledge Ventures.
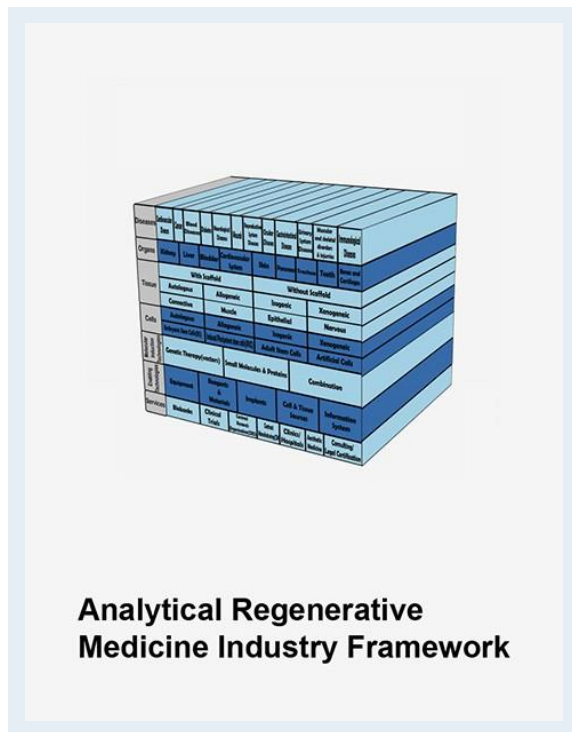
Kris Notaro
Analyst

Kris Notaro is an Analyst for Aging Analytics Agency and former Managing Director of the Institute for Ethics and Emerging Technologies, a US-based think tank focusing on the societal implications of emerging technologies founded by Nick Bostrom and James Hughes.

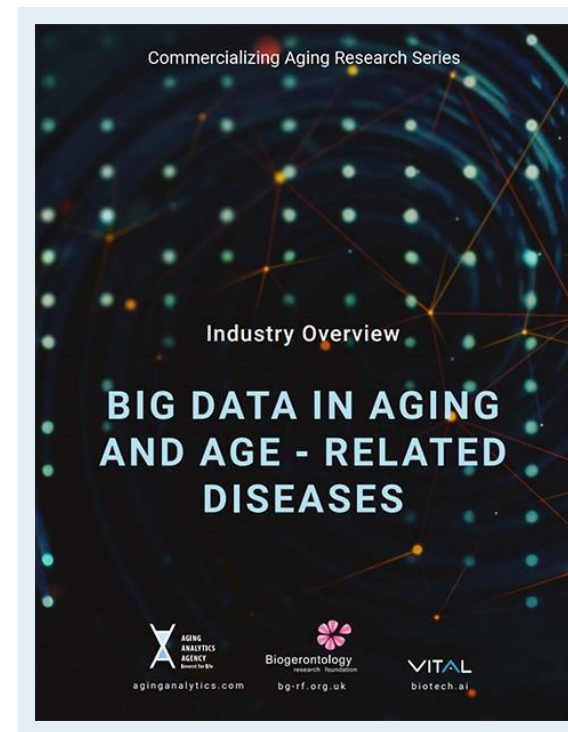# Reports by Aging Analytics Agency
# 2013 - 2015

SPECIALIZED LONGEVITY INDUSTRY REPORTS

Analytical Regenerative Medicine Industry Framework

2013

Investing in Regenerative Medicine: Technology Analysis and Market Outlook

2014 Report #1

ISBN # 978-0-9912902-1-5

May 2014

2014

Commercializing Aging Research Series

Industry Overview

BIG DATA IN AGING AND AGE - RELATED DISEASES

aginganalytics.com   bg-rf.org.uk   VITAL biotech.ai

2015

Reports by Aging Analytics Agency
2017 - 2018

Longevity Industry Landscape Overview 2018

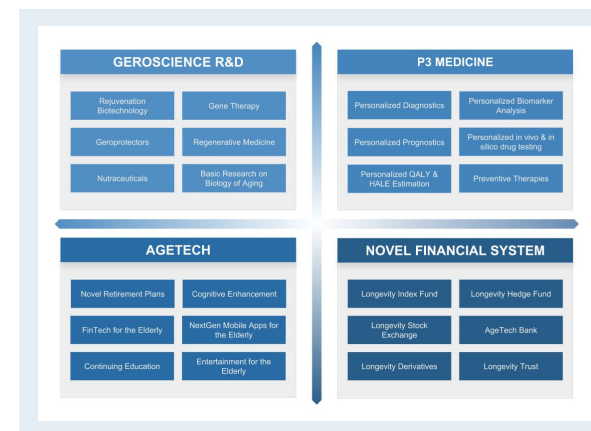**Longevity Industry Landscape Overview 2018 Volume I**
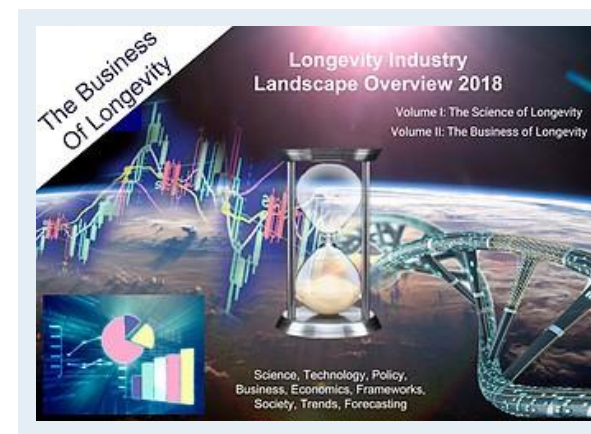
Longevity Industry Landscape Overview 2018 Volume II

Longevity Industry in UK Landscape Overview 2018
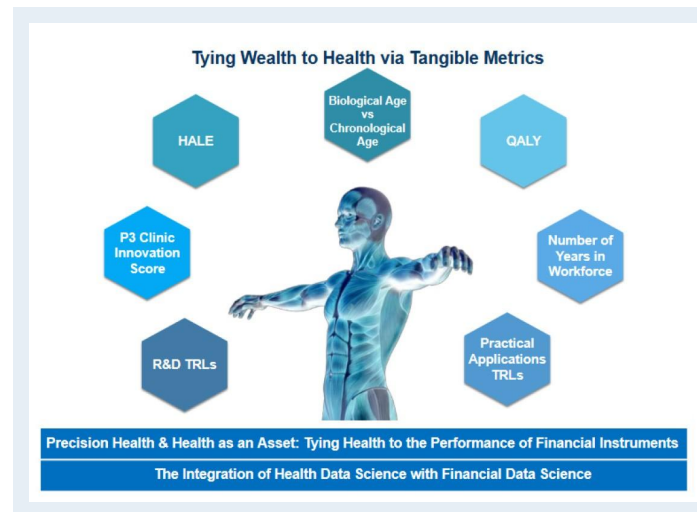

AI for Drug Discovery Landscape Overview Q2/2018

Longevity Industry Classification Framework

Technology Readiness Levels for Tangible & Quantitative Industry Forecasting

Applying Technology Readiness Levels for Forecasting the BioTech and BioMedicine Industries

Pipeline for the Progressive Model of P3 Medicine Platform

Pipeline for the Progressive Model of P3 Medicine Platform

TRLs use a ranking of 1-9, with 9 being the most mature technology. Specific levels are assigned to specific technologies by a group of qualified scientific experts. The use of TRLs creates a uniform metric, enabling consistent discussions of maturity across different types of technologies. In the coming years, TRLs can underpin efforts to shed light on the most important technologies and reveal those currently furthest away from practical applications. Therefore, TRLs enable the prediction of the right timing and focus to ensure that each emerging technology accomplishes its specific endpoints, highlighting possible interactions between technologies.

TRLs Give Us Advanced Capabilities for Tangible Industry Forecasts

What are TRLs, and Why are They Important?

The unique value of Aging Analytics Agency is deeply connected to their use of tangible and quantifiable metrics to perform near-future industry forecasting, giving weight and substance to the projections, insights and conclusions presented in their analytical reports.

Specifically, they employ Technology Readiness Levels (TRLs), a proven quantifiable framework used in aerospace and other technological industries, to estimate the market readiness of a given technology in the Longevity, Personalized and Preventive Medicine as well as Advanced Biomedicine fields.

For the first time, they have established the use of TRL in the life sciences industry, creating a scientific framework that allows us to quantifiably project when a given technology will mature for practical application in the clinic.
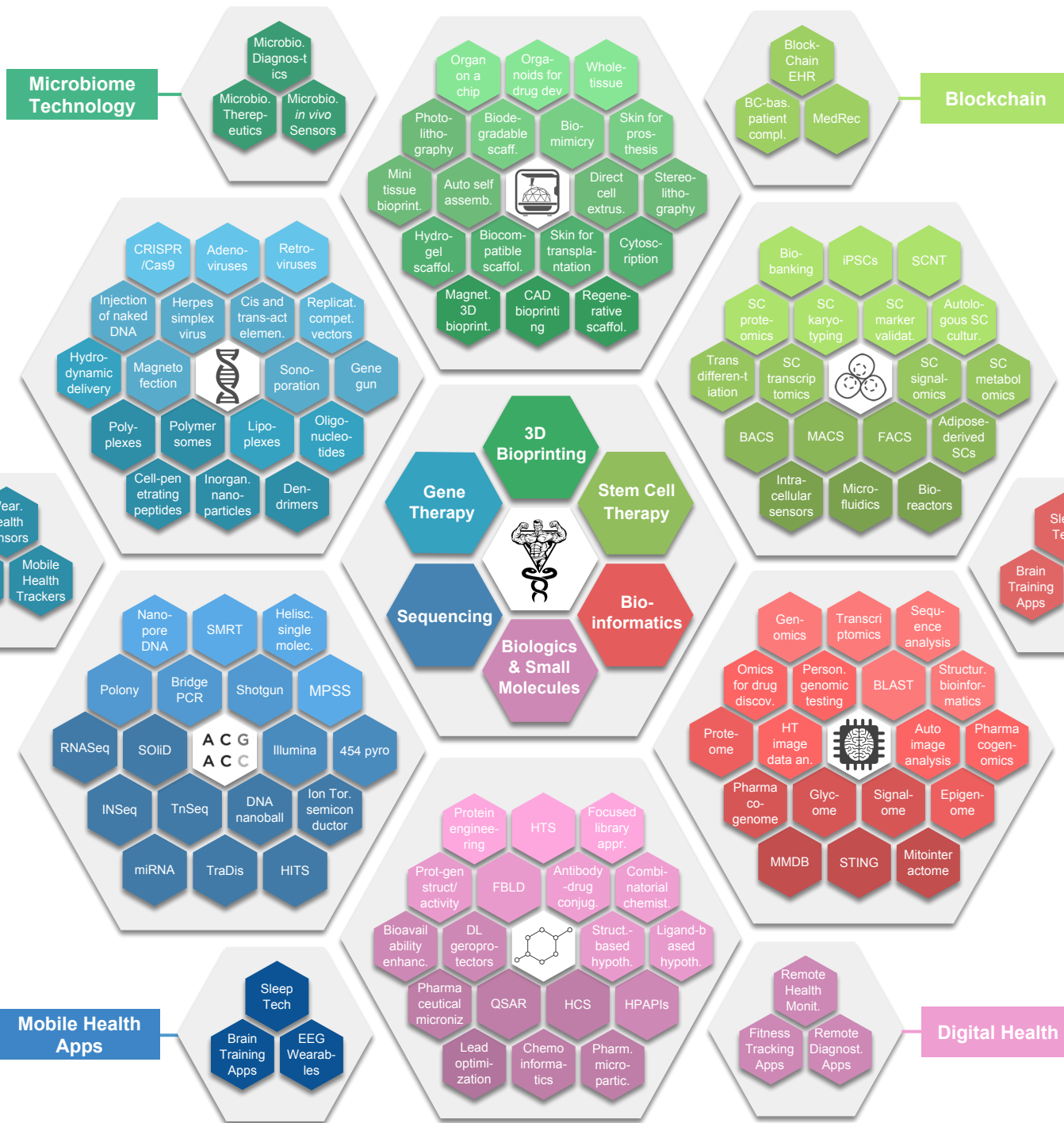
TRLs indicate whether a given technology is ready for practical implementation in real-world products and services. In the context of the Longevity Industry, a TRL ranking measures how close a therapy, diagnostic, prognostic technology or other product is from reaching the hands of actual patients in the clinic.

The use of TRLs creates a uniform metric, enabling consistent discussions on maturity assessment across different types of technologies. In the coming years, TRLs can underpin efforts to shed light on the most important technologies and reveal those currently furthest away from practical applications.

Therefore, TRLs enable identification of the right timing and focus to ensure that each emerging technology accomplishes its specific endpoints, highlighting possible interactions between technologies.

Aging Analytics Agency envisions using TRLs to expedite progress by providing an objective lens through which various technologies are judged. Similar to how TRLs have benefited the aerospace industry, they can bolster the efforts of the life sciences industry in the coming five years.

THE BUSINESS OF PROGRESSIVE MEDICINE 2018 *PRACTICAL APPLICATIONS*

Top 120+ Technologies & Therapeutics TRL 8-9

Microbiome Technology
- Microbio. Diagnos-tics
- Microbio. Therep-eutics
- Microbio. *in vivo* Sensors

Blockchain
- Block-Chain EHR
- BC-bas. patient compl.
- MedRec

3D Bioprinting
- Organ on a chip
- Organoids for drug dev
- Whole-tissue
- Photo-litho-graphy
- Biode-gradable scaff.
- Bio-mimicry
- Skin for pros-thesis
- Mini tissue bioprint.
- Auto self assemb.
- Direct cell extrus.
- Stereo-litho-graphy
- Hydro-gel scaffol.
- Biocom-patible scaffol.
- Skin for transpla-ntation
- Cytosc-ription
- Magnet. 3D bioprint.
- CAD bioprinting
- Regene-rative scaffol.

Gene Therapy
- CRISPR /Cas9
- Adeno-viruses
- Retro-viruses
- Injection of naked DNA
- Herpes simplex virus
- Cis and trans-act elemen.
- Replicat. compet. vectors
- Hydro-dynamic delivery
- Magneto fection
- Sono-poration
- Gene gun
- Poly-plexes
- Polymer somes
- Lipo-plexes
- Oligo-nucleo-tides
- Cell-pen etrating peptides
- Inorgan. nano-particles
- Den-drimers

Stem Cell Therapy
- Bio-banking
- iPSCs
- SCNT
- SC prote-omics
- SC karyo-typing
- SC marker validat.
- Autolo-gous SC cultur.
- Trans differen-tiation
- SC transcrip tomics
- SC signal-omics
- SC metabol omics
- BACS
- MACS
- FACS
- Adipose-derived SCs
- Intra-cellular sensors
- Micro-fluidics
- Bio-reactors

Sequencing
- Nano-pore DNA
- SMRT
- Helisc. single molec.
- Polony
- Bridge PCR
- Shotgun
- MPSS
- RNASeq
- SOliD
- Illumina
- 454 pyro
- INSeq
- TnSeq
- DNA nanoball
- Ion Tor. semicon ductor
- miRNA
- TraDis
- HITS
- ACG ACC

Bio-informatics
- Gen-omics
- Transcri ptomics
- Sequ-ence analysis
- Omics for drug discov.
- Person. genomic testing
- BLAST
- Structur. bioinforma-tics
- Prote-ome
- HT image data an.
- Auto image analysis
- Pharma cogen-omics
- Pharma co-genome
- Glyc-ome
- Signal-ome
- Epigen-ome
- MMDB
- STING
- Mitointer actome

Biologics & Small Molecules
- Protein engine-ring
- HTS
- Focused library appr.
- Prot-gen struct/ activity
- FBLD
- Antibody -drug conjug.
- Combi-natorial chemist.
- Bioavail ability enhanc.
- DL geropro-tectors
- Struct.-based hypoth.
- Ligand-b ased hypoth.
- Pharma ceutical microniz
- QSAR
- HCS
- HPAPIs
- Lead optimi-zation
- Chemo informa-tics
- Pharm. micro-partic.

Cognitive Technologies
- Sleep Tech
- Brain Training Apps
- EEG Wearables

AgeTech
- Wear. health sensors
- Tele-med.
- Mobile Health Trackers

Mobile Health Apps
- Sleep Tech
- Brain Training Apps
- EEG Wearab-les

Digital Health
- Remote Health Monit.
- Fitness Tracking Apps
- Remote Diagnost. Apps

AGING ANALYTICS AGENCY

DEEP KNOWLEDGE ANALYTICS

LONGEVITY INTERNATIONAL

Technology Readiness Level (TRL)

9	Commercialized
8	Pre-Production
7	Field Test
6	Prototype
5	Bench/Lab Testing
4	Detailed Design

Technology Readiness Levels (TRL) are a common measure of how close a technology is for practical use, used in many engineering disciplines.

By applying it to progressive medicine, we can forecast how long it will take a given therapeutic or technology to witness practical applications in the clinic or home. The darkness of each hexagon represents its TRL, with darker colors indicating a low TRL and brighter colors indicating a high TRL.

All technologies and therapeutics shown here have a TRL between 8-9.

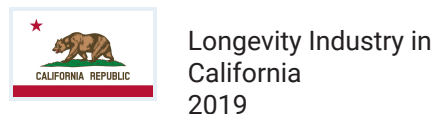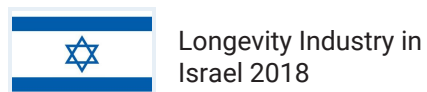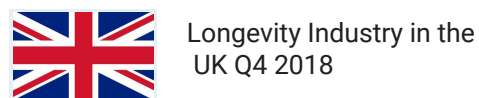# Aging Analytics Agency Produced Longevity Reports 10x Faster in 2018

In 2018, Deep Knowledge Ventures injected additional financing to support Aging Analytics Agency's ongoing and future projects. This enabled Aging Analytics Agency to extend the size of its analytics team by 10-fold.
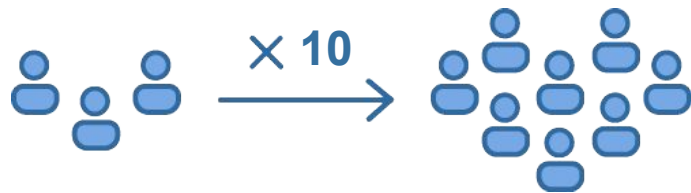
This growth in brain power allowed us to proportionally increase the rate of production of their reports. Just in the past year, Aging Analytics Agency have doubled the number of high-quality reports compared to previous years, which include:

- Global Longevity Industry Overview, totaling over 1200 pages, which offers in-depth profiles of the top 100 companies, investors, non-profits and research labs active in the sphere;
- 850-page specialized case study on the Longevity Industry Landscape in the United Kingdom.

In line with this expansion, they are on track for publishing a greater number of diverse and in-depth reports in the coming year, with some reports expanding further in their prior scope whereas others will be targeting particular topics and niches within the Longevity Industry.

 Longevity Industry in Singapore 2018

 Longevity Industry in the UK Q4 2018

 Longevity Industry in Israel 2018

 Longevity Industry in California 2019

Multiple Special Regional Case Studies Planned for 2019

Following the success of their *Longevity Industry in UK 2018 Landscape Overview* report, they are planning to publish a number of additional regional case studies aimed at countries where the topic of Longevity is experiencing a particularly rapid development.

Such region-specific focus is present due to a number of factors, including the emergence of new Longevity sectors in specific countries, the rise of particularly powerful geroscience tech hubs and R&D nexuses as well as the launch of strategic national development plans proposed by progressive governments.

Longevity Industry in UK Q4 2018

Longevity Industry in Israel 2019

Longevity Industry in Singapore 2019

 Longevity Industry in Switzerland

 Longevity Industry in Japan

 Longevity Industry in Hong Kong

 Longevity Industry in Taiwan
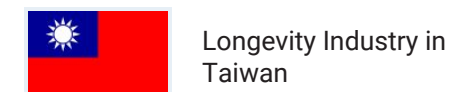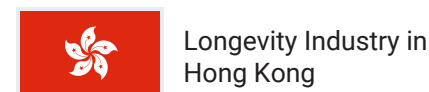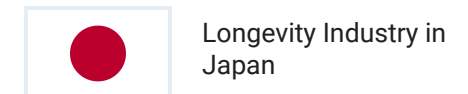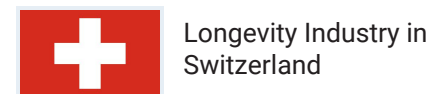
Reports Published in Q1 2019
by Aging Analytics Agency

Longevity Industry in UK Q4 2018

FemTech Longevity Landscape Overview

Longevity Industry in Israel 2019

Longevity Industry in Singapore 2019

Upcoming Reports Q2 2019
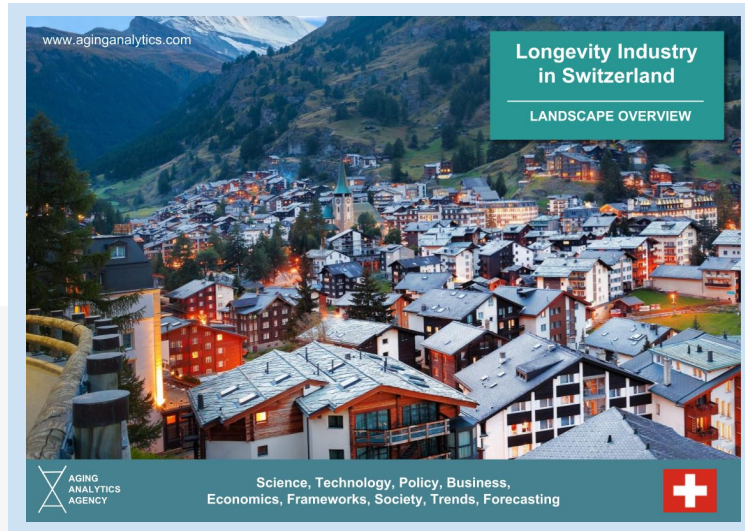
Longevity Industry in Switzerland

Longevity Industry in Japan

Longevity Industry in Hong Kong

Longevity Industry in California

Upcoming Reports Q2-Q3 2019
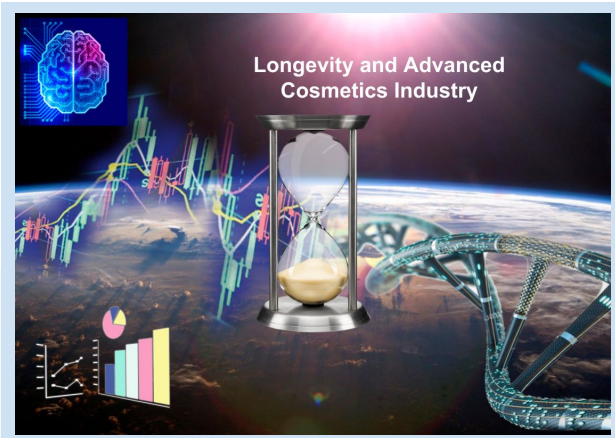
Longevity and Advanced
Cosmetics Industry 2019

Precision Medicine Clinics
Landscape Overview 2019

Advancing Financial Industry
AgeTech / WealthTech / Longevity

Longevity Industry
and Microbiome 2019

Global Longevity Industry
Landscape Overview 2019

Proprietary Longevity Industry
Analytics: Comparative
Classification Framework

Online Longevity Analytics Platform to Enable a Framework for Cross-Industry Stakeholder Dialogue and Industry Optimization

2019

In 2019, to compliment these reports, Aging Analytics Agency is releasing an advanced online Longevity Analytics Platform and database featuring interactive visuals which can transform static analytical reports into dynamic infographics updated in real-time. This platform will enable complex interactions between industry entities and stakeholders to be visualized, filtered, searched and thus more easily understood
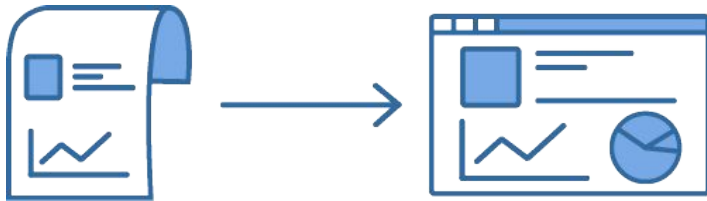
Once created, this platform will be continuously updated with real-time industry developments and will be significantly upgraded with the integration of elements including:

- A stakeholder smart-matching engine
- Supply chain analysis
- Tools for the syndication of investment rounds
- Customized report production
- Peer-to-peer, distributed stakeholder ranking systems
- Big data analytics and other advanced tools and techniques

IT-Platform as the Investment Knowledge Nexus for Longevity.Capital

The platform will be open to qualified stakeholders, and will serve as the framework for industry optimization and cross-disciplinary dialogue and collaboration between companies, investors, entrepreneurs, scientists and government officials. The overarching aim of the platform is to promote the synergistic and integrated development of the Longevity Industry to maximize the benefits of all industry stakeholders.

The Longevity Industry continues to grow in size but remains highly fragmented, with different stakeholders displaying disparate opinions on where it is headed and how long it will take to get there. their platform aims to deliver a framework for proper industry unification. In prototype development for over a year, this interactive platform will ultimately serve as the investment knowledge epicenter of Longevity.Capital.

Moving forward, Aging Analytics Agency will serve as the main source of expertise behind Longevity.Capital, providing sophisticated Longevity Industry analytics in order to develop and de-risk the fund's investment strategies. Meanwhile, Longevity.Capital will follow through on and execute the strategy, and provide financial products similar to hedge funds.

Longevity Analytics Platform Development Q2 2019: Filterable Company & Investor Listings, Interactive MindMaps

Quick Searches

Autocompletes

Drag and Drop interfaces

Filtering & Sorting

Longevity Analytics Platform Development Q3 2019
Bottom-Up Smart Matching & Syndication of Investment Rounds

- Automatically connects and provides network suggestions
- Smart-matching between relevant entities and stakeholders
- Accelerates the adoption and deployment of new technological solutions
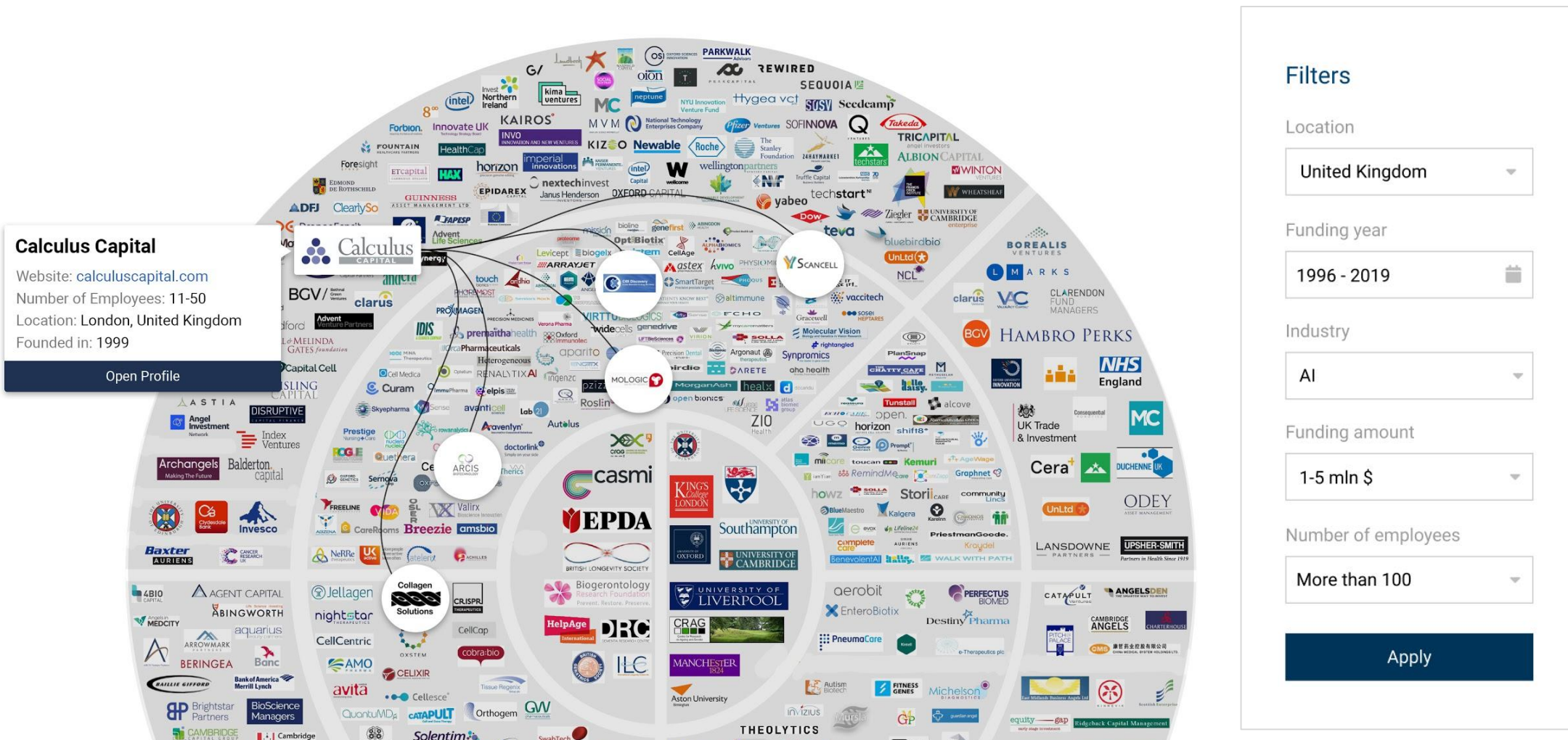
Aging Analytics Agency's beta prototype Longevity Industry Analytics Platform is live and available at mindmaps.aginganalytics.com. The official version will launch in **Q3 2019,** featuring **10,000 entities** classified into the four key sub-sectors. Built to serve as the next-generation solution for industry optimization, it will equip all participants with tangible tools for stakeholder smart-matching, with a strong focus on cross-discipline dialogue and synergetic cooperation.

Next Multi-Trillion Underdeveloped Market for Financial Institutions

AgeTech Market

Globally
1 Billion on Retirement

In the UK
10 Million on Retirement

> " The one billion retired people globally are
> a multi-trillion dollar opportunity for business "
> — *Dmitry Kaminskiy interview in the Financial Times.*

Ageing represents not only one of the most pressing problems of our time, but also one of the most promising opportunities. Financial institutions such as investment banks, pension funds and insurance companies can either sink or swim when hit by the oncoming Silver Tsunami. Whether they succeed to ride the wave or drown under it will depend not only on their willingness to deploy new business models adapted to an ageing population and the emerging industries of AgeTech, WealthTech and Longevity Finance, but also on the quality of Longevity Analytics that they use to formulate such business models.
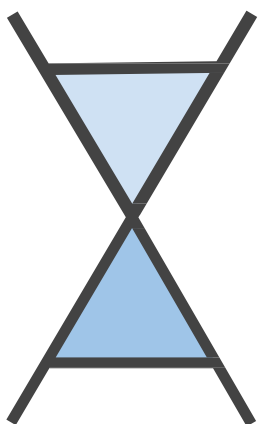
Aging Analytics Agency is primarily interested in strategic collaboration with international corporations, organisations and governments of progressive countries on projects and initiatives related to Longevity.

Aging Analytics Agency is open to engage with strategic clients via a variety of approaches, including:

- Conducting customised case studies, research and analytics for internal (organizational) use, tailored to the precise needs of specific clients;

- Producing open-access analytical reports;

- Offering customised analysis using specialised interactive industry and technology databases and IT-platforms.

In certain specific cases, if it fits our interests, AAA is open to co-sponsoring research and analytics for the production of both internal and openly-access industry reports and special case studies on the topics of Longevity, Precision Health, Personalized Medicine, Digital Health, Blockchain in Healthcare as well as other advanced topics.

AGING ANALYTICS AGENCY

www.aginganalytics.com   info@aginganalytics.com