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Mack Institute Spring Conference
June 9, 2016

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Human Longevity – 260 Employees in Three Sites



La Jolla, CA



Mountain View, CA



Singapore



Sequencing
Facility

**HEALTH
NUCLEUS**

Machine Learning,
Data Mining and
Algorithms

Informatics

Human Longevity – ~300 Employees in *Four* Sites



La Jolla, CA

Mountain View, CA

Singapore

Human Longevity Inc. Advances Leadership Role in Newborn Genome Sequencing with Strategic Acquisition of Stem Cell Banking from Celgene Cellular Therapeutics

HLI to Offer Newborn Genome Sequencing Product in Combination with Stem Cell Banking

(SAN DIEGO, CA)—January 28, 2016—Human Longevity, Inc. (HLI), the genomics-based, technology-driven company, announced today that the company has agreed to purchase [LifebankUSA](#), a leader in placental and cord blood banking, along with its proprietary and high-yield method for extracting placental stem cells and related therapeutic programs, and the biomaterials program which includes the marketed product Biovance®, a cell matrix critical to wound healing applications.

THE RIGHT FOCUS AT THE RIGHT TIME

MALE
30%

MORTALITY RATE
FOR AGES 50-74

Aging is among the most significant risk factor for human disease. The Health Nucleus is dedicated to investigating this universal condition.

FEMALE
20%

MORTALITY RATE
FOR AGES 50-74

MALE

Neurologic 3% | Cirrhosis 3% | Diabetes 6% | Respiratory 7% | Other 13% | Cardiovascular 32% | Cancer 36%

FEMALE

Other 5% | Neurologic 5% | Cirrhosis 5% | Diabetes 10% | Respiratory 10% | Cardiovascular 25% | Cancer 40%

Life Sciences and Healthcare Industries in Transition



Express Scripts Plunges as Biggest Client Threatens to Leave

- REACTIVE

- DISEASE MANAGEMENT

- GENERALIZED

- COSTLY

New Precision Medicine Guidelines Aimed at Improving Patient Treatment Plans for Pa

- PROACTIVE

- PREVENTATIVE

- PERSONALIZED

- PREDICTIVE

FACT SHEET: Obama Administration Announces Key Actions to Accelerate Precision Medicine Initiative

that every patient is tried to tailor their individuals. You can match a — that was an important cancer cure to our genetic standard? What if figuring as simple as taking our

Healthcare spending, 2016 (% of GDP)

North America
Western Europe
Latin America
Asia and Australasia
Eastern Europe
Middle East and Africa

THE BLOG

Will We Have a Health Care System or a Sick Care System? A Tale of Two Futures

Source: The Economist | © 2016/2015 HCL Inc. ET | Updated Nov 21, 2016

FACT SHEET: Investing in the National Cancer Moonshot

During his 2016 State of the Union Vice President Biden to lei state cancer as we know a new \$1 billion i

Human Longevity, Inc. (HLI) to Offer Oncology Products Including Comprehensive Whole Germline, Tumor Genome and Whole Cancer Exome Products

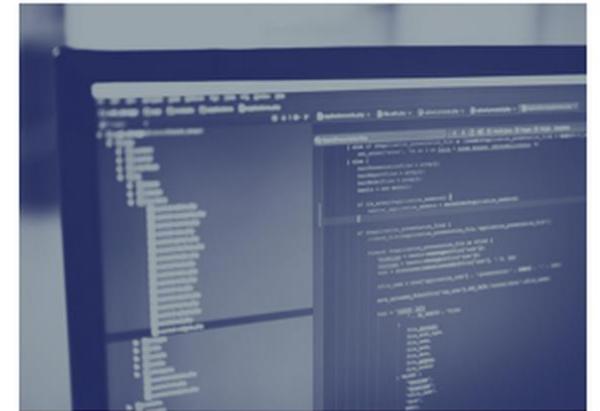
(SAN DIEGO, CA)—January 12, 2016—Human Longevity, Inc. (HLI), the genomics-based, technology-driven company, announced today its oncology genomics program, including the development of comprehensive whole germline and tumor genome analysis, as well as tumor and germline exome analysis products.

Genomics – A Continuum of Care Strategy

Longevity Begins At Birth and Is a Lifetime Clinical Strategy



- Newborn & Childhood Screening (0-5 years)
- Pediatric Genetic Diagnostics (Rare Disease)
- Adult Genetic Screening
- Tumor Profiling
- PGX Utilization w/ Integrated Clinical Decision Support
- Genomic Research of the Highest Quality via Knowledgebase™ & HLI Search

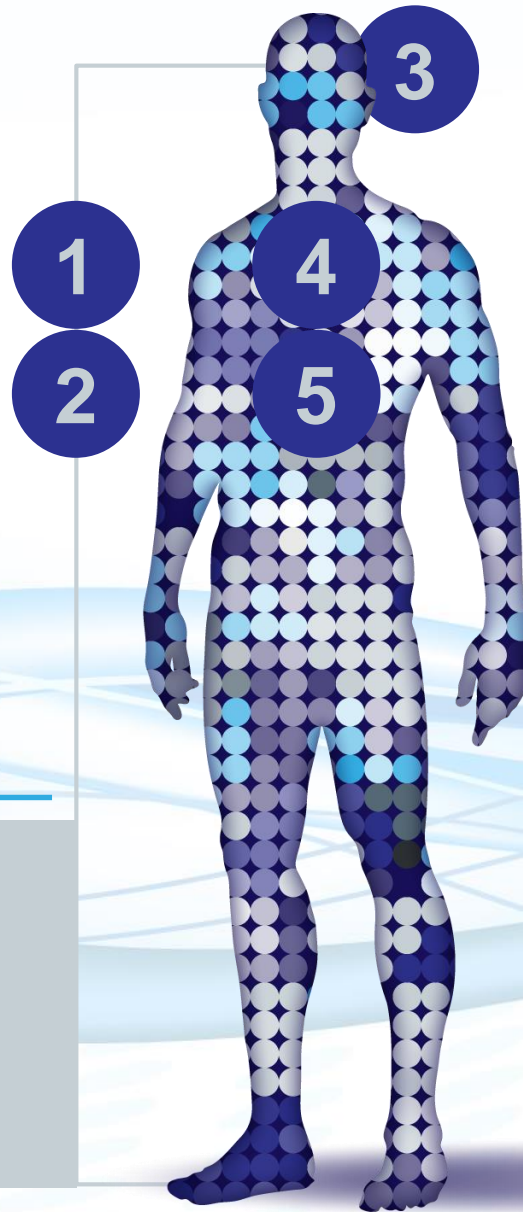


GENOMIC- INFORMED MEDICAL RECORD

HEALTH DATA COLLECTED
BY THE HEALTH NUCLEUS

150_{GB}

OVER AN 8 HOUR DAY



1 WHOLE BODY

- MRI (musculoskeletal/ lipid analysis)
- MRI (organ specific RSI/diffusion for early cancer detection)
- DEXA Scan
- InBody Biometrics
- Over 70 Laboratory Diagnostic Tests (Blood)
- 3D Forensic Imaging (Avatar)

2 GENETIC SEQUENCING

- Whole Genome
- Metabolome
- Microbiome

3 BRAIN

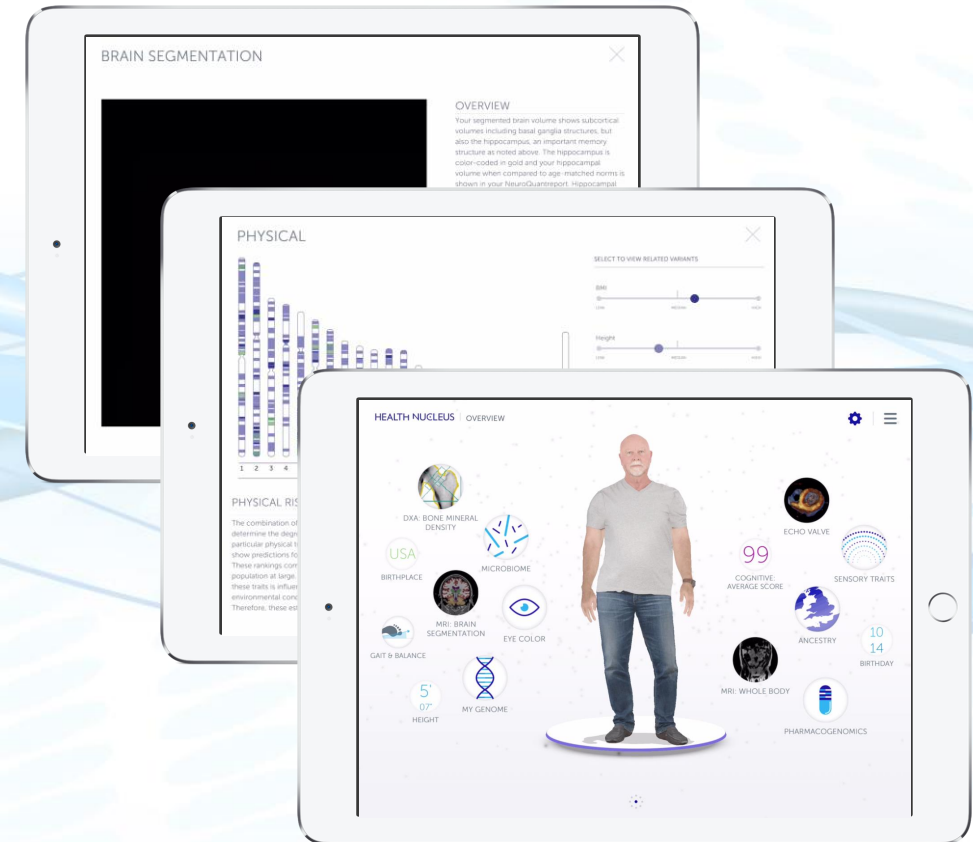
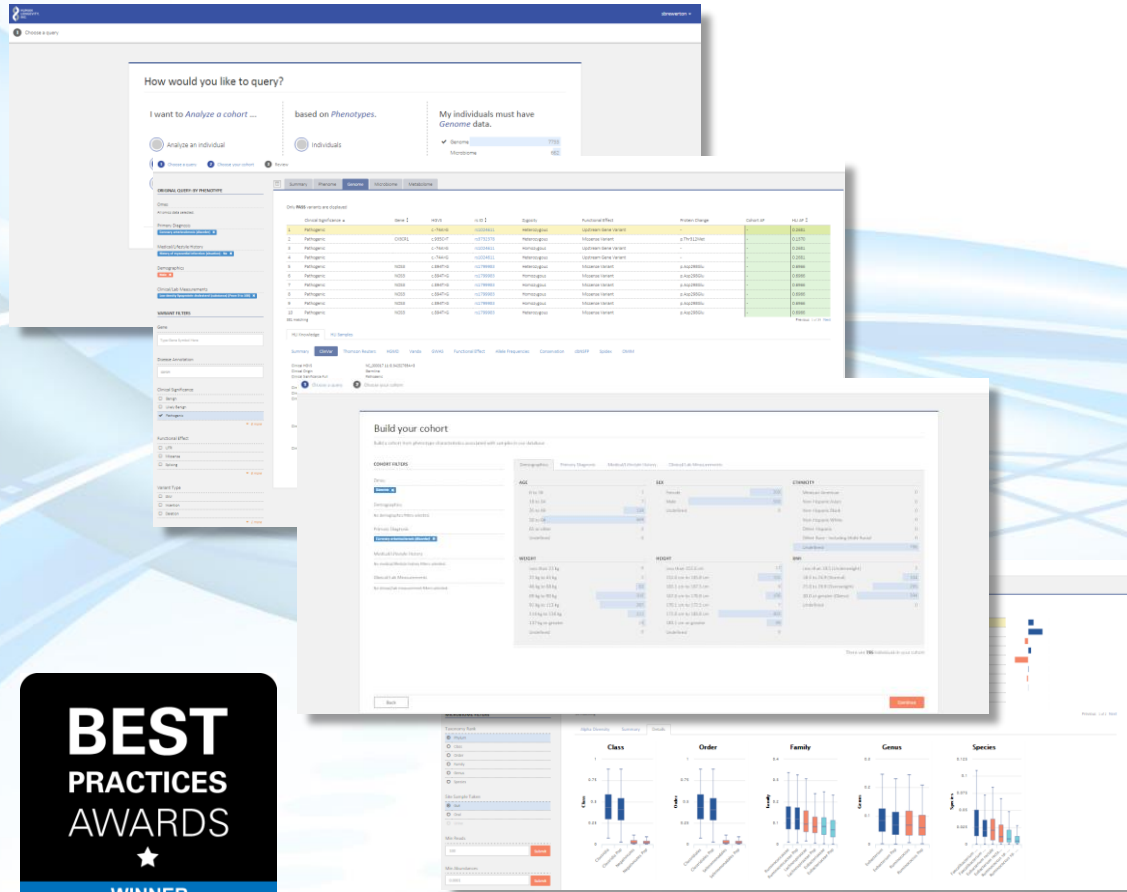
- NeuroQuant® Brain MRI
- 3D T2 Brain MRI
- Diffusion MRI
- Neurocognitive Testing
- Quantitative Gait Analysis

4 PULMONOLOGY

- Pulmonary Function Testing

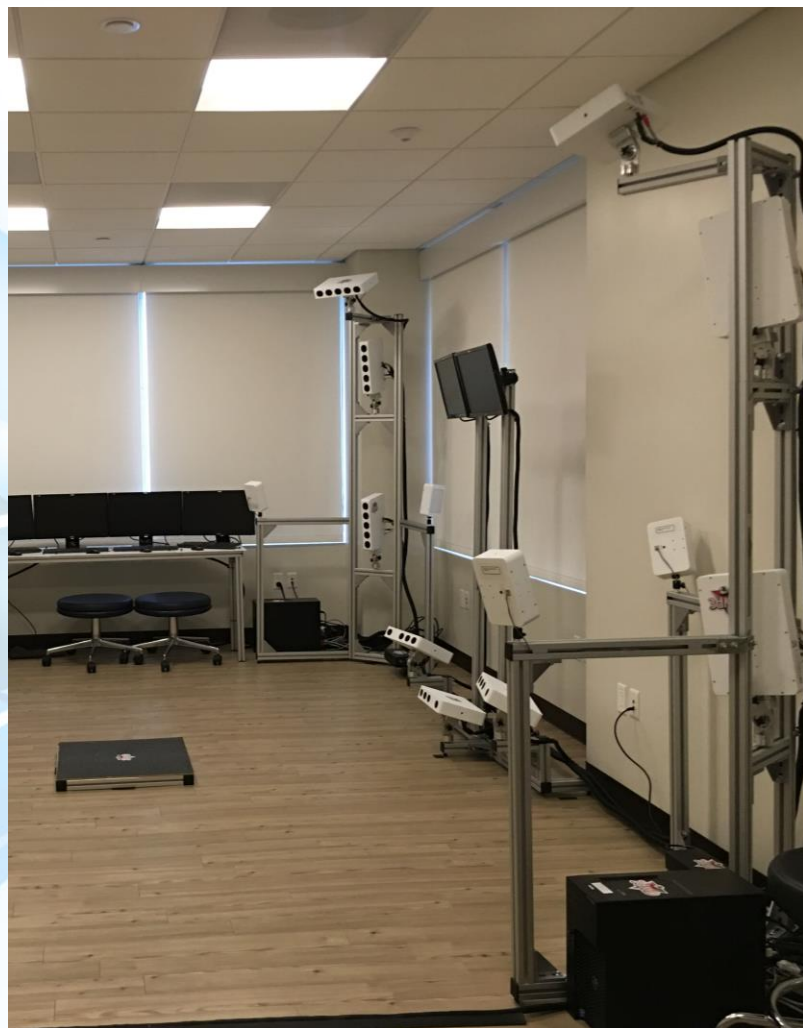
5 CARDIOVASCULAR

- Echocardiography (2D, 3D, 4D)
- ECG
- 2 week Ambulatory Rhythm Testing

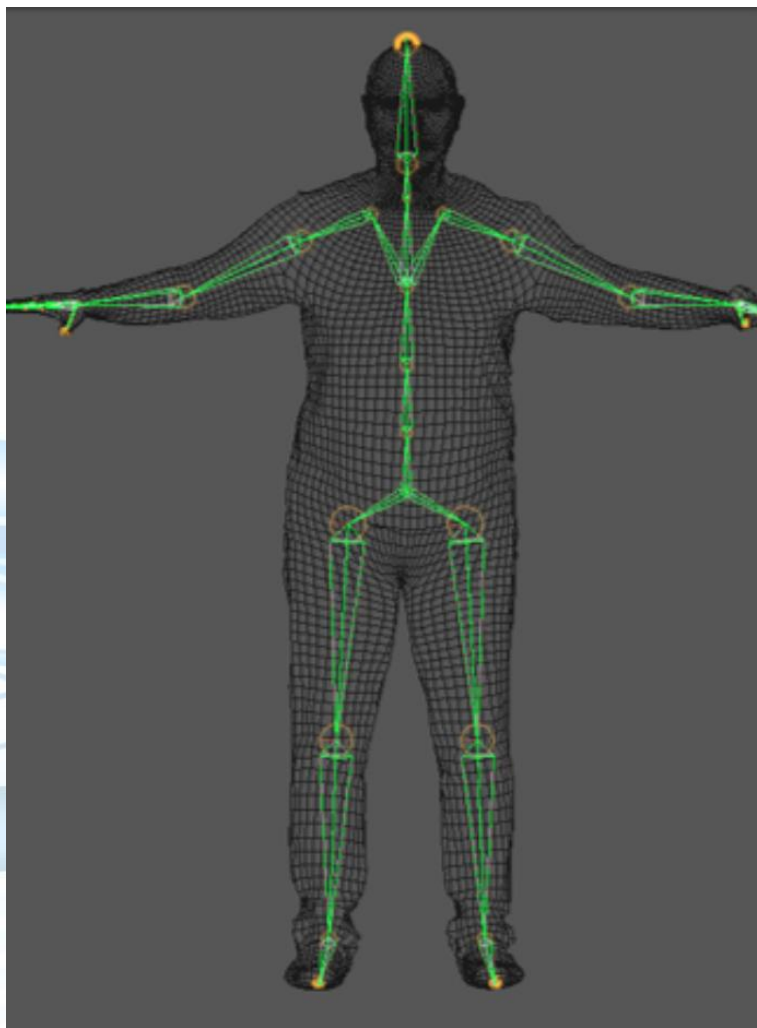


*Avatar Patent Pending – All Rights Reserved

The Center of Engagement with the Genomic Informed Health Record



Avatar Capture



Digital Rendering



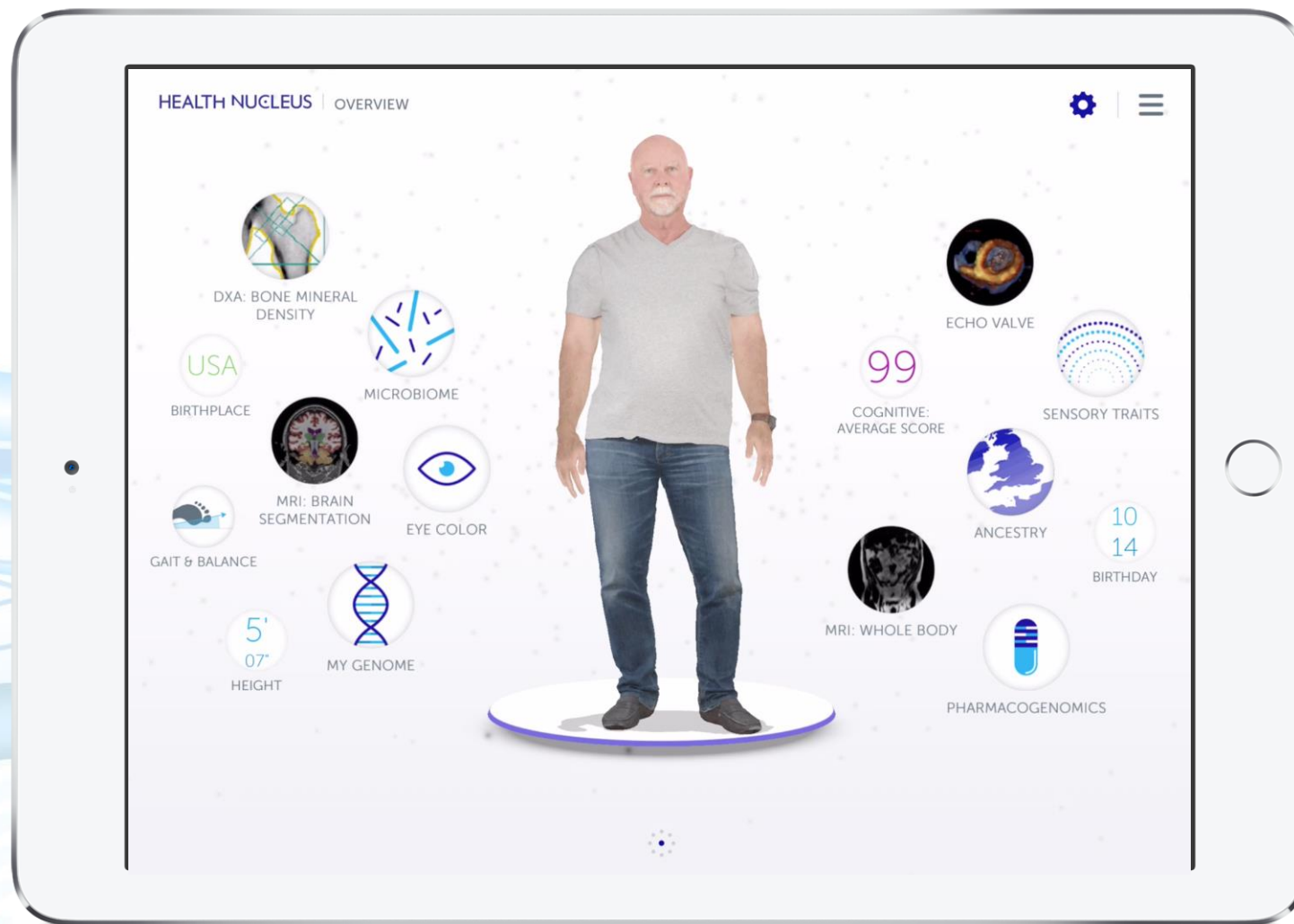
Animation

Exploration Centered Around You!

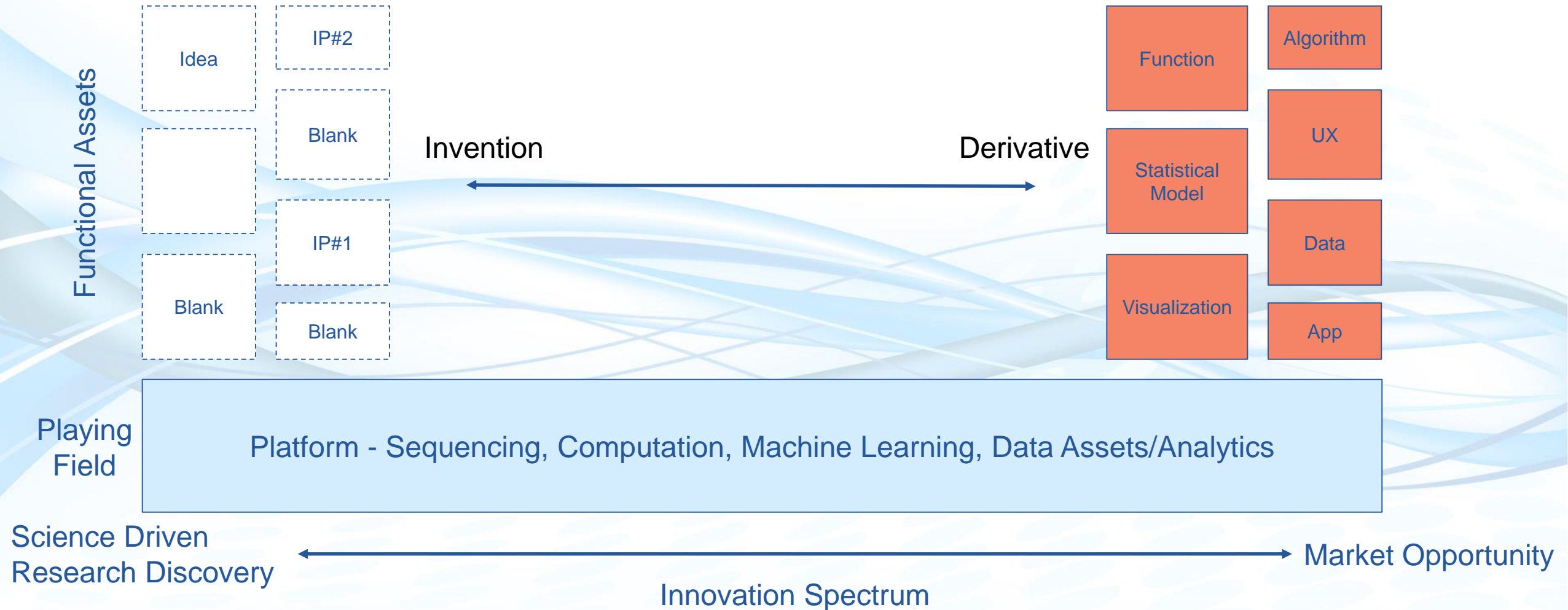
Navigate from your place in the world down to your genomic variation



- Integration of genomic and phenotype data
- Inclusion of microbiome and metabolomics
- Leveraging self-reported data including family history
- Provided in a format that allows you to explore you



Multi-tier Innovation Library Feeds Iterative PD on a Spectrum



OUR

MISSION

CHANGING THE PRACTICE OF MEDICINE, MAKING
IT PREDICTIVE, PREVENTATIVE AND GENOMICS-
BASED. ULTIMATELY, OUR GOAL IS TO EXTEND
THE HEALTHY, HIGH PERFORMANCE AND

PRODUCTIVE LIFE SPAN.



HUMAN LONGEVITY, INC.

Thank You!

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