



GLOBAL WELLNESS
SUMMIT 2017



DNA Testing:

Understanding Results and Exploring Opportunities

Ali Mostashari, PhD, CEO, LifeNome Inc., U.S.



The Age of Personalized Wellness

Artificial Intelligence, Genomics, and the Data-driven Health and Wellness Revolution



Ali Mostashari, Ph.D.
CEO, LifeNome



GLOBAL WELLNESS
SUMMIT

A PARADIGM SHIFT IS BREWING IN WELLNESS

JUST WITHIN THE PAST 3 YEARS...



Personal Biological
Data (DNA +
Microbiome)

+



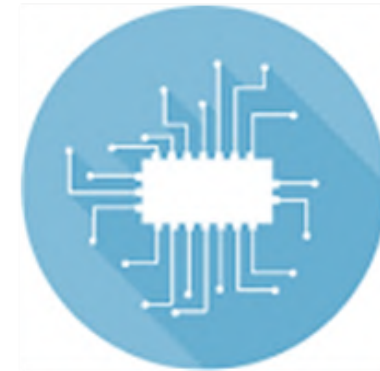
Personal
Physiological Data
(Wearables)

+



Personality Data and
Behavioral Science

+



Artificial Intelligence
and Machine Learning

ADVANCES IN SCIENCE AND ARTIFICIAL INTELLIGENCE HAVE ENABLED
TRUE PERSONALIZATION OF WELLNESS PRODUCTS AND SERVICES

DEMAND FOR PERSONALIZATION PASSING TIPPING POINT

WOULD CHOOSE A BRAND OVER ANOTHER IF THEY PROVIDED ME THE FOLLOWING PRODUCTS AND SERVICES THAT ARE PERSONALIZED FOR ME BASED ON MY DNA....

71%

SUPPLEMENTS

57%

**CORPORATE
WELLNESS**

55%

**WEIGHT LOSS
AND FITNESS**

54%

**SKIN CARE/
COSMETICS**

42%

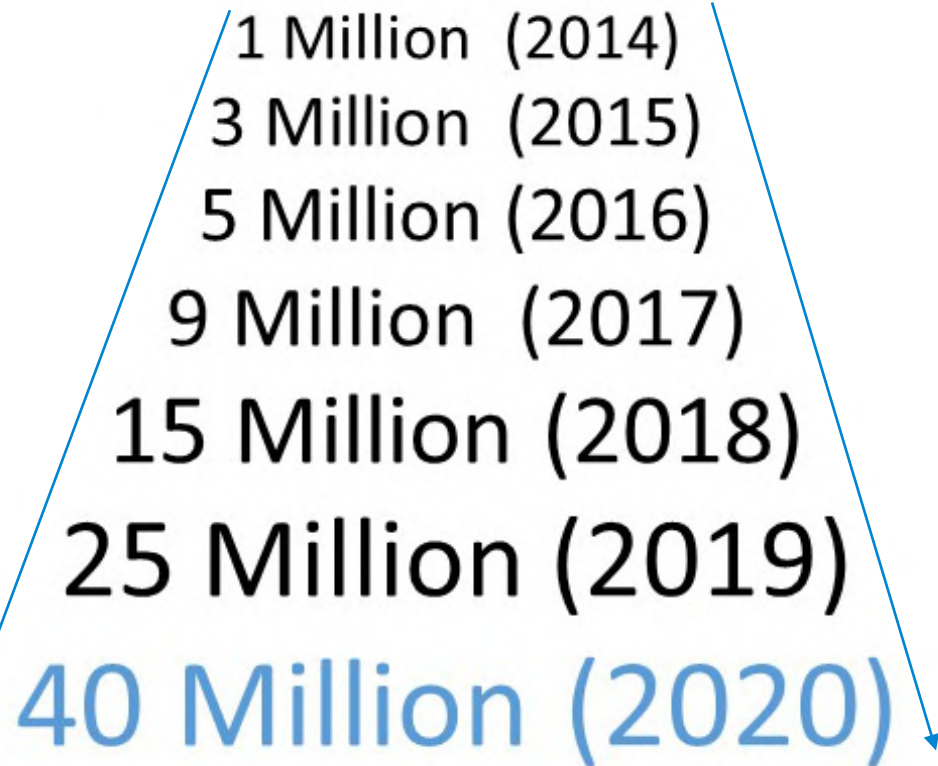
FRAGRANCES

Source: LifeNome – Columbia University U.S. National Survey of Attitudes Towards DNA-based Personalization, July 2017

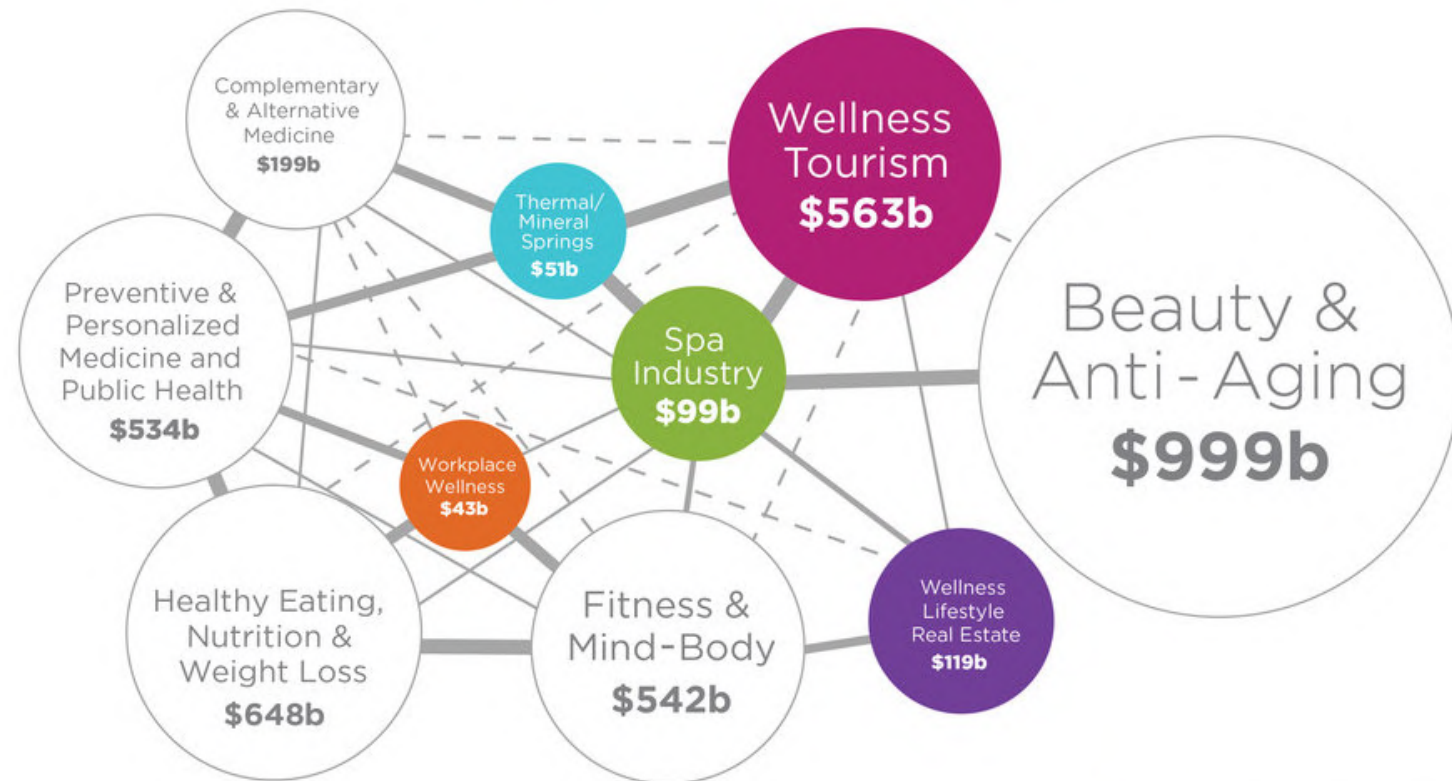
BIOLOGY: ULTIMATE FRONTIER OF WELLNESS

PERSONALIZATION

U.S. Consumers with DNA Data

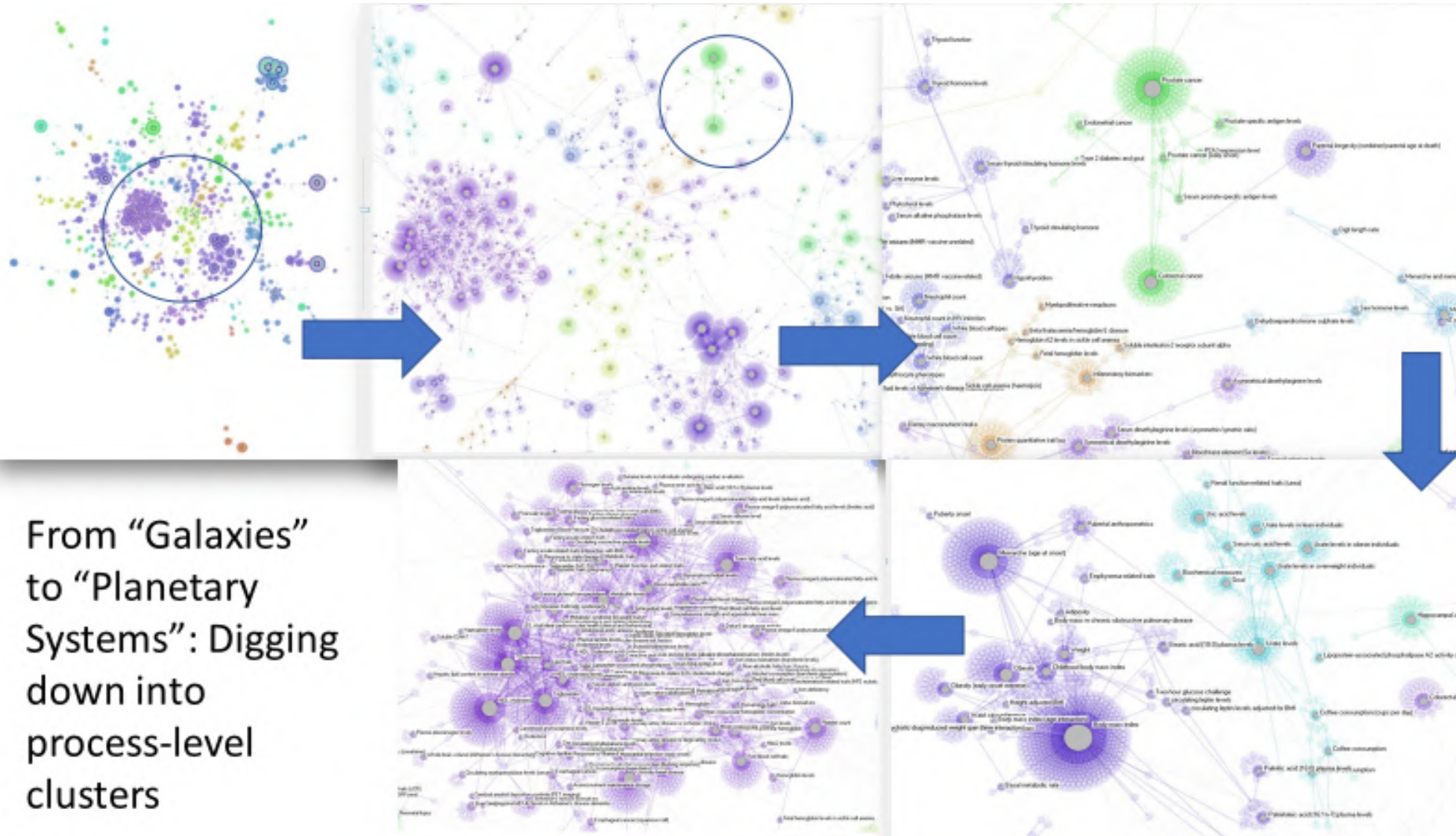


GLOBAL WELLNESS ECONOMY: \$3.7 trillion in 2015



Note: Numbers may not add due to overlap in segments.
Source: Global Wellness Institute, Global Wellness Economy Monitor, January 2017

AI + BIOLOGICAL DATA + BEHAVIORAL DATA = PERSONALIZED WELLNESS



PERSONALIZATION EXAMPLE: NUTRITION



Generic User



Dr. Raya Khanin
Co-Founder of LifeNome



Dr. Ali Mostashari
Co-Founder of LifeNome



Nutrition Facts	
Lean Shake, Swiss Chocolate - GNC Total Lean	
Serving Size: 2 scoops (48g)	
Amount Per Serving	
Calories 180	Calories from Fat 25
% Daily Value*	
Total Fat 2g	4%
Saturated Fat 0g	2%
Cholesterol 5mg	2%
Sodium 300mg	12%
Potassium 0mg	0%
Total Carbohydrates 30g	10%
Dietary Fiber 8g	32%
Sugars 5g	
Protein 9g	
Vitamin A	20%
Vitamin C	50%
Calcium	50%
Iron	20%

* Percent Daily Values are based on a 2000 calorie diet.

Nutrition Facts	
Total Lean, Lean Shake, Swiss Chocolate - GNC	
Serving Size: 2 scoops (48g)	
Amount Per Serving	
Calories 180	
% Daily Value*	
Total Fat 2g	3%
Saturated Fat 0g	2%
Cholesterol 5mg	3%
Sodium 250mg	14%
Potassium 0mg	0%
Total Carbohydrates 30g	12%
Dietary Fiber 8g	32%
Sugars 5g	
Protein 9g	
Vitamin A	20%
Vitamin C	35%
Calcium	34%
Iron	13%

* Percent Daily Values are based on a 2000 calorie diet.

Nutrition Facts	
Lean Shake, Swiss Chocolate - GNC Total Lean	
Serving Size: 2 scoops (48g)	
Amount Per Serving	
Calories 180	Calories from Fat 25
% Daily Value*	
Total Fat 2g	6%
Saturated Fat 0g	4%
Cholesterol 5mg	3%
Sodium 300mg	25%
Potassium 0mg	0%
Total Carbohydrates 30g	12%
Dietary Fiber 8g	32%
Sugars 5g	
Protein 9g	
Vitamin A	20%
Vitamin C	48%
Calcium	25%
Iron	20%

* Percent Daily Values are based on a 2000 calorie diet.

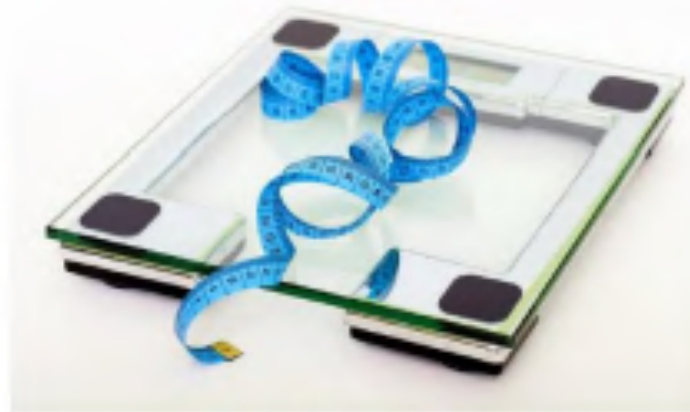
PERSONALIZATION EXAMPLE: DIET AND WEIGHT LOSS



9 Million

U.S. Consumers with
DNA Data by end of
2017

72% Interested in DNA-based Weight
Loss and Nutrition Personalization
(Source: Columbia University-LifeNome
National Survey 2017)



33%

Increase in Weight Loss
Effectiveness

Over 12 months given same calorie
restrictions for individuals on DNA-
based weight loss compared to
Individuals on generic diets
(Source: University of Trieste Study, 2014)



30%

Increased adherence to
recommendations








for individuals on DNA-based
nutrition advice compared to those
on generic advice
(Source: University of Trieste Study, 2014)

PERSONALIZATION EXAMPLE: SKIN CARE




Best for Willa!

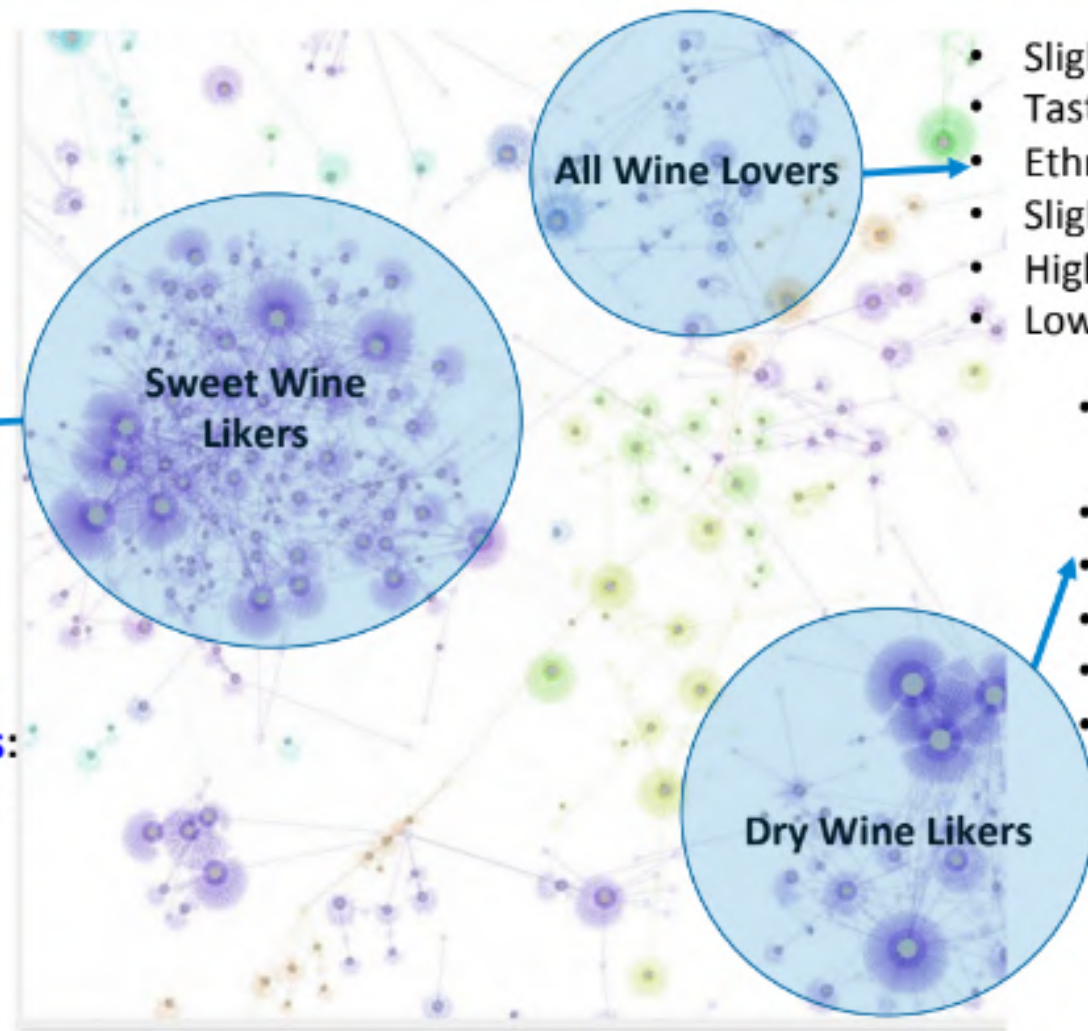


Willa's Genetic Skin Profile			
Increased collagen breakdown			×
Decreased pollution defense	×	 	
Decreased skin detoxification			×

PERSONALIZATION EXAMPLE: PRODUCT PLANNING AND MARKETING

- SuperTasters (Genetic Bitter Taste Sensitivity)
- Younger
- More Female
- Ethnically Diverse
- Lower alcohol tolerance
- Lower alcohol addiction tendency

Factors that determine our taste and smell preferences:
Genetics, Gender, Age, Life stage, Peer feedback, Socioeconomic status, Geography, Culture



All Wine Lovers

- Slightly Older
- Tasters (Genetic Bitter Taste Sensitivity)
- Ethnically More Diverse
- Slightly More Male
- Higher alcohol tolerance
- Lower alcohol dependence tendency

Dry Wine Likers

- Nontasters (Genetic Insensitivity to Bitterness)
- Older
- Significantly More Male
- Higher proportion of whites
- Higher alcohol tolerance
- Higher alcohol dependence tendency

GOING BEYOND FADS: SCIENCE MATTERS

IN THE NEXT 1-3 YEARS...

PERSONALIZATION WILL TAKE THE MARKET BY STORM,

POOR (SUPERFICIAL APPLICATION OF) SCIENCE (PARTICULARLY PART OF THE GENETIC FRENZY) WILL DETERIORATE PUBLIC TRUST AND FIZZLE OUT.

AFTER THE INITIAL GOLD RUSH PERIOD...

WHAT MATTERS LONG-TERM IS **PROOF OF EFFECTIVENESS AND VALIDATION.**

AND FINALLY....

**WAITING OUT TO SEE IF
SOMETHING IS A FAD OR A
PARADIGM SHIFT IS RISKY
BUSINESS.**

**FIND SUBSTANTIVE DISRUPTORS
AND CREATE PARTNERSHIPS
WITH THEM.**





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