

Thinking Like a Futurist



Presented by:
Garry Golden

July 26, 2018

Start

End



Foresight 101



Drivers of Change



Learning More

More or Less Change Ahead?

**Last
ten years**



**Next
ten years**



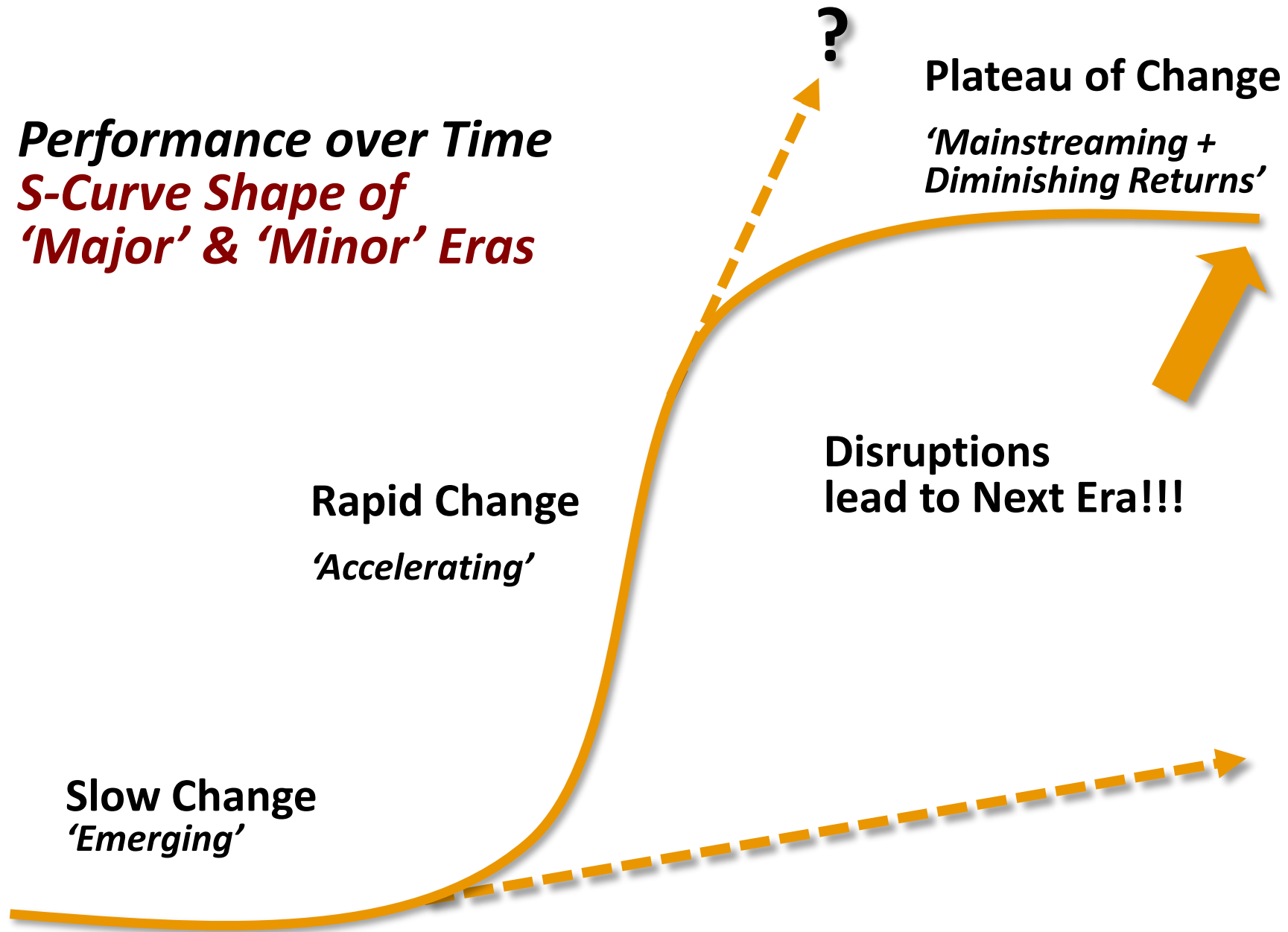
Foresight *as the Front End...*
of Innovation + Strategy

Foresight = Front end of Innovation

Era-based Growth Strategies



Performance over Time
S-Curve Shape of
'Major' & 'Minor' Eras



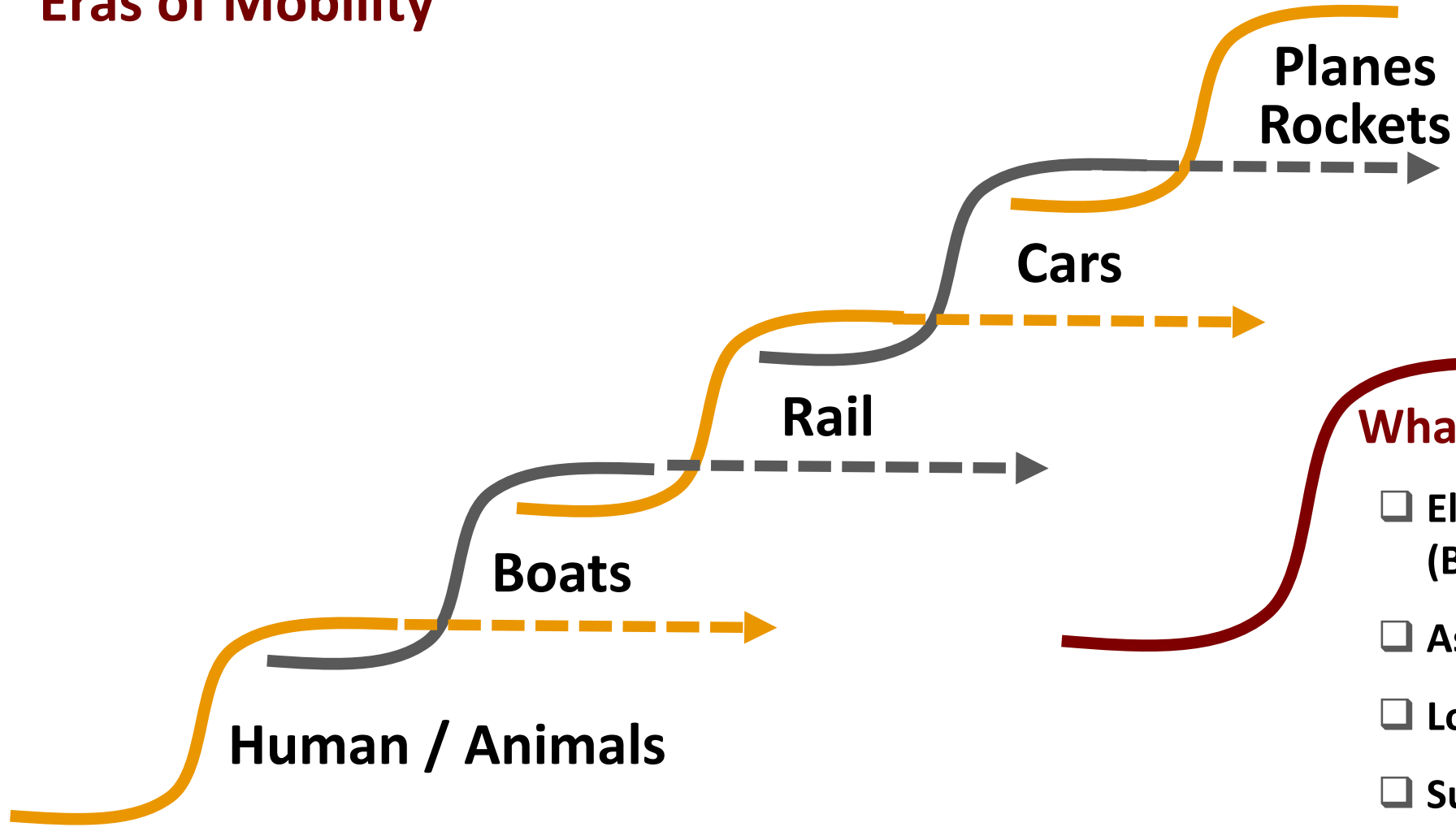
Plateau of Change
*'Mainstreaming +
Diminishing Returns'*

Rapid Change
'Accelerating'

**Disruptions
lead to Next Era!!!**

Slow Change
'Emerging'

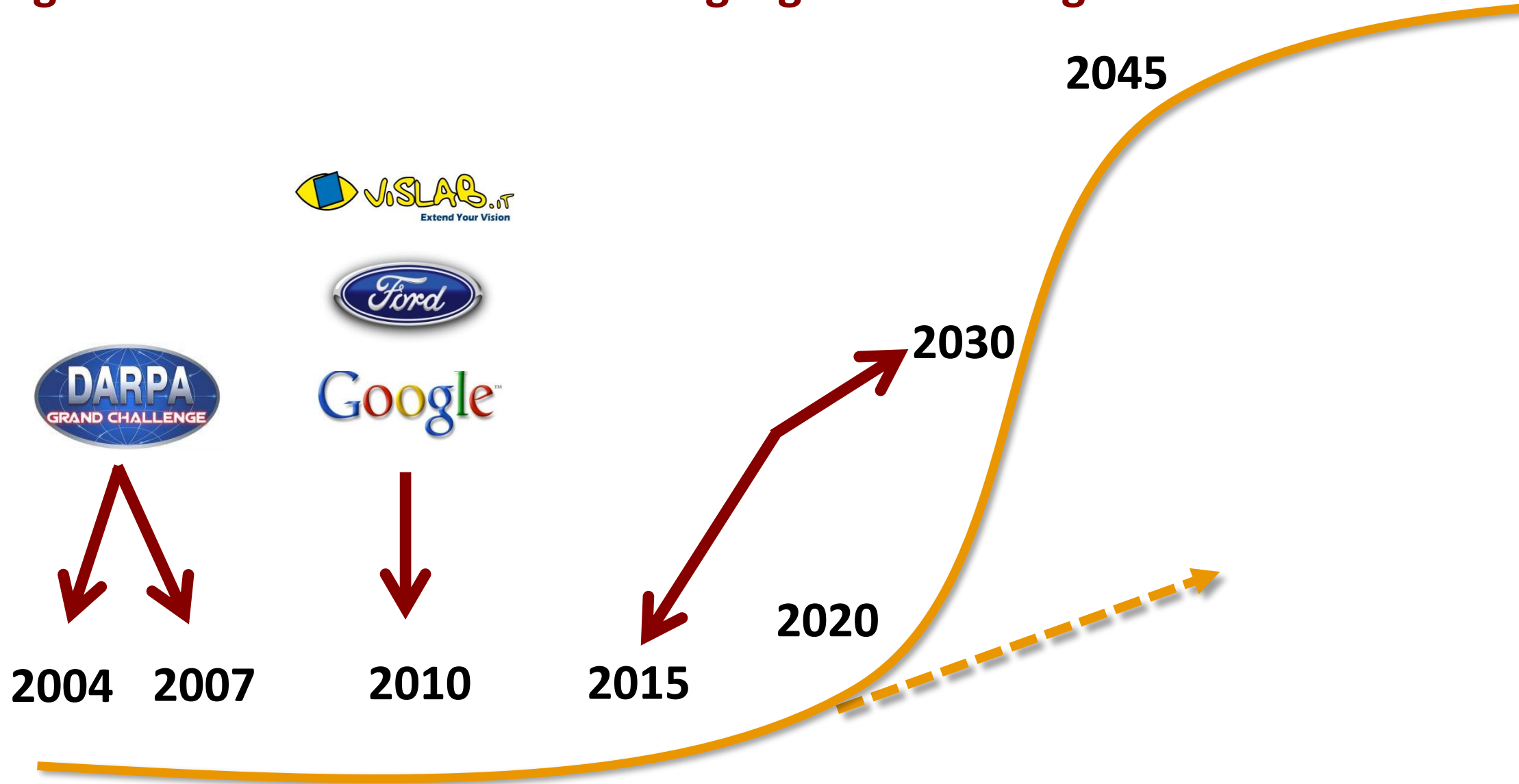
Eras of Mobility



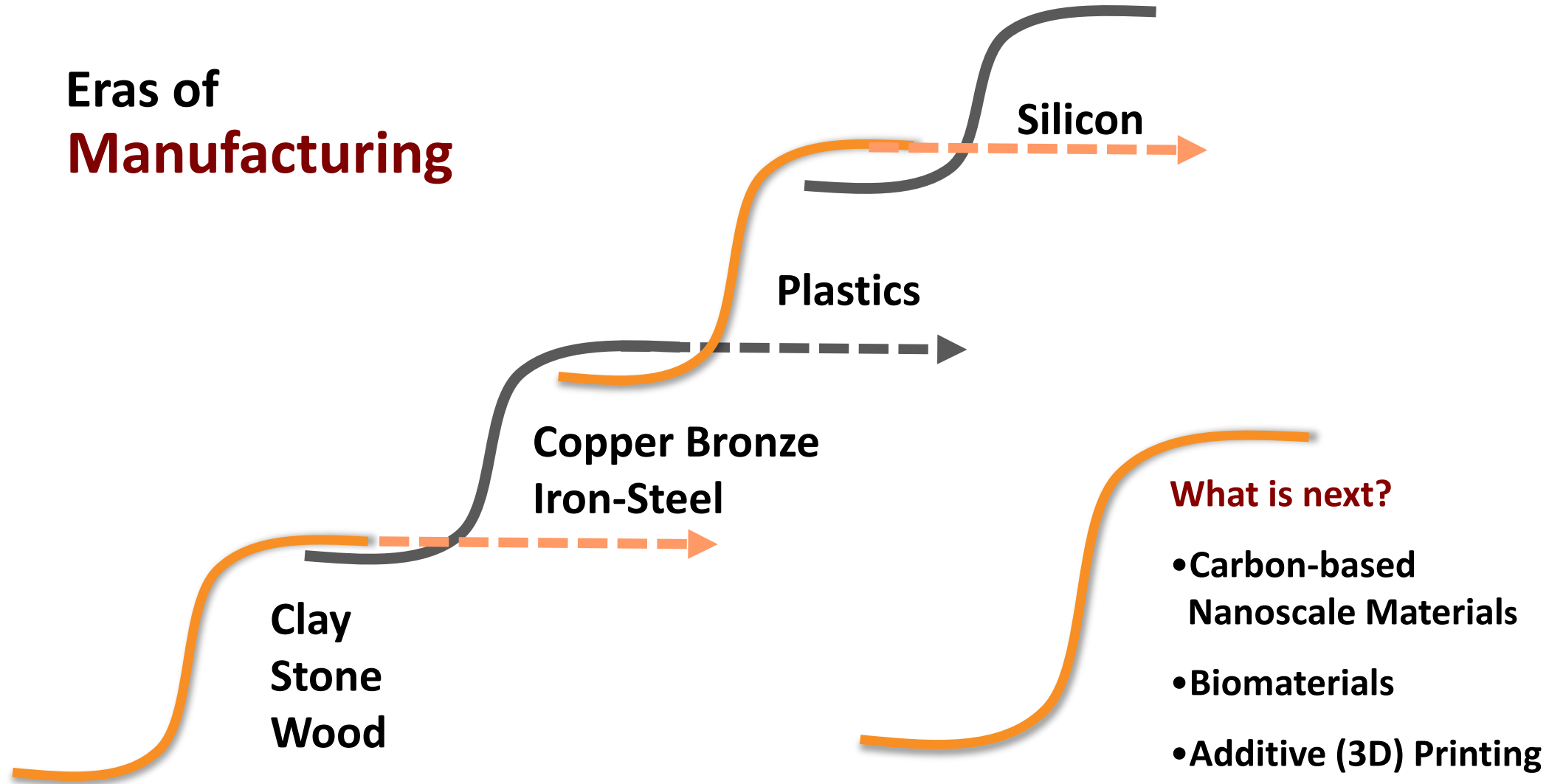
What is next?

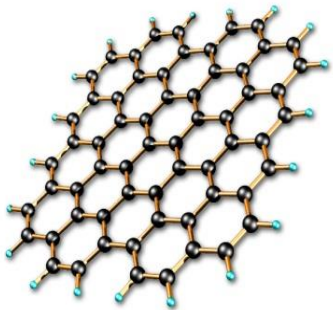
- Electric Vehicles
(Battery + Fuel cell)
- Assistive + Autonomous
- Low-Volume Production
- Sub-orbital Space

Tapping Your Inner Futurist: Monitoring Signals of Change

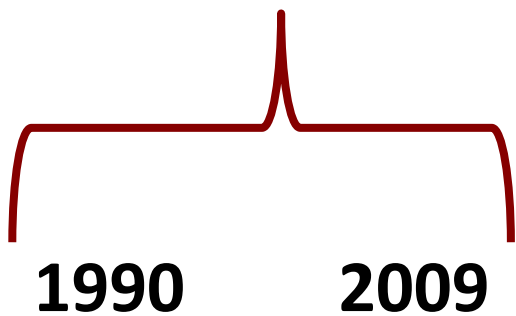


Eras of Manufacturing

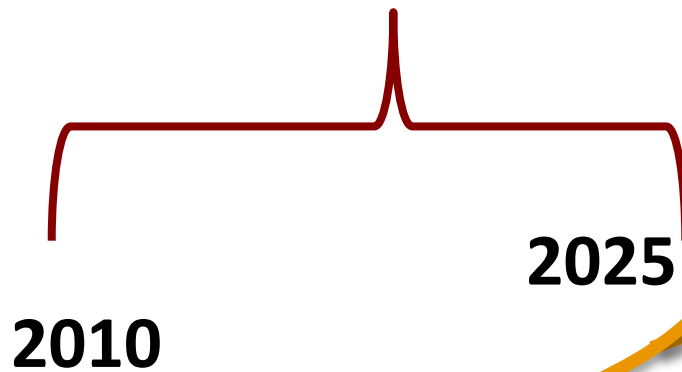




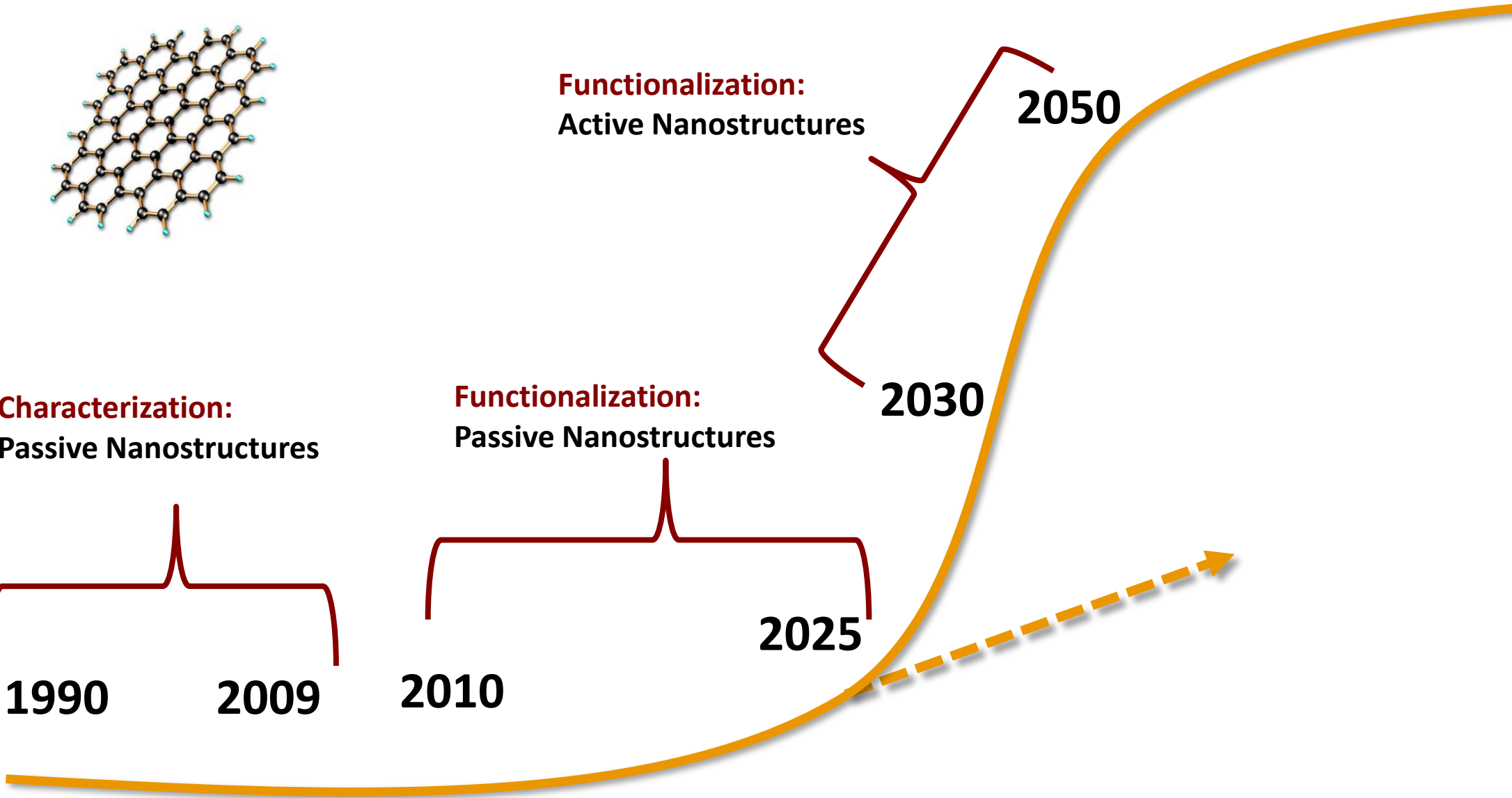
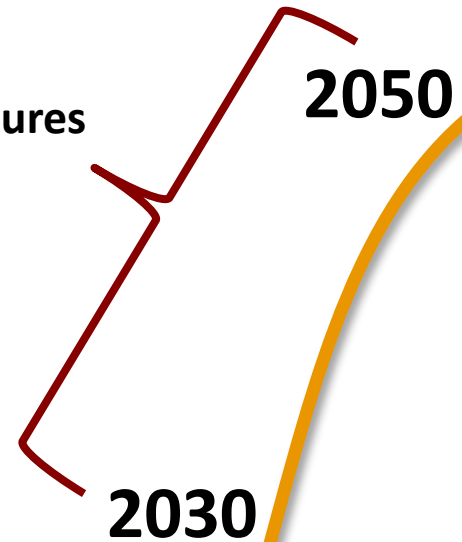
Characterization:
Passive Nanostructures



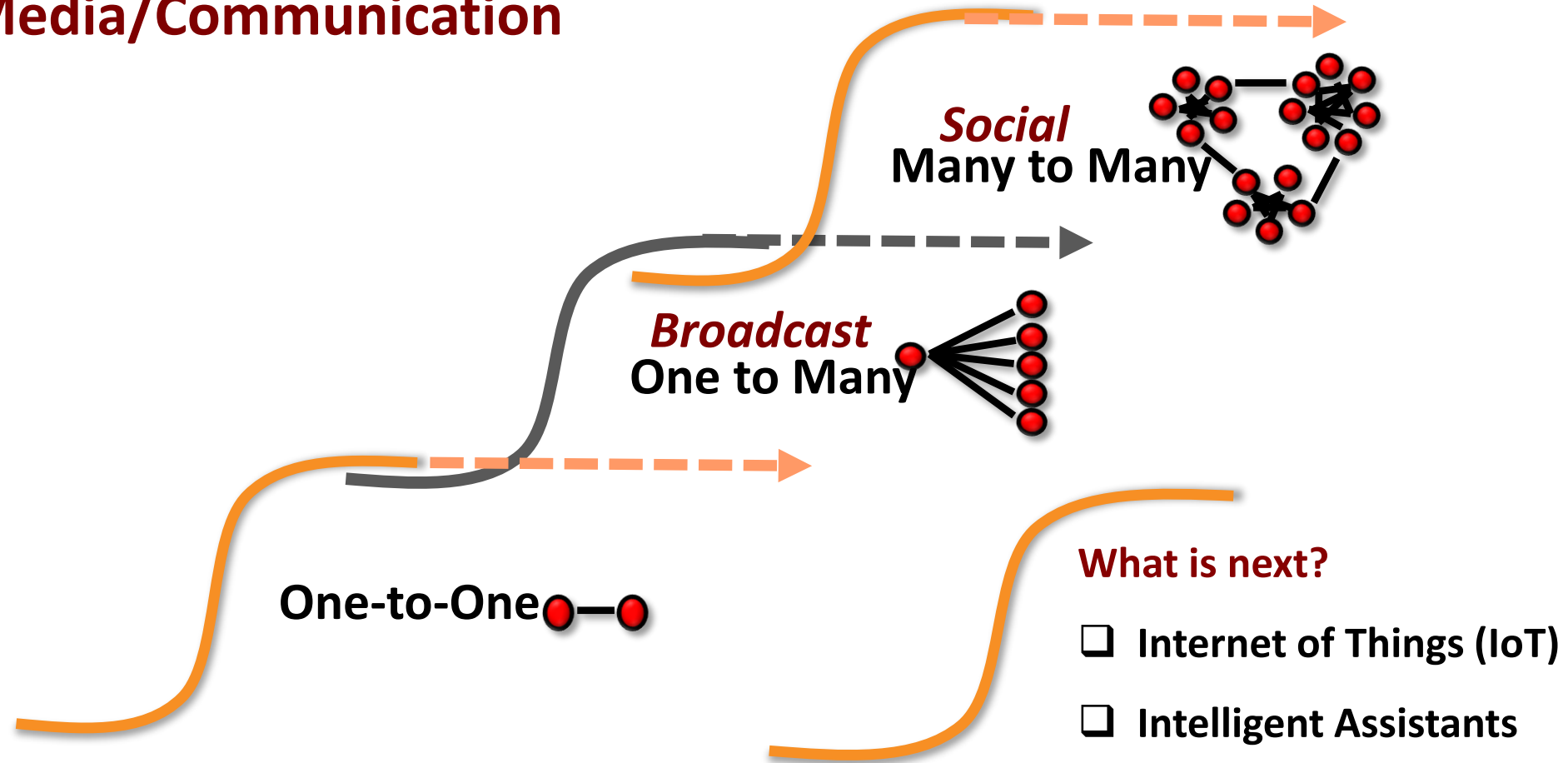
Functionalization:
Passive Nanostructures



Functionalization:
Active Nanostructures

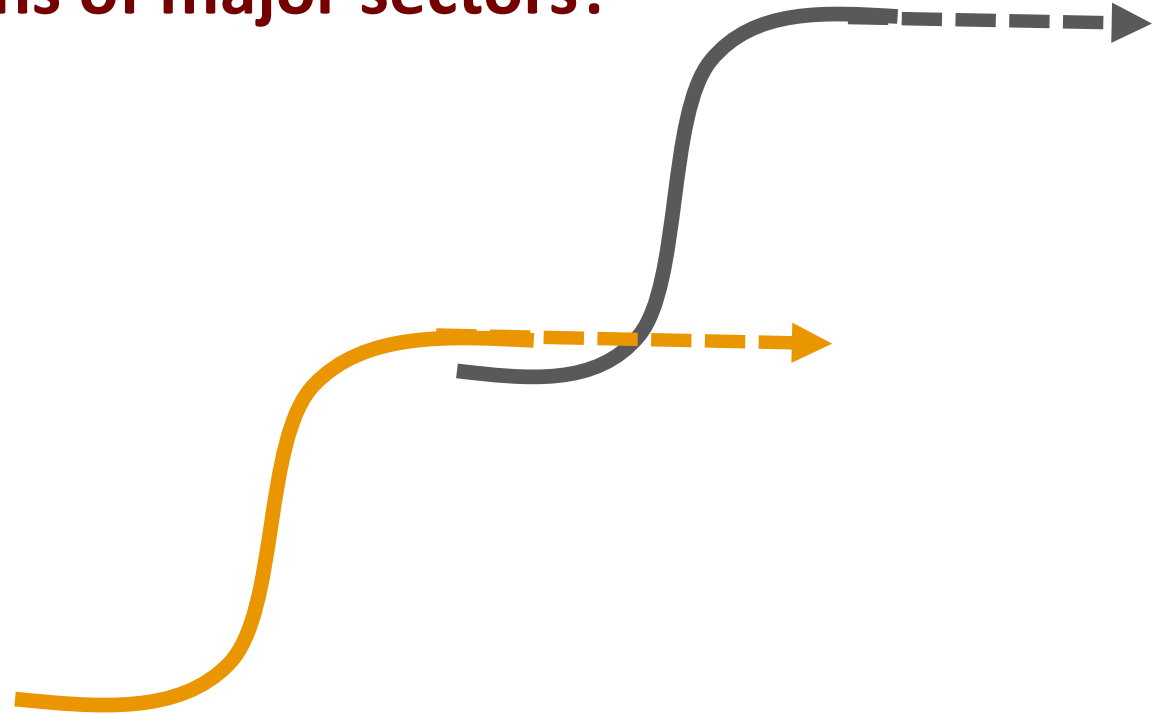


Eras of Media/Communication



How will societies navigate transitions of major sectors?

- Transportation/Mobility
- Healthcare / Wellness
- Agriculture / Farming / Food
- Retail
- Media / Communication
- Education / Learning



Collective Anticipation of Industry & Market Transitions



Future of Transportation

Autonomous // Electrification



Future of Healthcare

Population Health // Consumerization



Future of Energy

Distributed // Fuel Cells



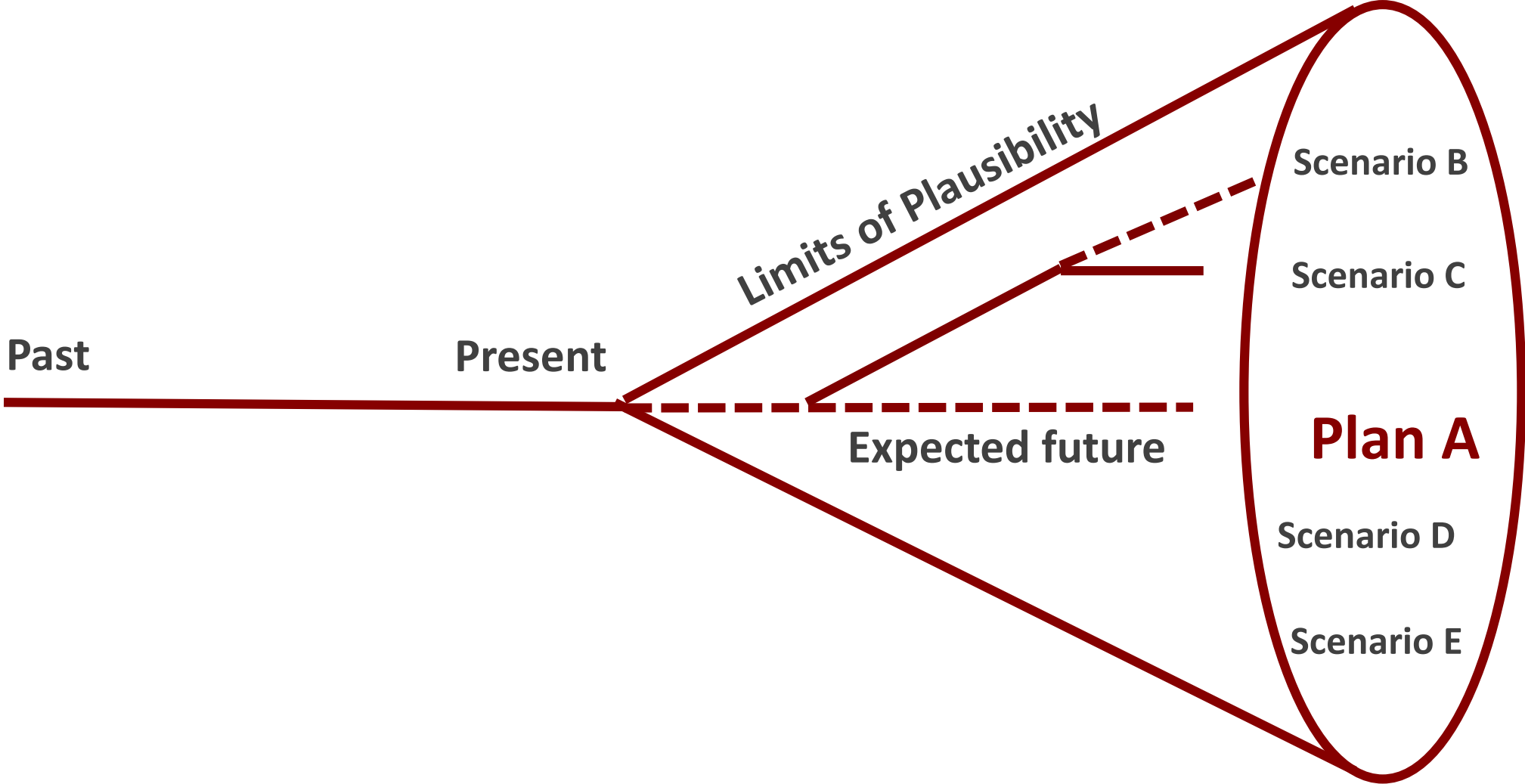
Future of Financial Services

Blockchain / Artificial Intelligence

Thinking Like a Futurist?

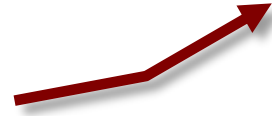
Foresight 101: Cone of Plausibility

Multiple Outcomes, Multiple Time Horizons



Foresight 101

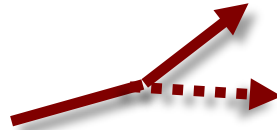
Trends
(Continuities)



Plausible
Future

Forecasts

Events
(Discontinuities)



Possible
Futures

Scenarios

Choices
(Discontinuities)



Preferred
Future

Visions

Four Futures Thinking



**Continued
Growth**



**Disciplined
Constrained**



Transformed



**Decline
Collapse**

Ability to Tell Stories of Evansville's Four Futures



**Continued
Growth**



**Disciplined
Constrained**



Transformed



**Decline
Collapse**

End

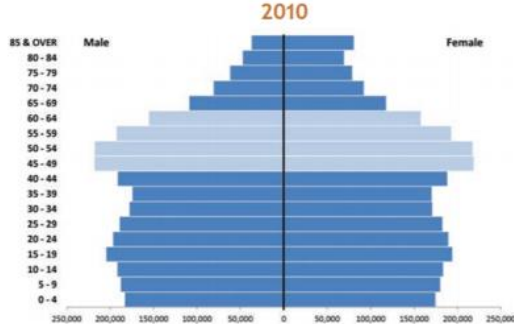


Drivers of Change

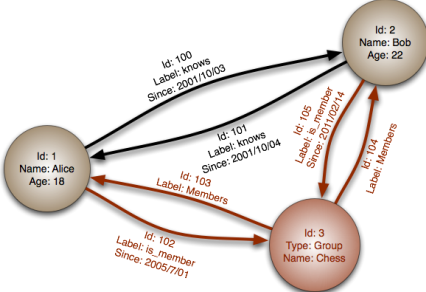


Learning More

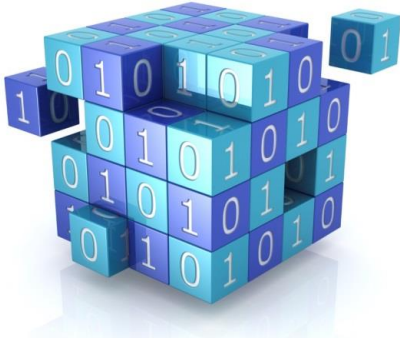
The Slow Pace of Big Change



Demographic Destinies

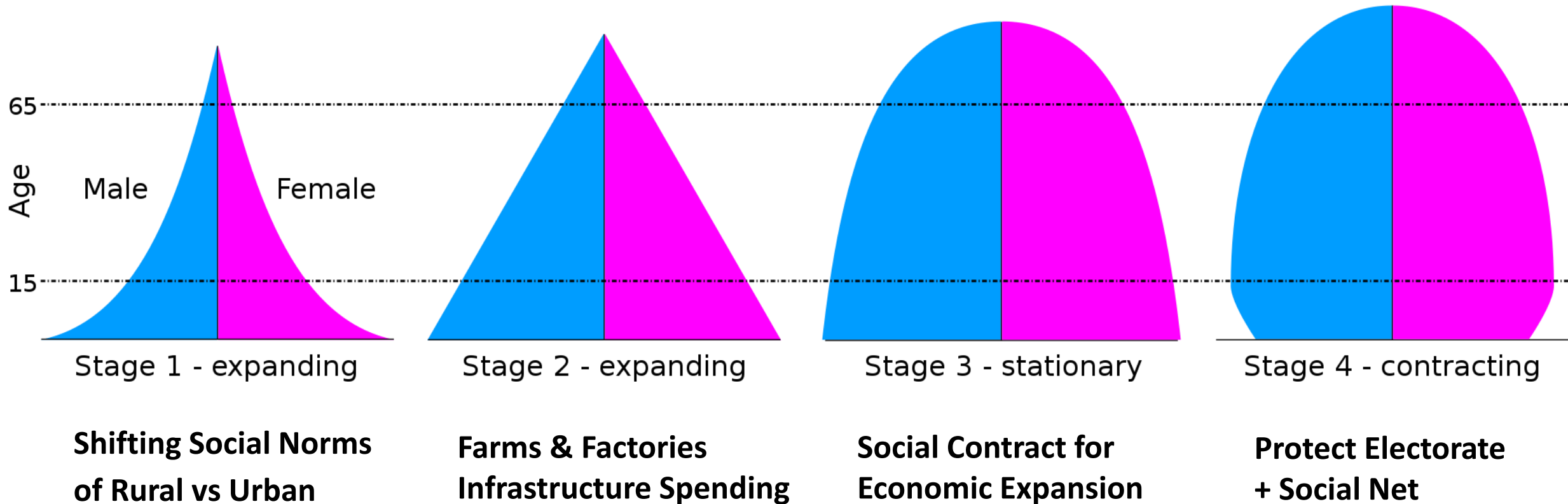


From Social Graph to Experience Graph



Blockchain + Trusted Transactions

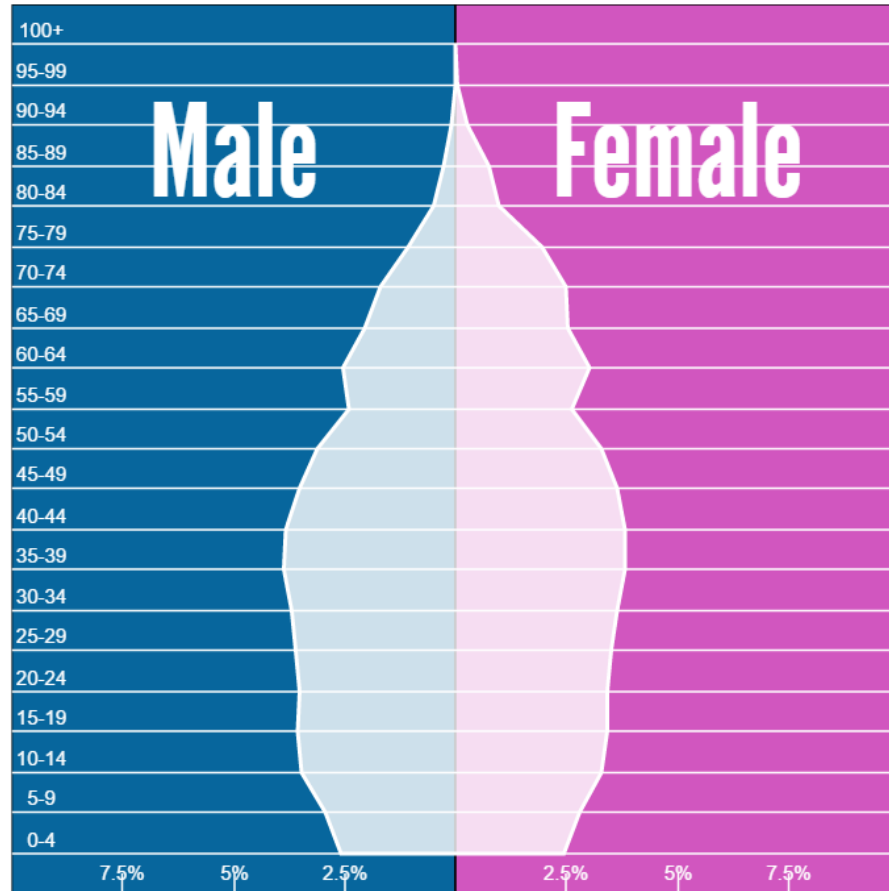
Globalization Reshaped by Demographic Realities



Europe's Demographic Liability

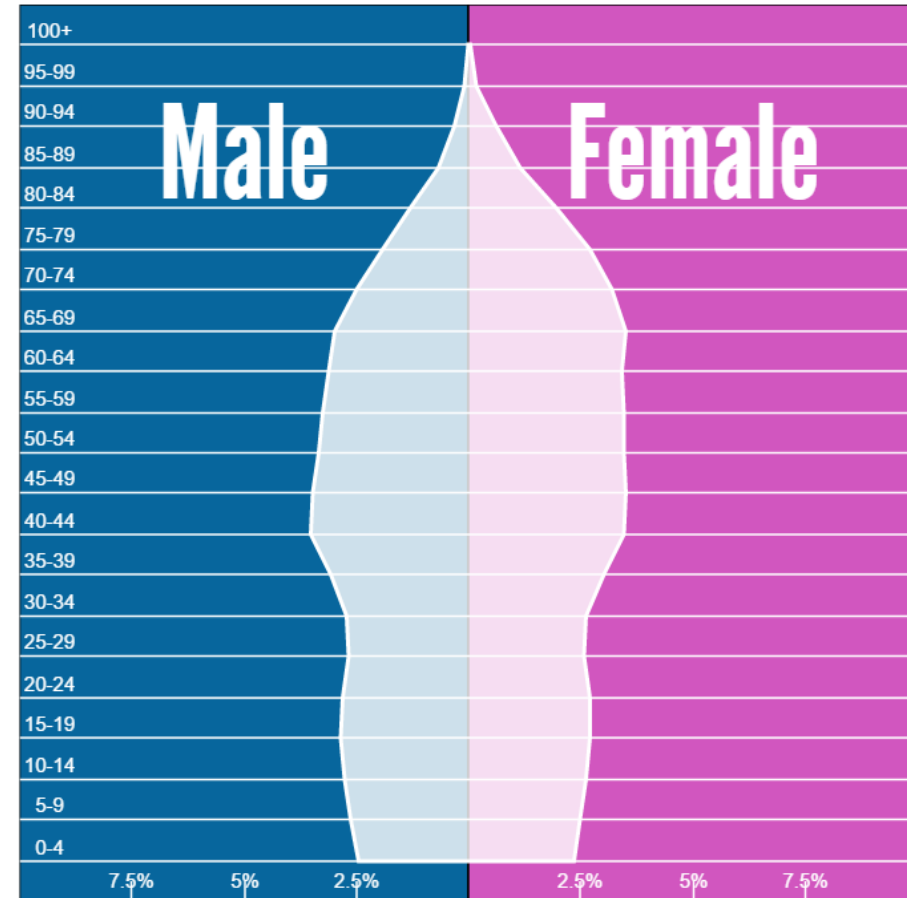
EUROPE 2000

Population: **726.407.000**



EUROPE 2030

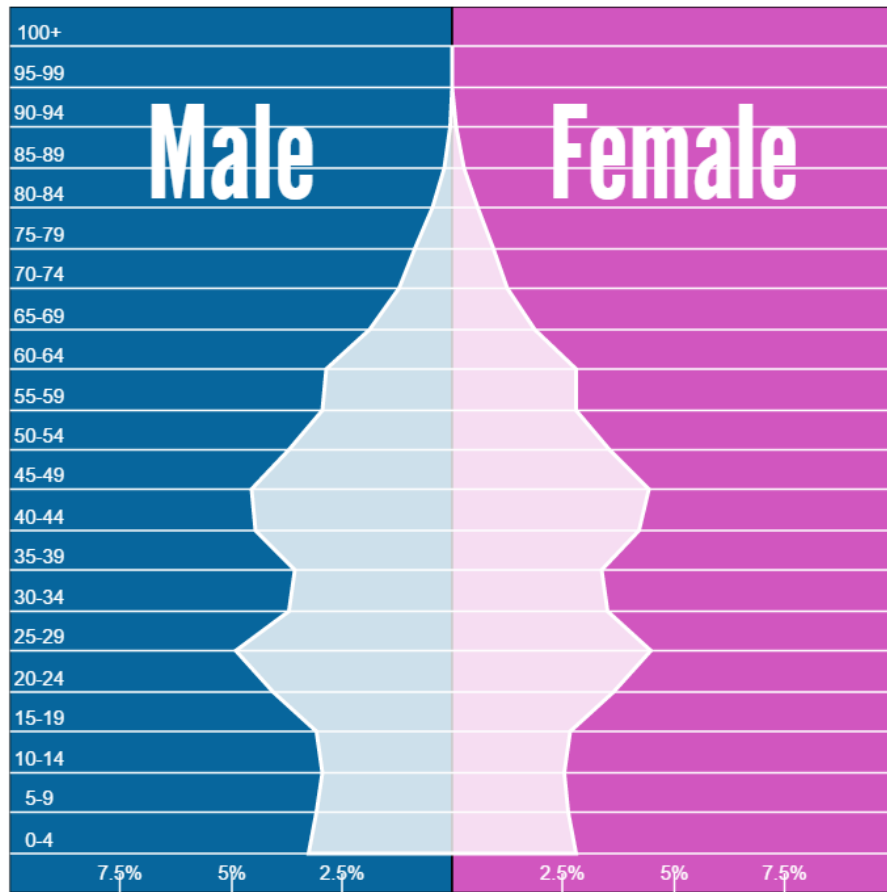
Population: **733.929.000**



Global Challenges: Workforce Constraints + Delayed Consumerization

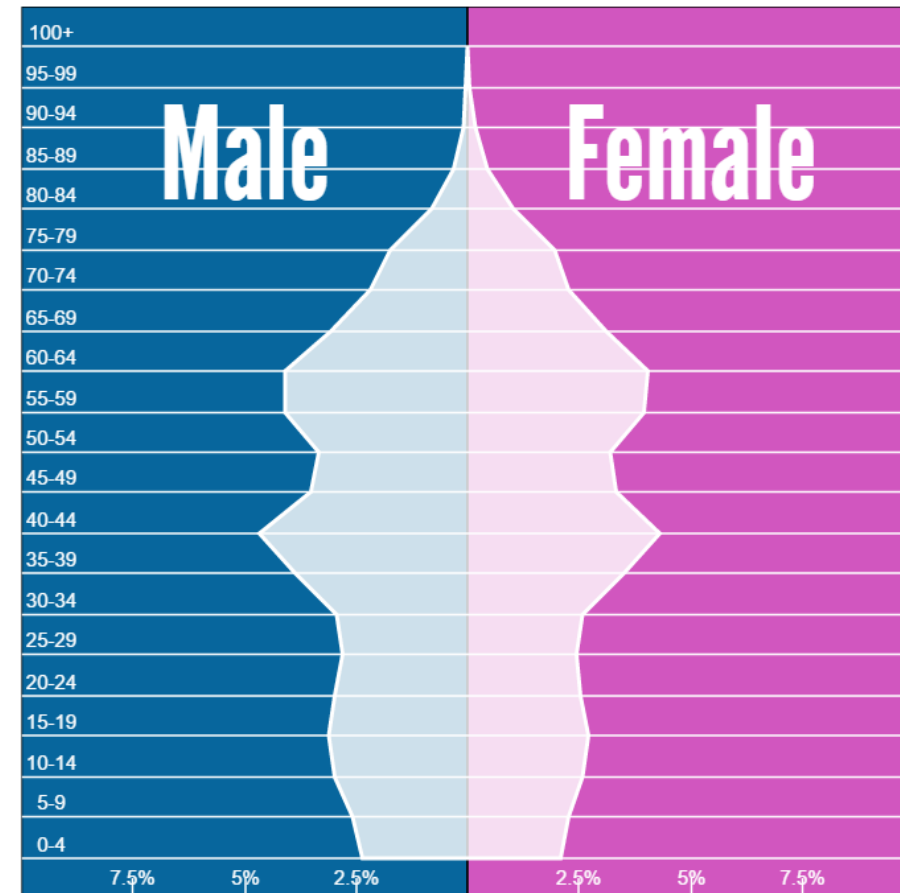
**China
2015**

Population: **1.376.048.000**



**China
2030**

Population: **1.415.545.000**

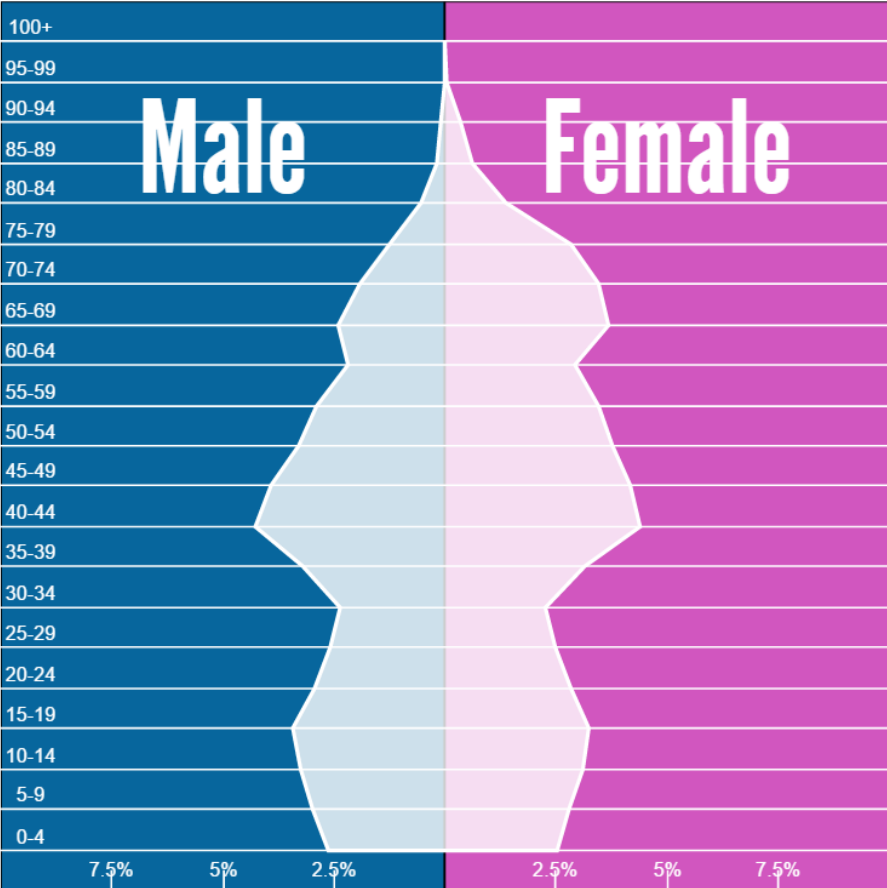


Global Challenges: Aging Electorates inside Regional Powers

Russian Federation

2030

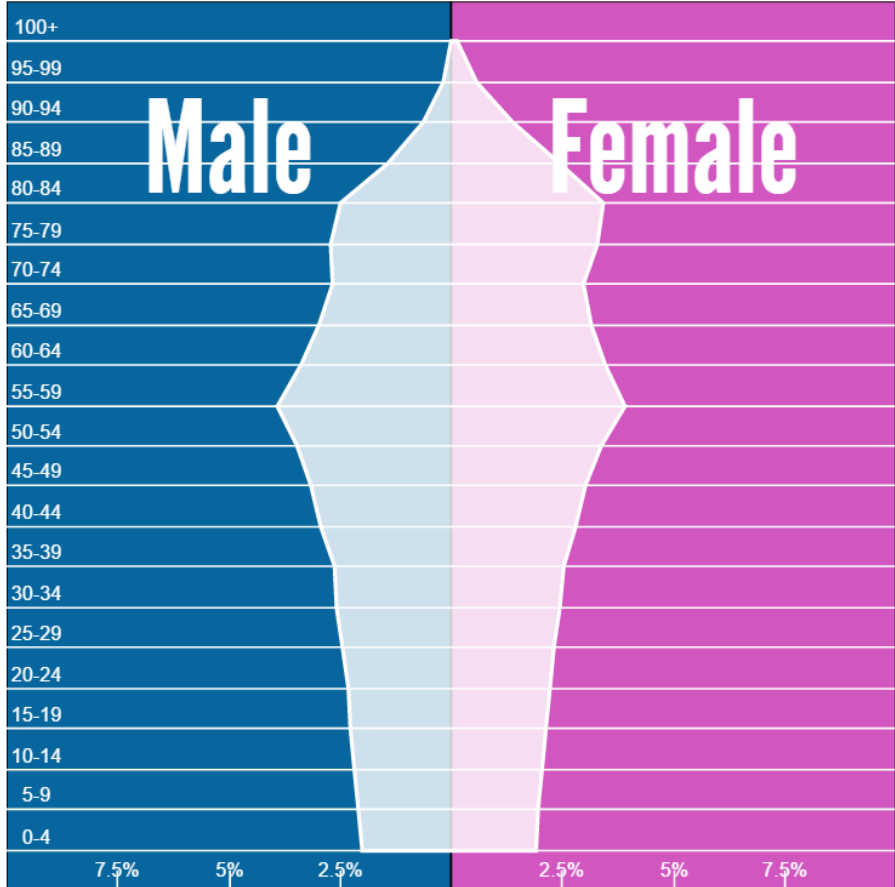
Population: 138.652.000



Japan

2030

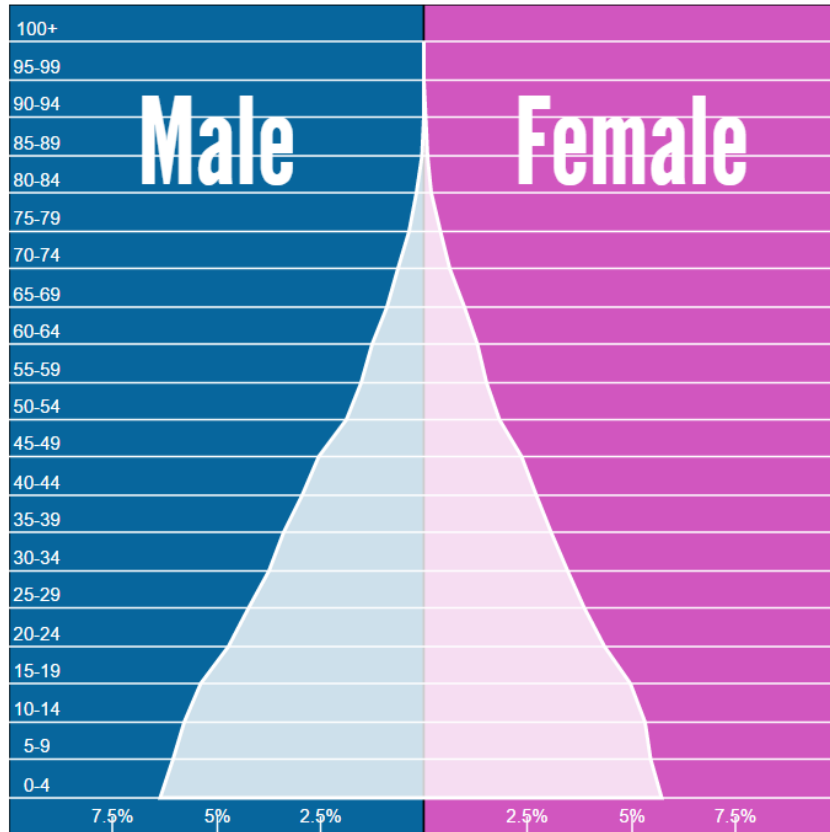
Population: 120.127.000



Investing in Global *Demographic Dividends*

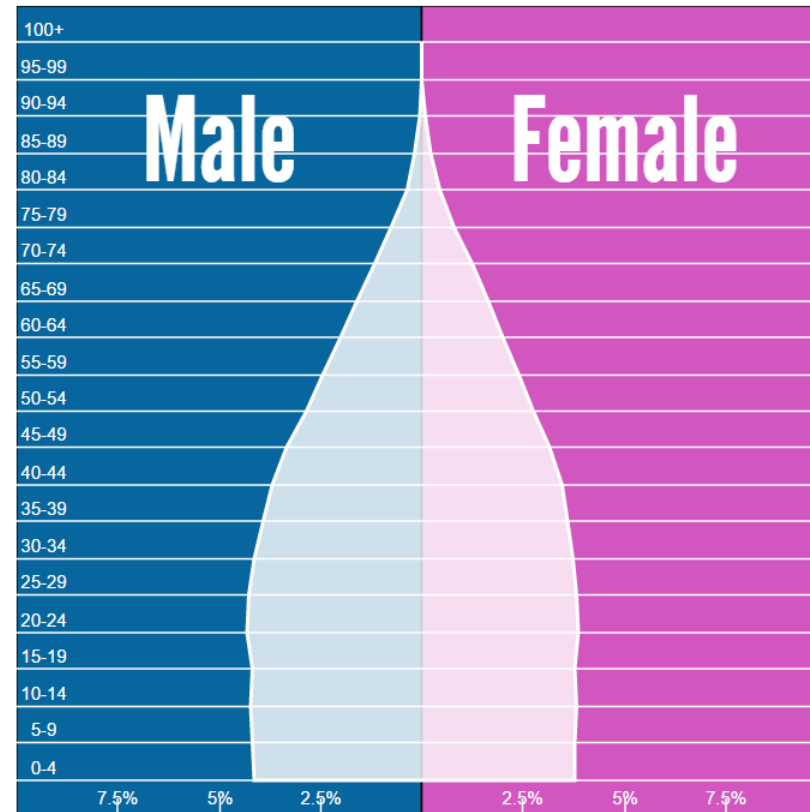
**India
2000**

Population: **1.053.481.000**



**India
2030**

Population: **1.527.657.000**

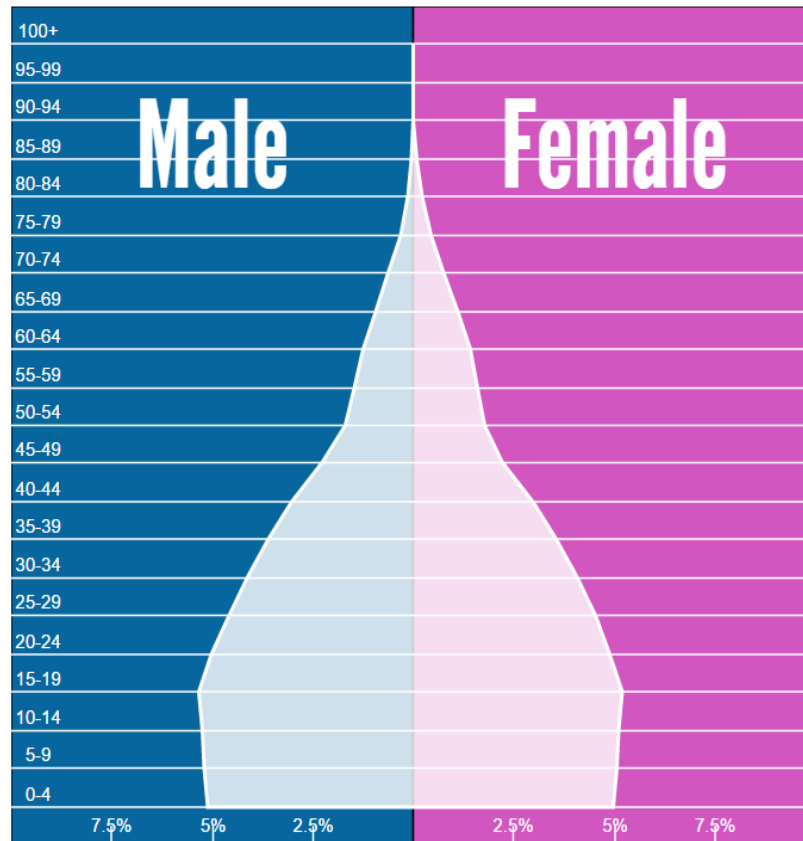


250 million joining workforce by 2030

Investing in Global *Demographic Dividends*

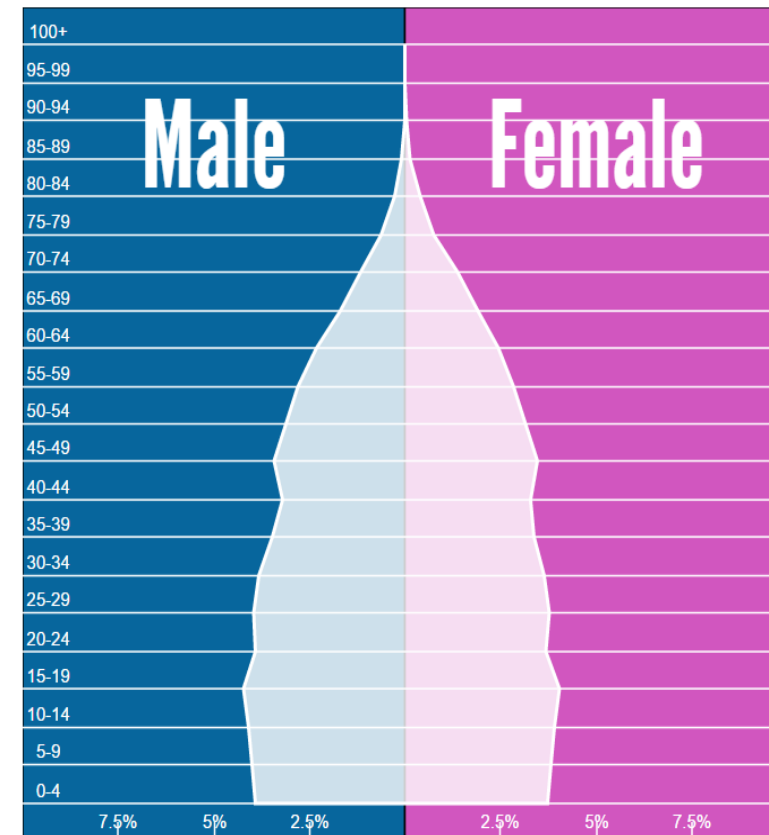
Indonesia 2000

Population: **211.540.000**

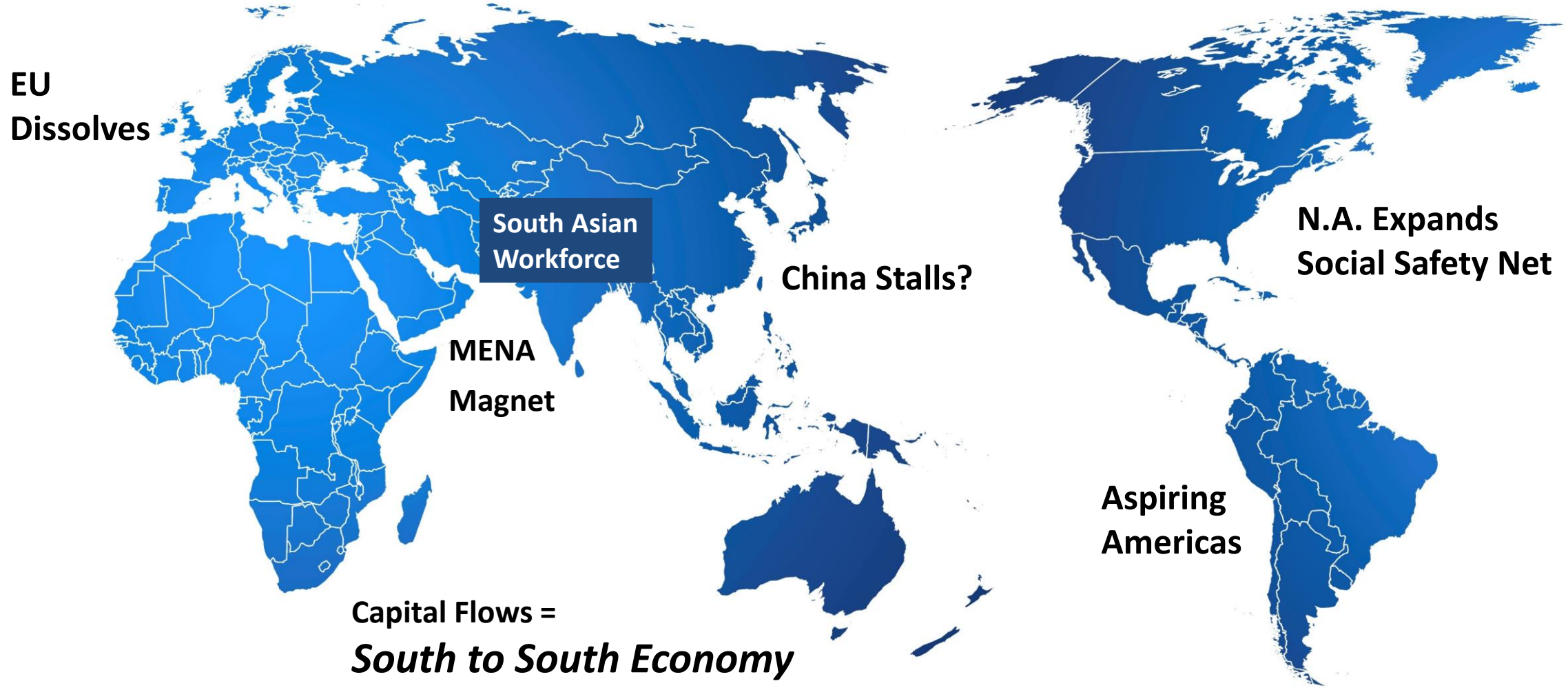


Indonesia 2030

Population: **295.481.000**

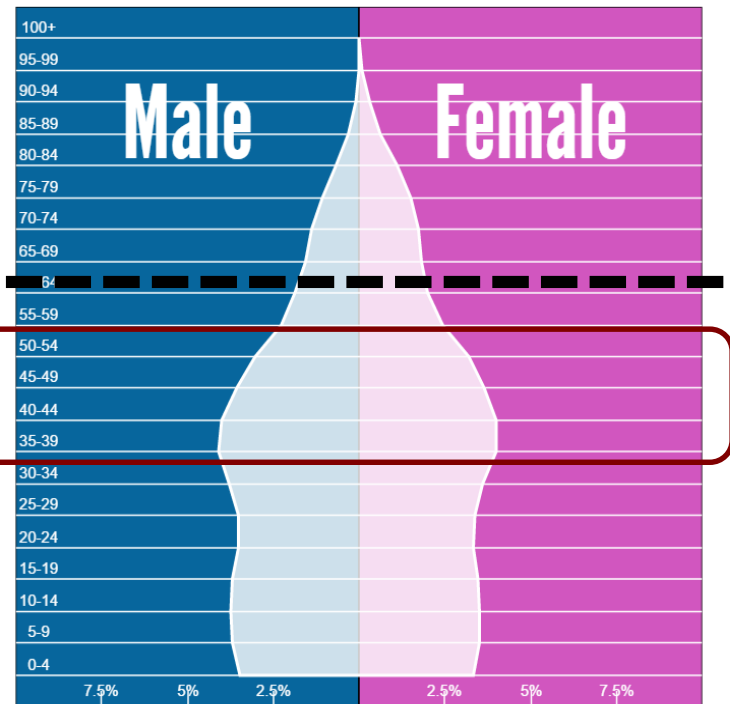


Consider Tipping Points Ahead for Global Events

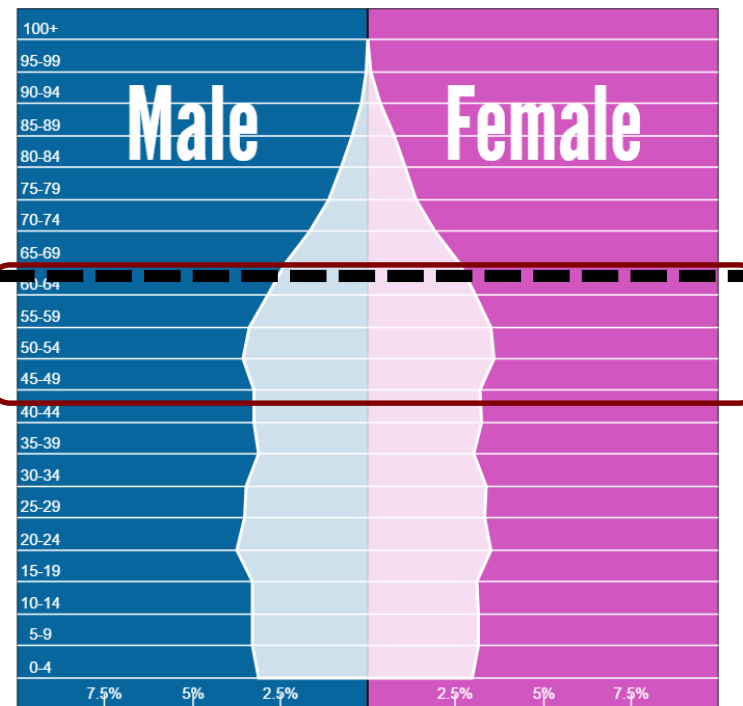


Society, Policy & Norms Re-align around Demographic Transitions

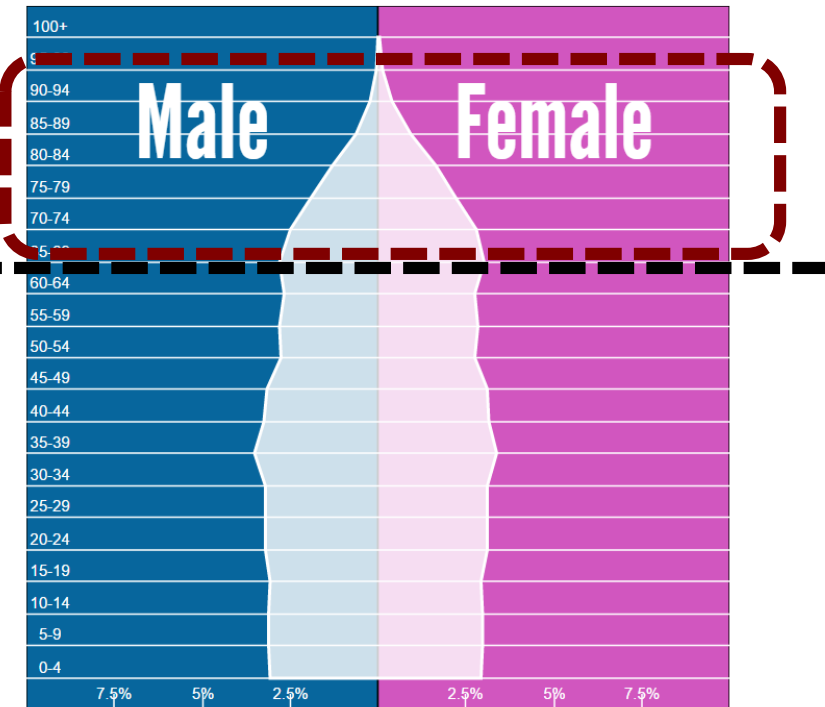
United States of America
2000
Population: 282.895.000



United States of America
2015
Population: 321.773.000



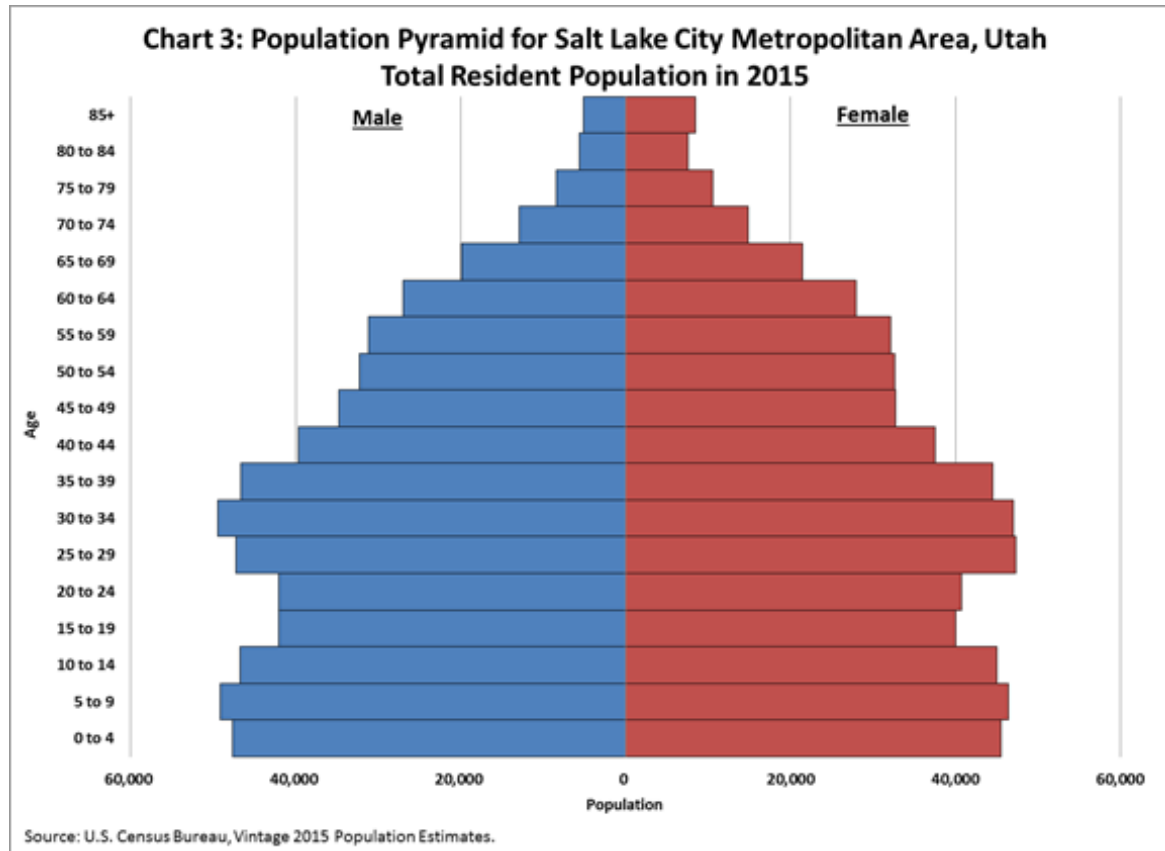
United States of America
2030
Population: 355.764.000



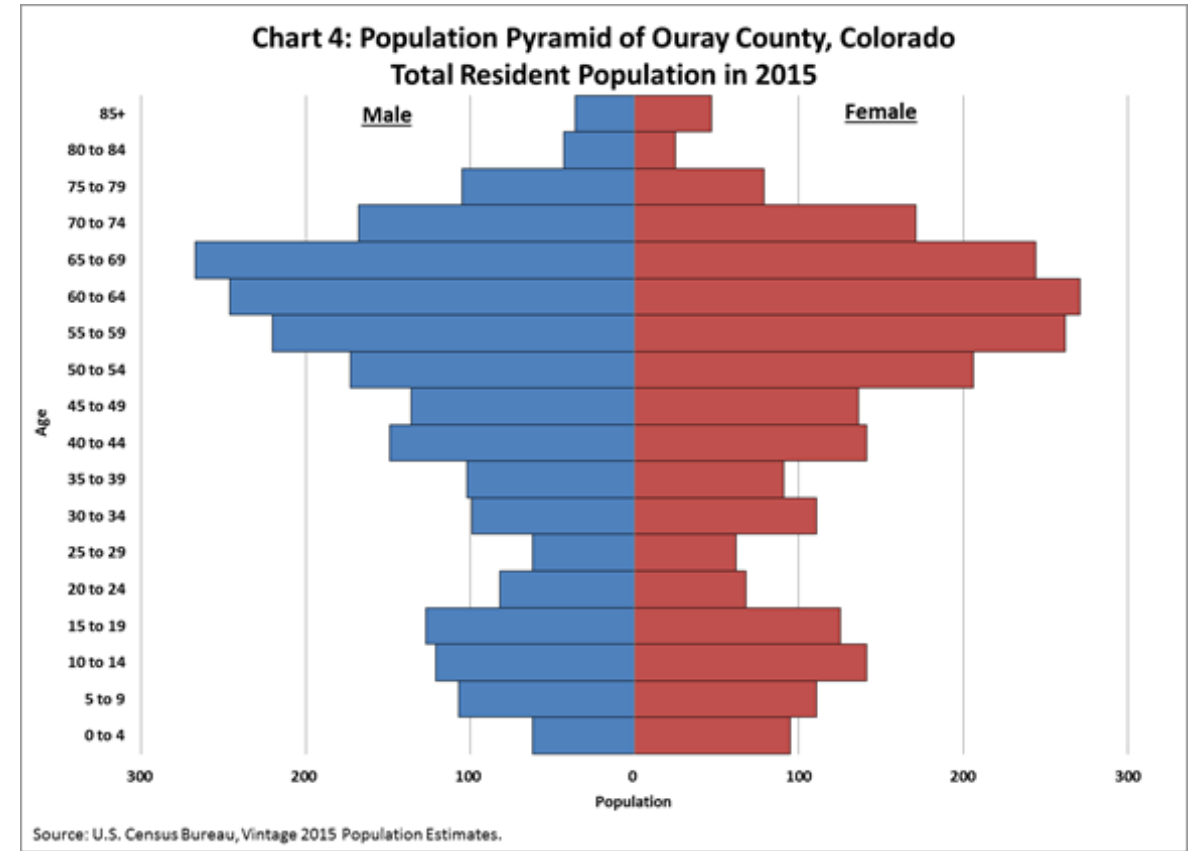
Source: populationpyramid.net

Bifurcated Demographic Destinies...?

Metropolitan Pyramids



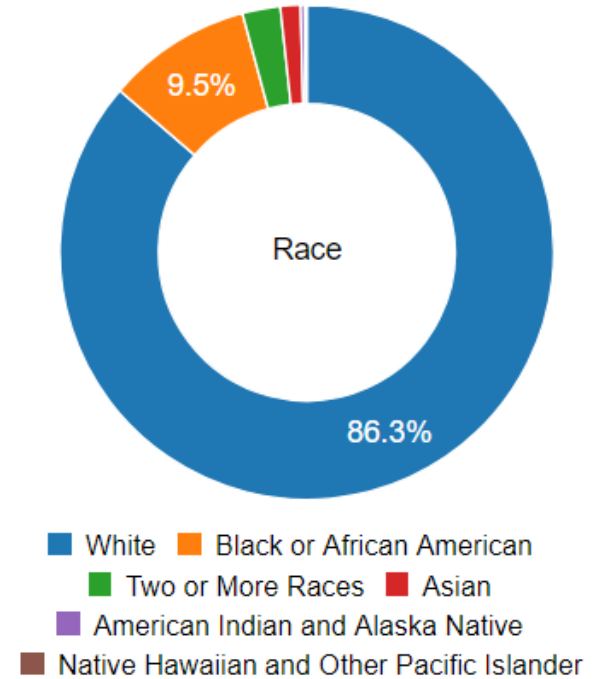
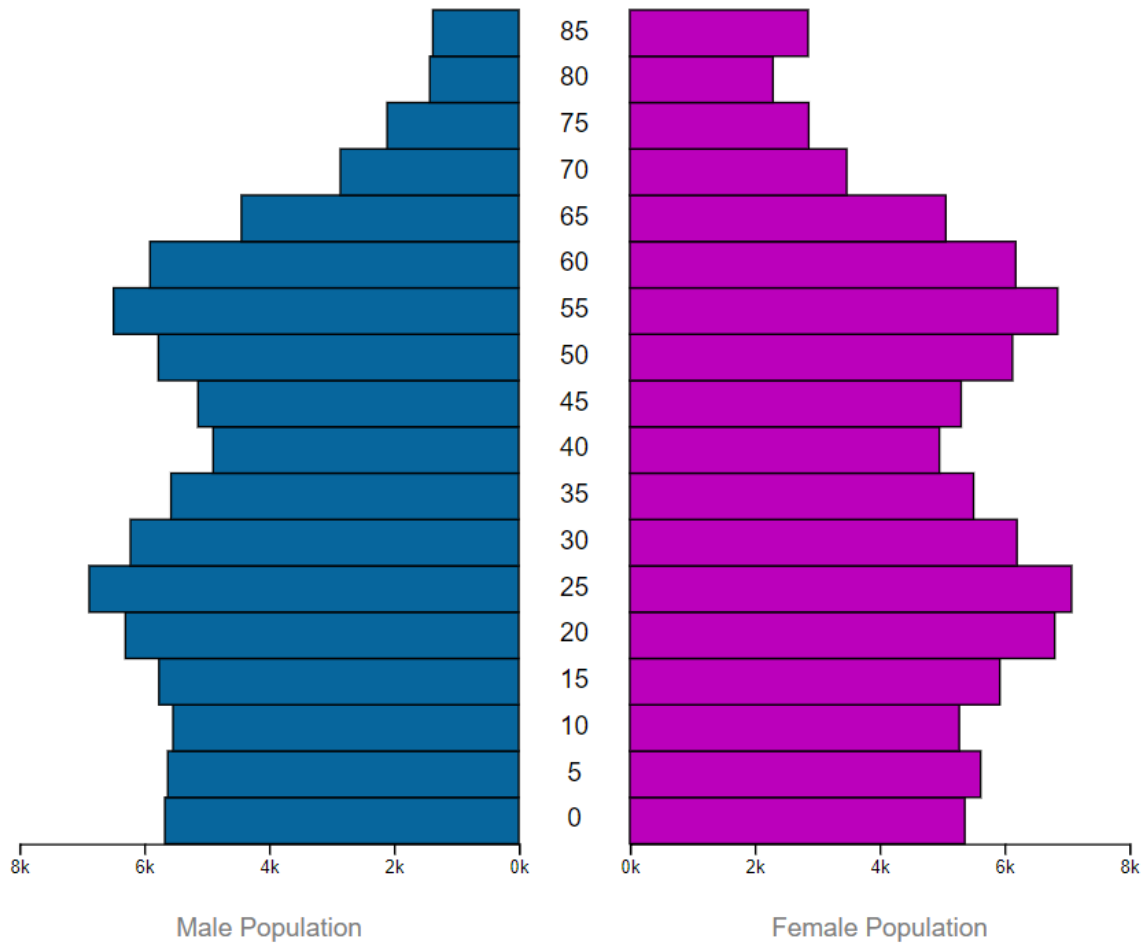
Rural & Small Town Pyramids



Source:
<https://www.census.gov/>

Understanding Implications of Our Demographic Destinies

Vanderburgh County Population Pyramid



Solutions for Aging Populations

Aging in Place Solutions

How might we enable successful transitions to Aging-in-Place lifestyles?

Caregiver-centered Design

How might we develop caregiver-centered solutions?



Aging in Place



Financial
Solutions

verizon

amazon

ERICSSON

BROOKDALE
SENIOR LIVING

Non-Traditional Partnerships
& Solution Providers

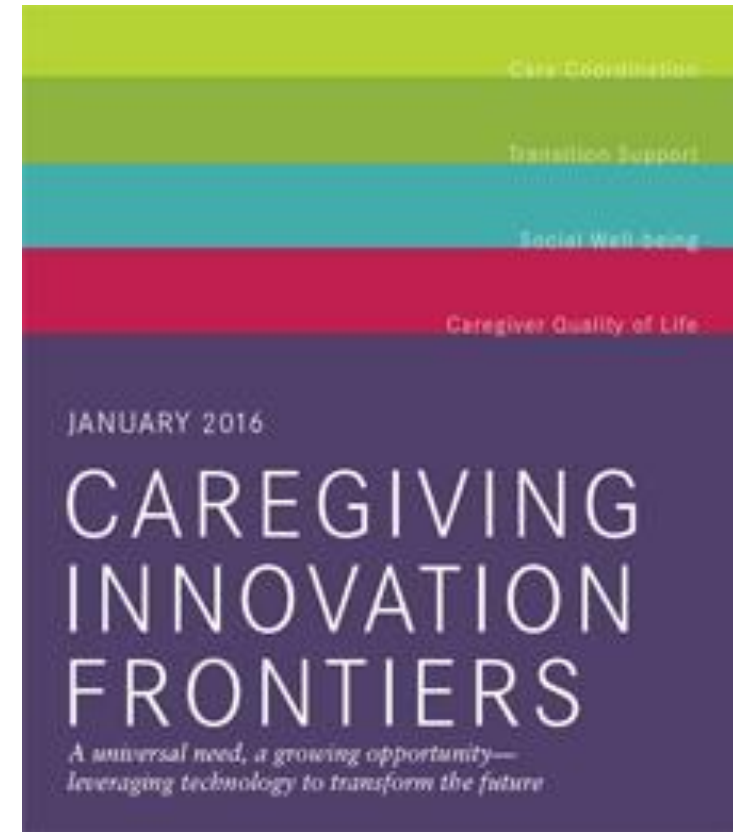
echo show + amazon cloud cam



Social
Norms

Elevating Status and Solutions for Caregivers

AARP Report Finds Caregiving Market Will Grow 13% To Become \$279 Billion Disruptive Opportunity 2016-2020



45 million unpaid caregivers by 2020.

Evansville Scenario: Most Supportive Caregiver Community in U.S.



DAILY ESSENTIAL ACTIVITIES PAGE 10

Meals, home and personal care, home repair, delivery, transportation services



HEALTH AND SAFETY AWARENESS PAGE 18

Health vital alerts, diet and nutrition, medication management, personal safety monitoring, telehealth



CAREGIVER QUALITY OF LIFE PAGE 50

Respite and backup care, social support, health and wellness, financial/job security



CARE COORDINATION PAGE 26

Care planning, care professional engagement, records and benefits management, recovery support



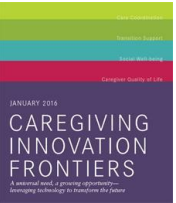
SOCIAL WELL-BEING PAGE 42

Digital inclusion, life enrichment and empowerment, community networking, life companions

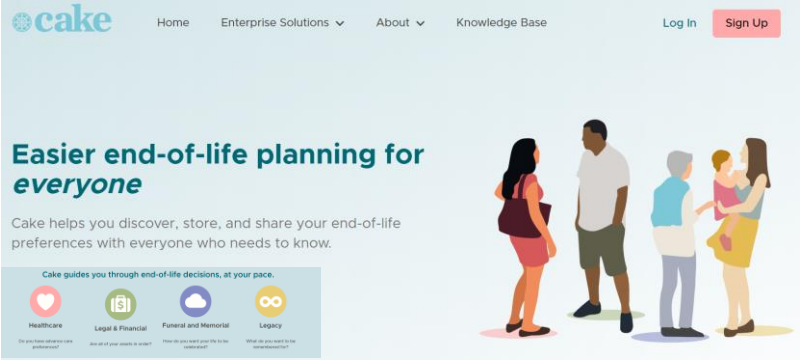


TRANSITION SUPPORT PAGE 34

Home retrofit services, long-term care insurance planning, long-term care provider referral, legal assistance, hospice/funeral planning



Understanding Range of Solutions Coming to Market



End of Life Planning

How does Irene work for older adults?



We let you sell your home, but retain the right to live in it, or rent it out, for the rest of your life.



Stay in your home or rent it out



Get the funds you need, debt-free



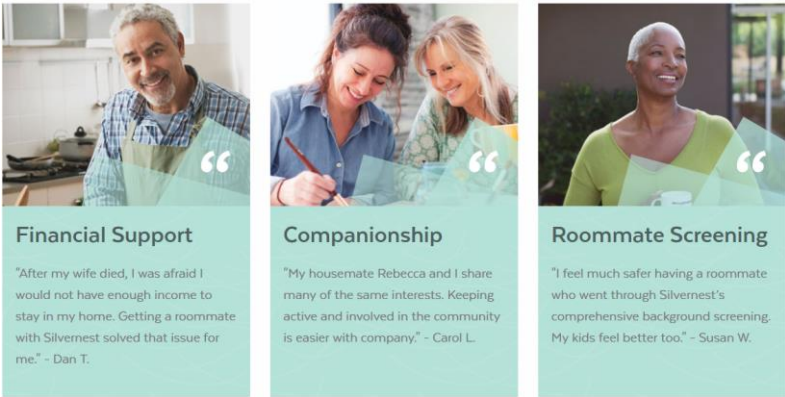
Never worry about house expenses again



Leveraging Key Assets

Silvernest Does it Best

In the words of our happy users, here's where Silvernest shines.



Social Isolation



Caregiver-Connected Solutions

Aligning Skillsets & Mindsets for Public & Private Sector Orgs

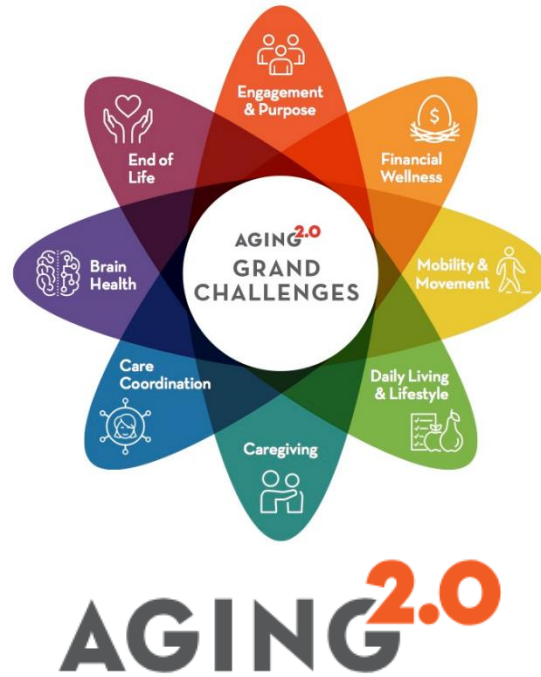
Innovation to Drive Business:

- Security / Fraud Protection
- Automotive
- Housing
- Budgeting/Planning
- Credit Risk Profile (Beyond FICO)

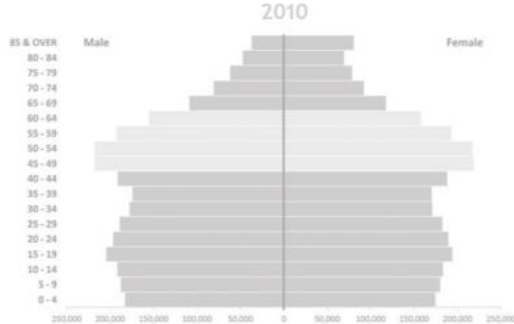
Innovation that considers:

- Social Isolation
- Dignity & Purpose
- Fairness / Discrimination
- Cognitive Support Needs
- Expanding Notions of Community
- Language (Senior; Older Adult)

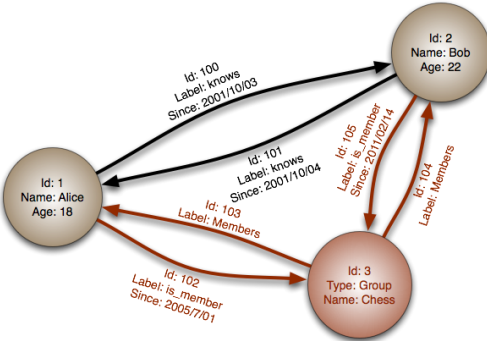
Learning More from Innovative Organizations



The Slow Pace of Big Change



Demographic Destinies



From Social Graph to Experience Graph



Blockchain + Trusted Transactions



In the News



In Fall 2018, Stanford Business School will pilot a program with **Experience.ai** to capture experience data from learning, project performance and decision processes within case study groups. Stanford's vision is for every student to retain rights to experience data and build a critical personal digital asset for the future.

True

False





Context of the *Creepy Line*

Google

Inevitability of Dealing with the *Creepy vs Compelling Line* in..

AI-Driven Innovations

Social Norms for the Anonymous-Access Web

1993

Images
Removed

Social Norms & the Social Web

2008

Images
Removed

Everyone knows I'm
working on some
personal growth issues

Images
Removed

**Assumption for Life in 2020s:
The web is a platform for
managing outcomes &
personal behavior change.**

Emergence of Data & Outcomes-driven World



**Social
Data**



**Health
Data**



**Device +
Infrastructure**

EXPERIENCE
API

“I did this...”

**Learning & *Doing*
Experience Data**

Signal of Change from the Learning & Development (L&D) Community

Assumption: Experience Data Appears Inside School, Workplace & Beyond



EXPERIENCE
API

Activity Streams
<Actor, Verb, Object>
“I did this”



Blackboard



canvas
BY INSTRUCTURE

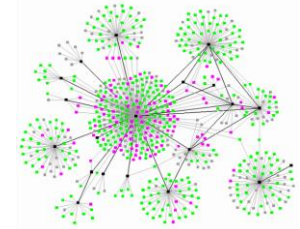


Scenario: People Embrace Experience Capture Analytics



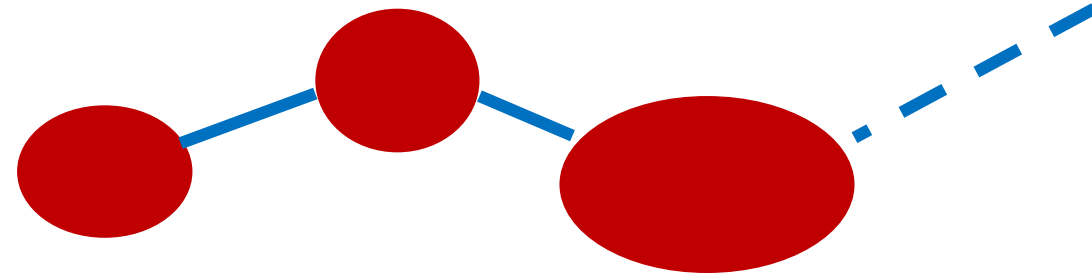
“I did this...”
Statements

- Lucy **read** an article on virtual reality for aging populations
- Lucy **opened** an Evernote folder on ageing solutions
- Lucy **watched** a Youtube video on Social VR Experiences for Ageing Boomers
- Lucy **interviewed** the Director of MIT's Age Lab
- Lucy **attended** an MIT workshop on VR simulations
- Lucy **wore** an 'ageing suit' at MIT Age Lab
- Lucy **mentored** with the Head of Innovation at AARP
- Lucy **designed** a new VR social space using Facebook Oculus dev kit
- Lucy **demonstrated** her VR experience for Aging populations at a NYC Meetup
- Lucy **won** an Webbie award for Social VR platform
- Lucy **taught** a Coursera MOOC on Universal Design and VR experiences
- Lucy **was hired** as head of Social VR for Aging Populations at Facebook

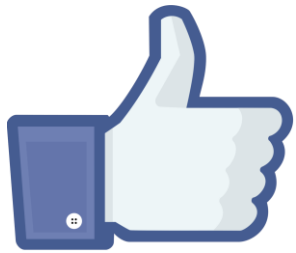


<Actor, Verb, Object>
“I did this”

- Thomas liked a Lucile Clifton poem he heard on iTunes
- Brentwood library invited Thomas to a Creative Aging poetry event
- Thomas enrolled in a creative writing class at Community College
- Thomas read Alice Walker for his creative writing course
- Brentwood library recommended an obscure Rita Dove poem
- Thomas performed his poetry at a local café event
- Brentwood library invited Thomas to a program on self-publishing
- Thomas self-published his first collection of poems
- Brentwood library added his book to their collection



Scenario for 2020s: Early Adopters Embrace Experience Analytics



EXPERIENCE
API

Assumption to Explore

**By 2025, Experience Data Will Become
Our Most Valuable Digital Asset**


and Controversial

If we capture experience data...



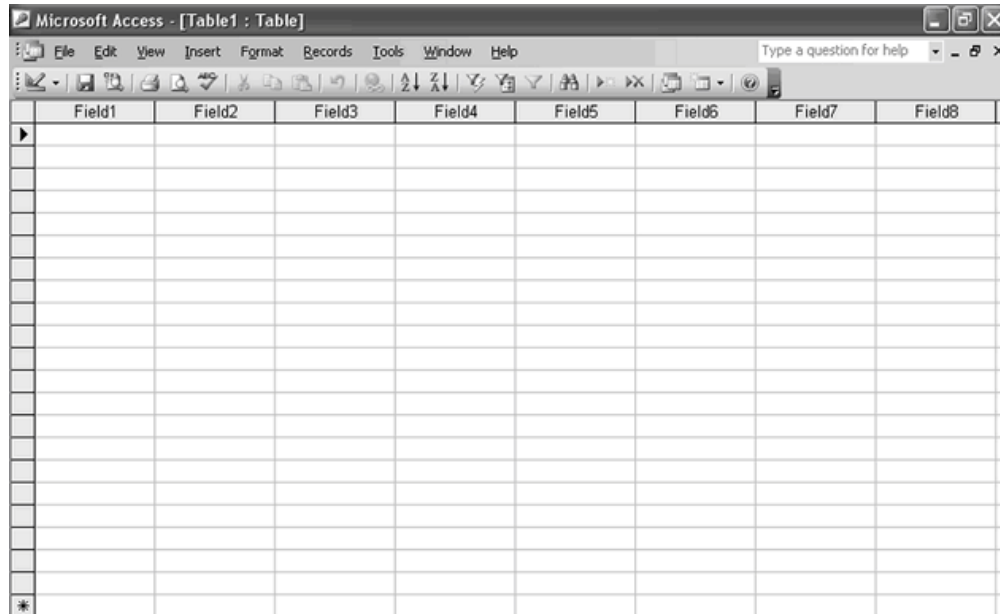
“I did this...”
Statements

How do we approach regulations?

How do we avoid the creepy line?

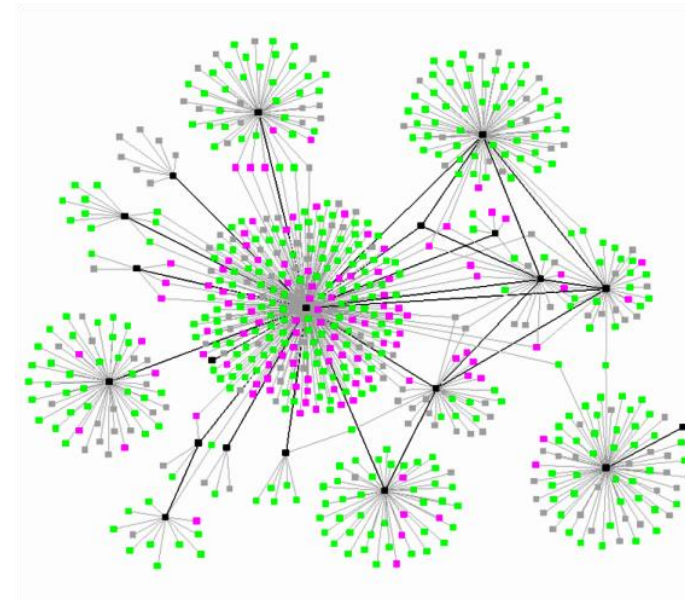
How do we make sense of it?

Building a Connected Data Foundation for Innovation



A screenshot of the Microsoft Access application window. The title bar reads "Microsoft Access - [Table1 : Table]". The menu bar includes "File", "Edit", "View", "Insert", "Format", "Records", "Tools", "Window", and "Help". Below the menu bar is a search bar with the text "Type a question for help". The main area displays a table with 8 columns labeled "Field1" through "Field8" and approximately 20 rows. The table is currently empty.

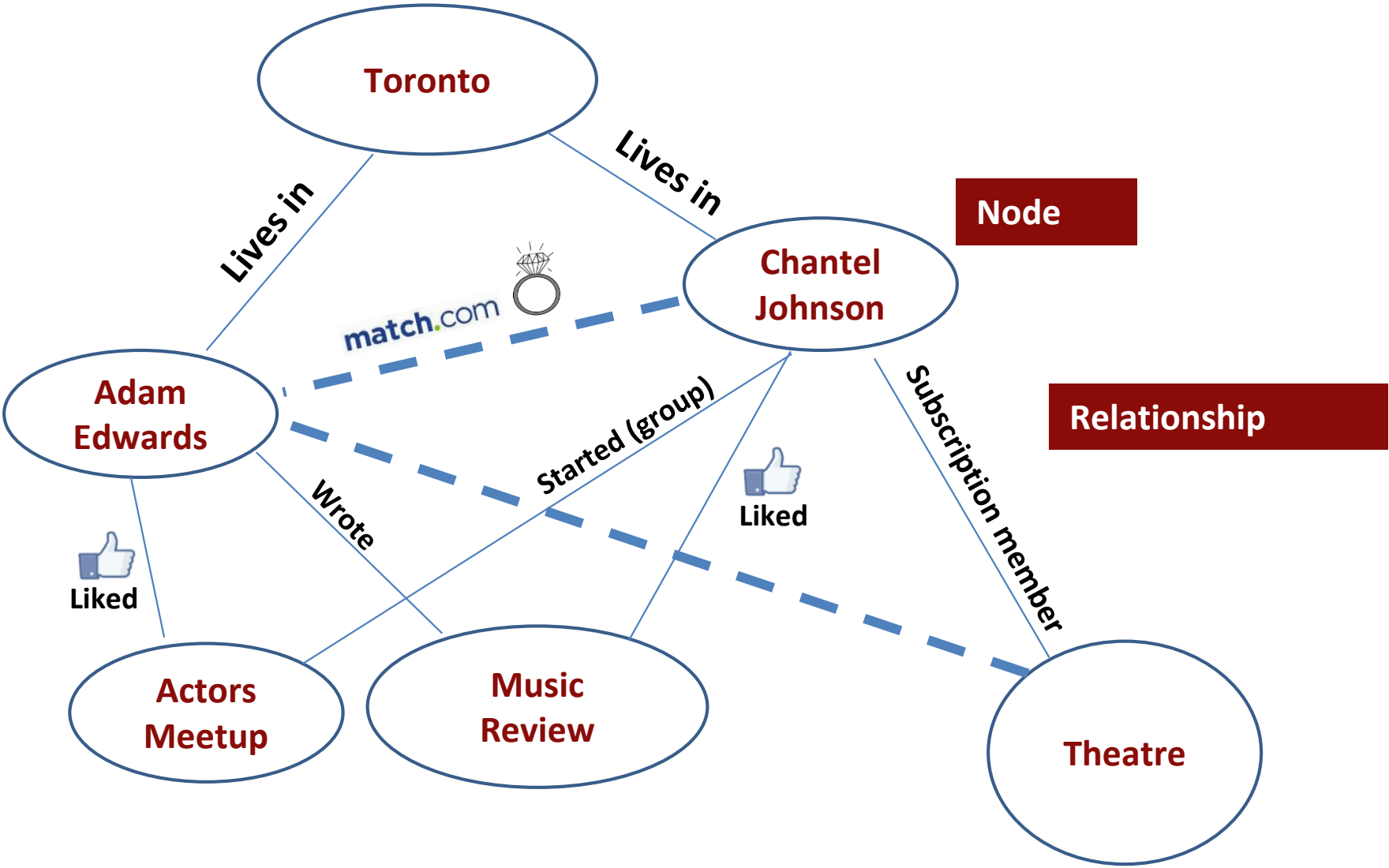
Tables = Past



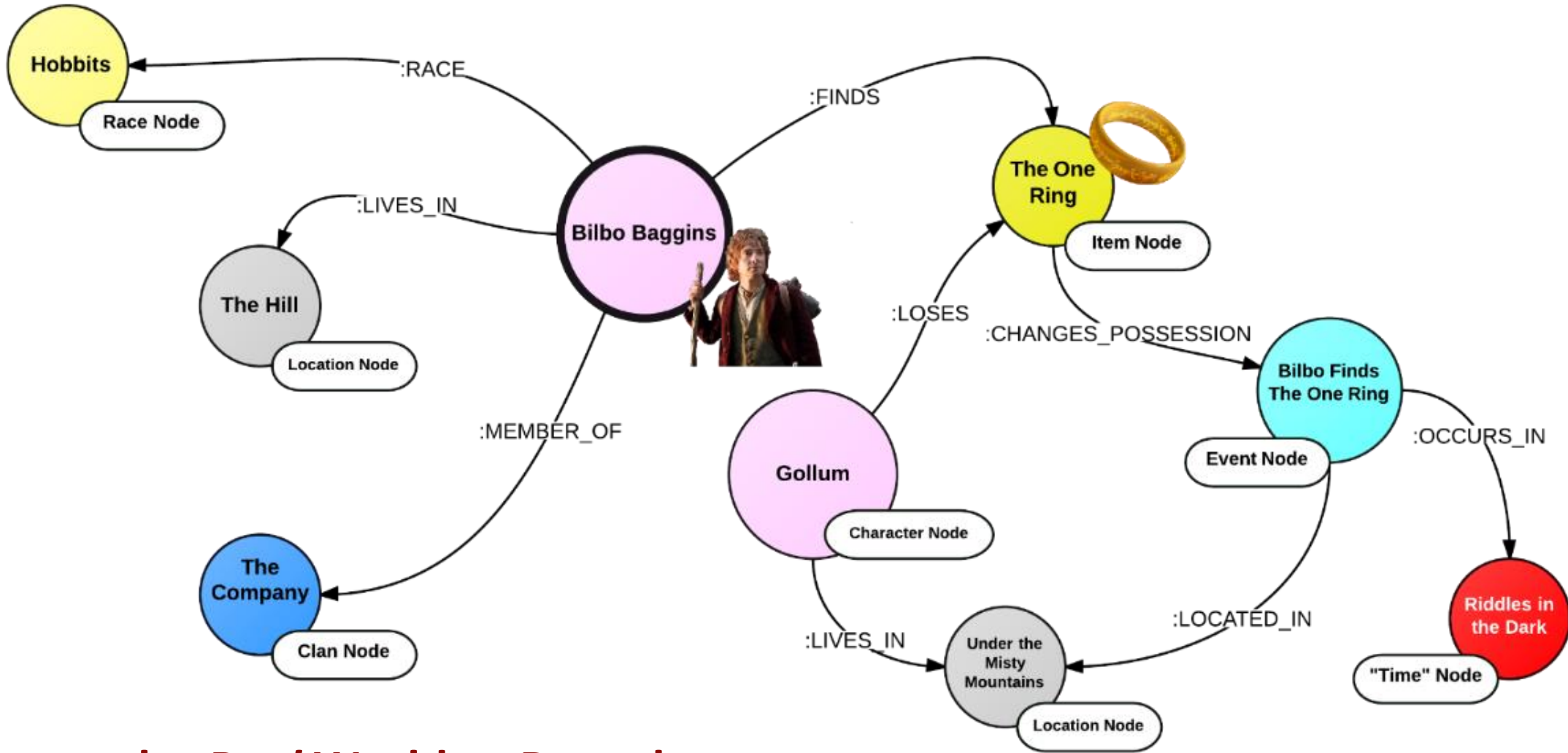
Graph Thinking = Future



Graph Database = Understanding Relationships + Connections



Graph Solutions for Understanding the Journey vs Outcomes



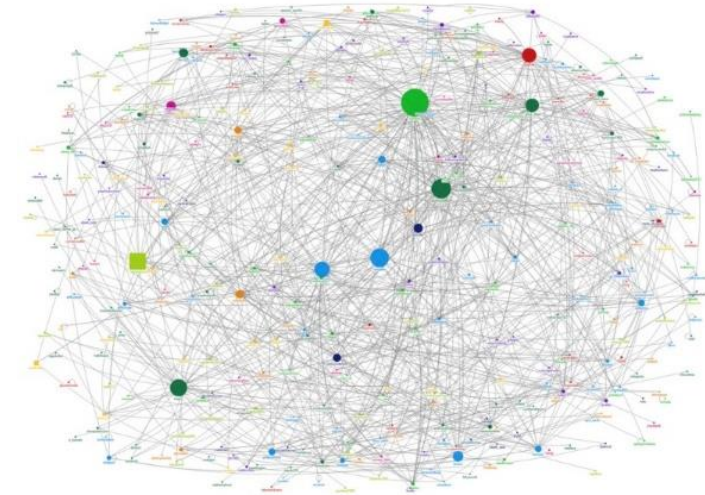
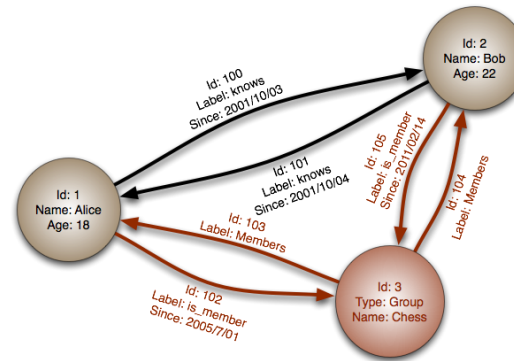
Mirrors the *Real World* to Reveal
Influencer Profiles, Decision Pathways and Recommendations

Noah is *Connecting Things on his Experience Graph*



**Who might have permission to see connections of experiences?
Learner, Teachers, Parents, Libraries, Museums, Park Staff...**

Scenario: Students, Teachers, Citizens Adopt Experience Graphs



Era of
Social Graph

Era of
Experience Graph

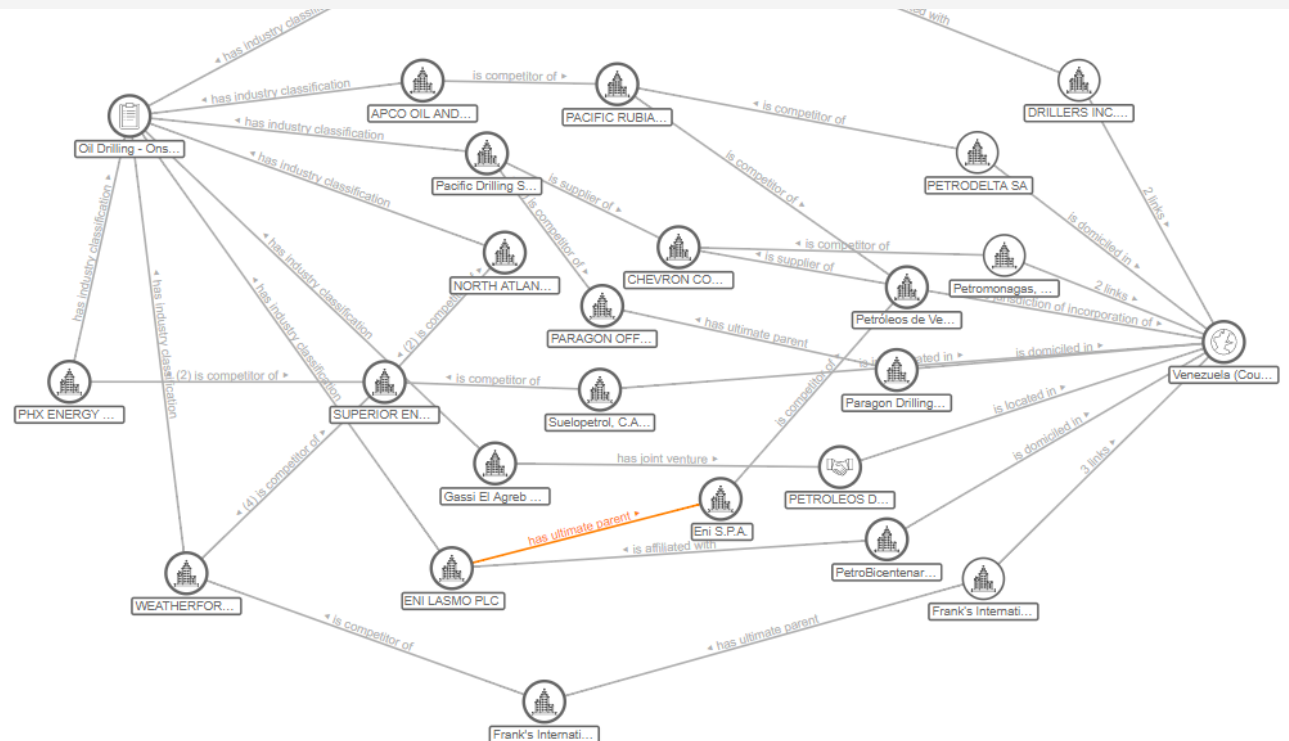
Real World Product = Enterprise Knowledge Graphs

OCTOBER 23, 2017

Thomson Reuters Launches first of its kind Knowledge Graph Feed allowing Financial Services customers to accelerate their AI and Digital Strategies

Graph network of 2 billion relationships brings to life a comprehensive view of the financial ecosystem so that users can uncover new, unexpected or difficult to find insights from connected data.

the answer company
THOMSON REUTERS



A linked data feed of Thomson Reuters financial content sets with a pre-identified set of relationships, helping you to uncover previously undetected connections within and across data sets.

Real World Product = The Economic Graph

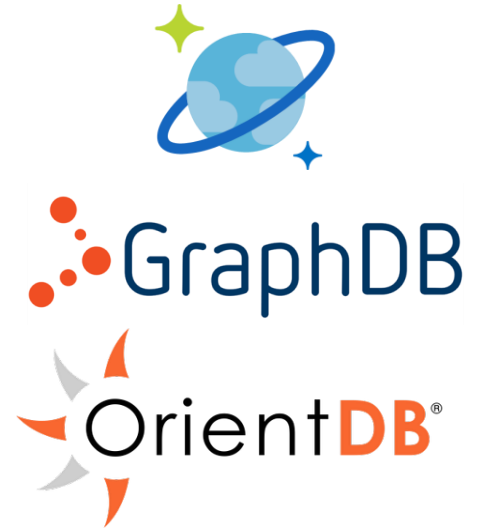


Members – Companies – Jobs – Skills – Schools – Knowledge

Learning Curve



Experience Analytics
Learning Record Stores



Graph Analytics

Rethinking Trust, Identity and Community



**Blockchain, Smart
Contracts & Tokenization**

Remember, It Was Hard to Explain the Internet in 1994



1994: "Today Show": "What is the Internet, Anyway?"

Evolution of the Web: Trust for Transactions



*Internet of Files
(Websites)*



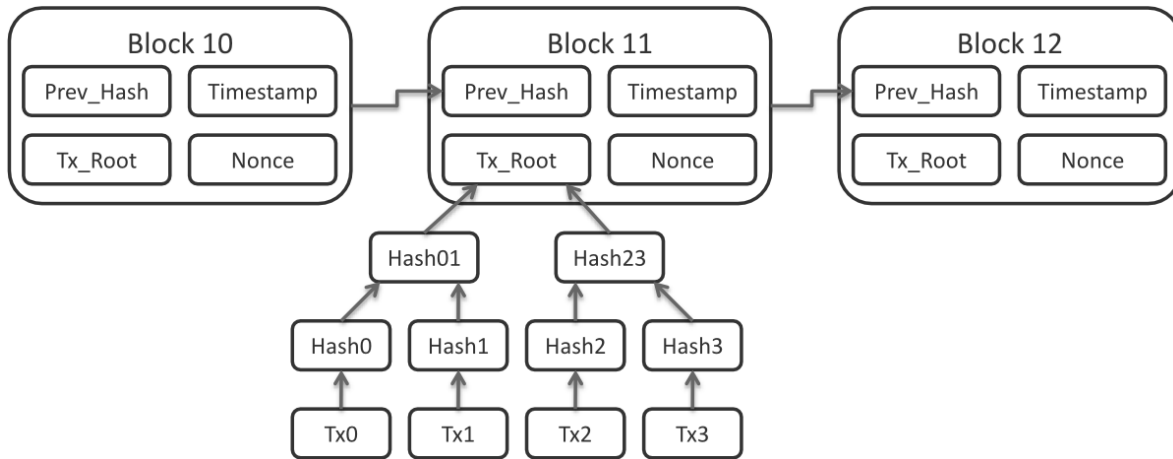
*Internet of
Social Networks*



*Internet of
Transactions*

In Records We Trust

Network Consensus on who did what...



**Ledger of Keys &
Asset Transactions**

A sample of EtherScript

```
note: ***An Ethereum smart contract to sell website for "5000 by March"  
note: First, store buyer's ethereum address:  
put: 6af267736363738ghgs7726337373737 in storage slot BUYER  
note: Then, store seller's ethereum address:  
put: 6af267736363738ghgs7726337373737 in storage slot SELLER  
note: April 1, 2014 is 13929839948 in "computer time"  
put: 16365437465 in storage slot DEADLINE  
note: If the agreed amount is received on time...  
When: transaction value ≥ 50000 ether  
and  
block timestamp ≤ storage slot DEADLINE  
then  
note: ... then designate the buyer as the new website admin and pay the seller  
put storage slot BUYER in storage slot WEBSITE_ADMIN  
Spend contract balance to storage slot SELLER
```

**Smart Contracts for
Business Process Automation!**

T = 0

Learning Curve: Development Platforms



Peer to Peer Transaction Marketplaces

Decentralized exchanges to disrupt* the third-party while opening up service stack for new value driven services. *Low fees may still apply.



iTunes without iTunes
Smart Contracts
disperse payments



Uber without Uber
Distributed
Ridesharing



ebay w/o ebay
Distributed
Marketplace



Peer to Peer
Energy Trading

Supply Chain – Automation, Transparency & Safety

IBM Forges Blockchain Collaboration With Nestlé & Walmart In Global Food Safety



Trusted Quality of Food & Medicine

Combining high-tech sensors, blockchain protocol and smart contracts, we are building a universally verifiable, community-driven ecosystem to assure the quality, safety & origins of products.

Financial Inclusion / Economic Identity



[Home](#)

[About Us](#)

[Our Solution](#)

[Learn More](#)

[Partners](#)

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BANQU

Leveraging blockchain technology to give the world's poorest access to the global economy.



Application: Liquidity & Financing Ecosystems



Sweetbridge

A blockchain-based protocol stack for global commerce and supply chains

Bridgecoin

- 1 A stable currency
- 2 Pegged to fiat currency
- 3 Your key to using the Sweetbridge Fund liquidity application



Sweetcoin

- 1 Enables interest-free borrowing
- 2 A limited-supply currency
- 3 Your key to exchanging Bridgecoin for fiat & using the Settlement application at no fee

Civil is the decentralized marketplace for sustainable journalism.

Local Journalism runs on Civil



The Colorado Sun

Investigative, explanatory and narrative journalism for a state in the midst of a massive evolution. From former top editors/writers at the Denver Post.

[VIEW NEWSROOM](#)



Block Club Chicago

The only independent outlet delivering reliable, nonpartisan coverage of Chicago's diverse neighborhoods. From the team behind DNAinfo.

[VIEW NEWSROOM](#)



The River

A Hudson Valley-based news outlet connecting the region to the world. Offers in-depth coverage from a regional perspective on issues of national importance.

[VIEW NEWSROOM](#)

'Tokenization' of Real Estate

ATL \$ 0,0630 ▲ 0,76%

INVEST

in Real Estate tokens representing shares
in individual real estate assets

[PLATFORM OVERVIEW](#) →

WHITEPAPER

BMD B ▲ 4.60%

value: ▼ 8.848 M USD

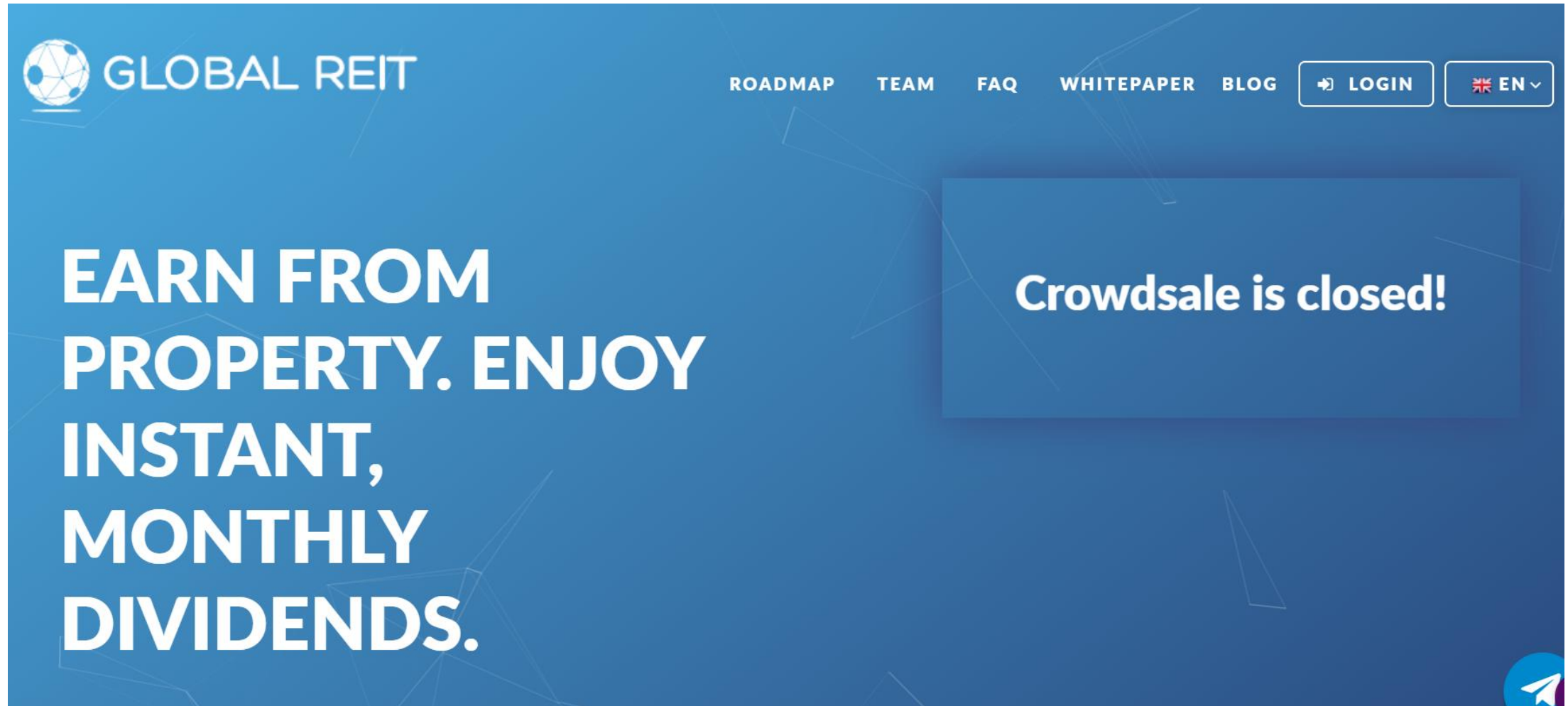
PQT ▼ 1.097 M USD

DNI

PTO
in
prog
now

TRADE →

Middle East Policies for Crypto Innovation



The image shows a screenshot of the Global REIT website. The background is a solid blue color with a subtle geometric pattern of white lines. In the top left corner, there is a logo consisting of a globe with white lines, followed by the text "GLOBAL REIT" in white, uppercase letters. To the right of the logo, there is a navigation menu with the following items: "ROADMAP", "TEAM", "FAQ", "WHITEPAPER", and "BLOG", all in white, uppercase letters. Further to the right, there are two buttons: a "LOGIN" button with a white arrow icon and the text "LOGIN" in white, uppercase letters, and a language selection button with a white flag icon, the text "EN", and a small white downward arrow. In the center-left of the page, there is a large white text block that reads: "EARN FROM PROPERTY. ENJOY INSTANT, MONTHLY DIVIDENDS." in white, uppercase letters. On the right side of the page, there is a dark blue rectangular notification box with white text that reads: "Crowdsale is closed!". In the bottom right corner, there is a small blue circular icon with a white paper airplane, representing a Telegram link.

GLOBAL REIT

ROADMAP TEAM FAQ WHITEPAPER BLOG [→ LOGIN](#) [🇬🇧 EN](#)

EARN FROM PROPERTY. ENJOY INSTANT, MONTHLY DIVIDENDS.

Crowdsale is closed!

Government Services



Governments reduce the cost and complexity via:

- Identity (Passports; Birth certificates; Business)
- Asset Registries (including land)
- Voting
- Procurement
- IoT and Building Management
- Regulatory + Compliance Automation
- Community Crypto Currencies (Financial inclusion)
- Cyber Security / Access Control to Documents
- DAOs (Decentralized Autonomous Organizations)*

Population Health Data Exchanges

HealthITAnalytics

Is Blockchain the Answer to Healthcare's Big Data Problems?

Can a blockchain approach to big data solve the healthcare industry's issues with security, interoperability, and care coordination?



Healthcare-related blockchain projects

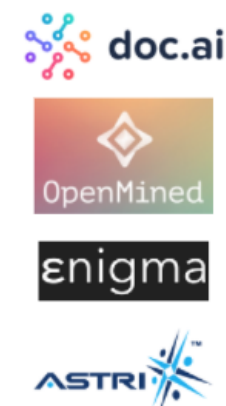
Healthcare Data Infrastructure (e.g., Blockchain-as-a-Service)



Electronic and Patient Health Records



Healthcare Analytics



Med Device & IoT Security



Identity



Supply Chain (e.g., Pharma)



Digital Medicine & Care Delivery

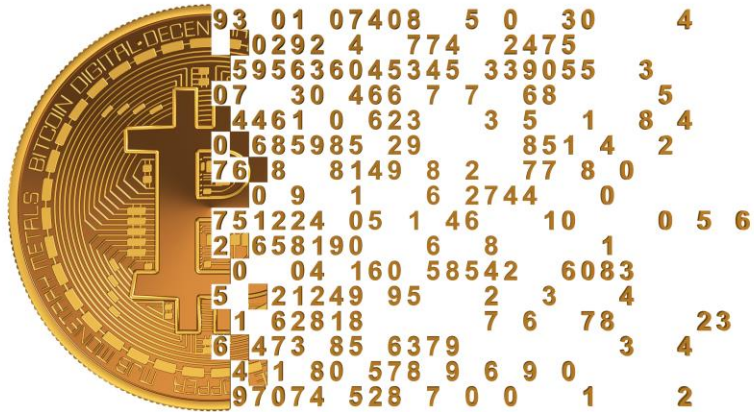


Advisory, Dev Shop & More

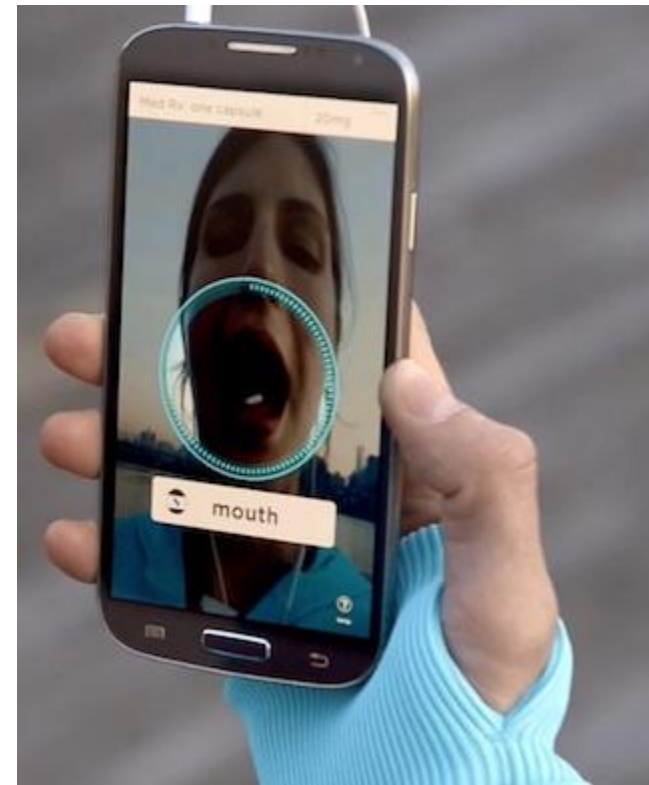


Future: Crypto Currencies Tied to Behavior Change

Incentivized Patients...



**Crypto Currencies + Smart Contracts
Automate Incentives for Adherence**



**Images
Removed**

End



Discussion

Launch Conversation on Who do we want to be...?

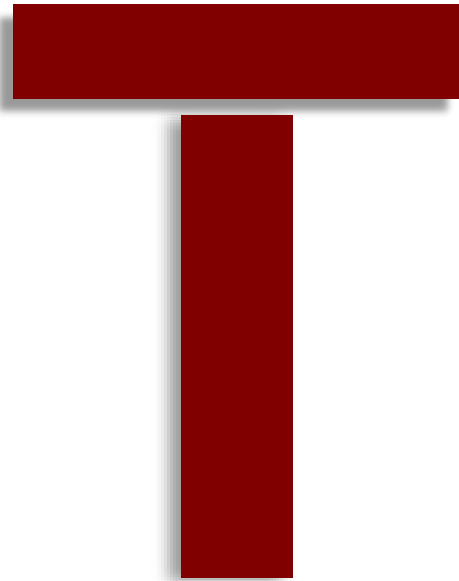


“I” Shaped Person
Success via Specialization



“T” Shaped Person
Success via Integration

What do we want to be as T-Shaped Individuals?



“T” Shaped
Professional Community

Also Trained in?

Ethics

Behavior Science

Cyber Security

Aging

Systems Thinking

Experience Design

Service Design

Psychology

Data Science

Crypto / Blockchain

Low Volume Manufacturing

Thank you!

Garry Golden

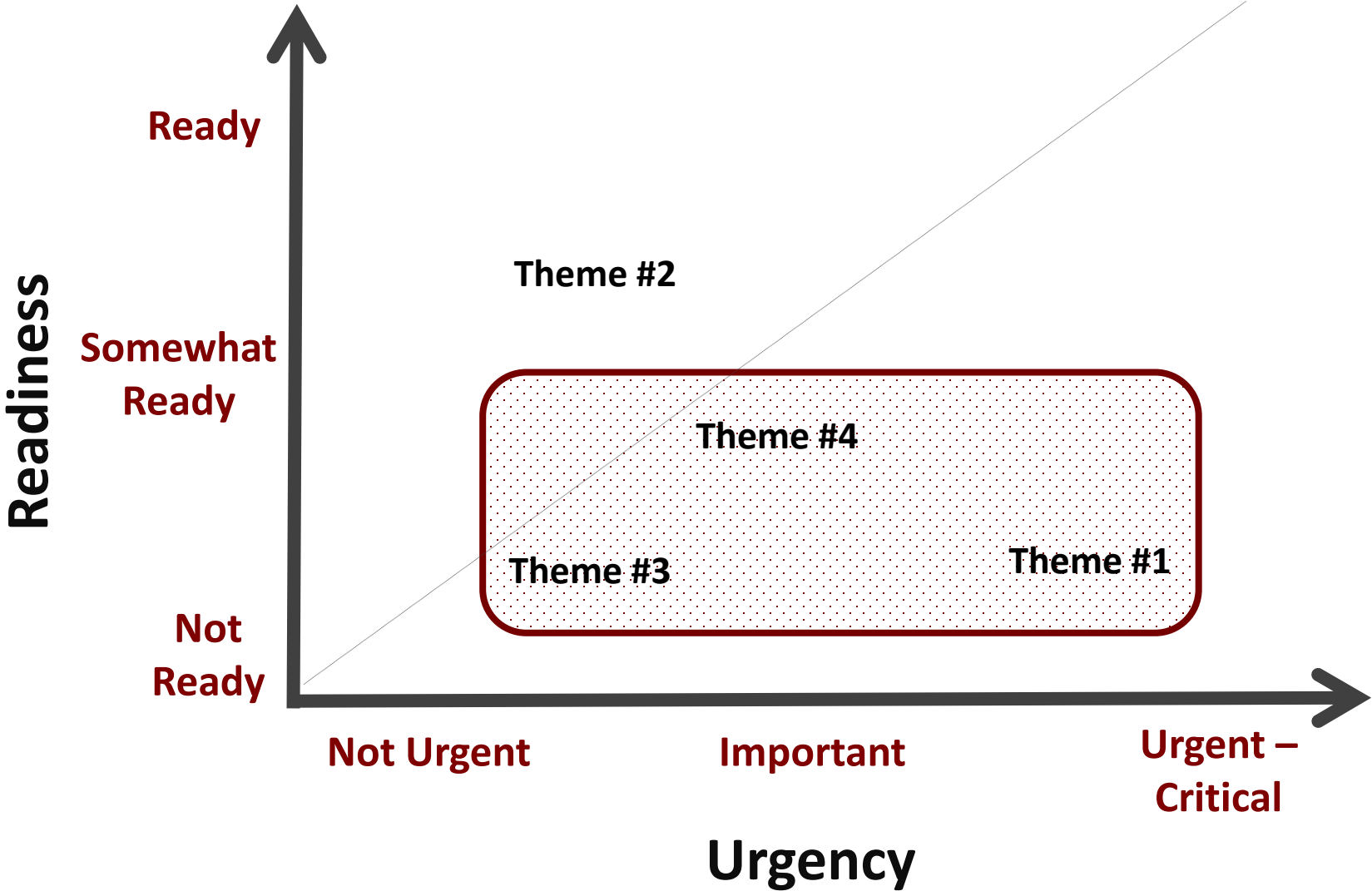
garrygolden@gmail.com (Two Rs)



Take a Pulse Check on Emerging Trends vs Organizational Appetite

Top Trends/Themes

- 1)
- 2)
- 3)
- 4)
- 5)



What is the biggest risk we should take over the next five years to align our businesses, government agencies and civic institutions with *possible and preferable futures*?

