Tapping Your Inner Futurist

Looking at the Future of Business

By Garry Golden

www.garrygolden.com/ZIPD2015

#ZIPDBC2015 @garrygolden

The E-marketeers @Emarketeers2 · Oct 13

Great Scott! Come to @garrygolden's ZIPD conference for creating headlines for the future! #ZIPDBC2015 #mktg331

RETWEETS 8 FAVORITES 10

3:03 PM - 13 Oct 2015 · Deta

Eteam @eteam22 · Oct 13

Meet a real futurist @garrygolden (not a fake 👎🏻) at the "Creating Headlines from the Future" #ZIPDBC2015

Young Solomon @PotentialSneaks · Oct 13

Come learn how to make a "change" on Thu #ZIPDBC2015 #BusinessIsLife @garrygolden

Start

End

Warm up
Foresight 101

Slow Pace
of Fast Change

What to do..?!

More or Less Change Ahead?

Things that **will not go away**: Desire for Face to Face Connections; Social Norms-Culture; Resistance to Change; Natural Life stages

Also…Batman shirts will still be big in 2115

In the News

In 2016 the Supreme Court of California is scheduled to hear a case filed by Amy Lee to grant her control of learning data & analytics generated during her years at Stanford University.

True

False

Social Data

Health Data

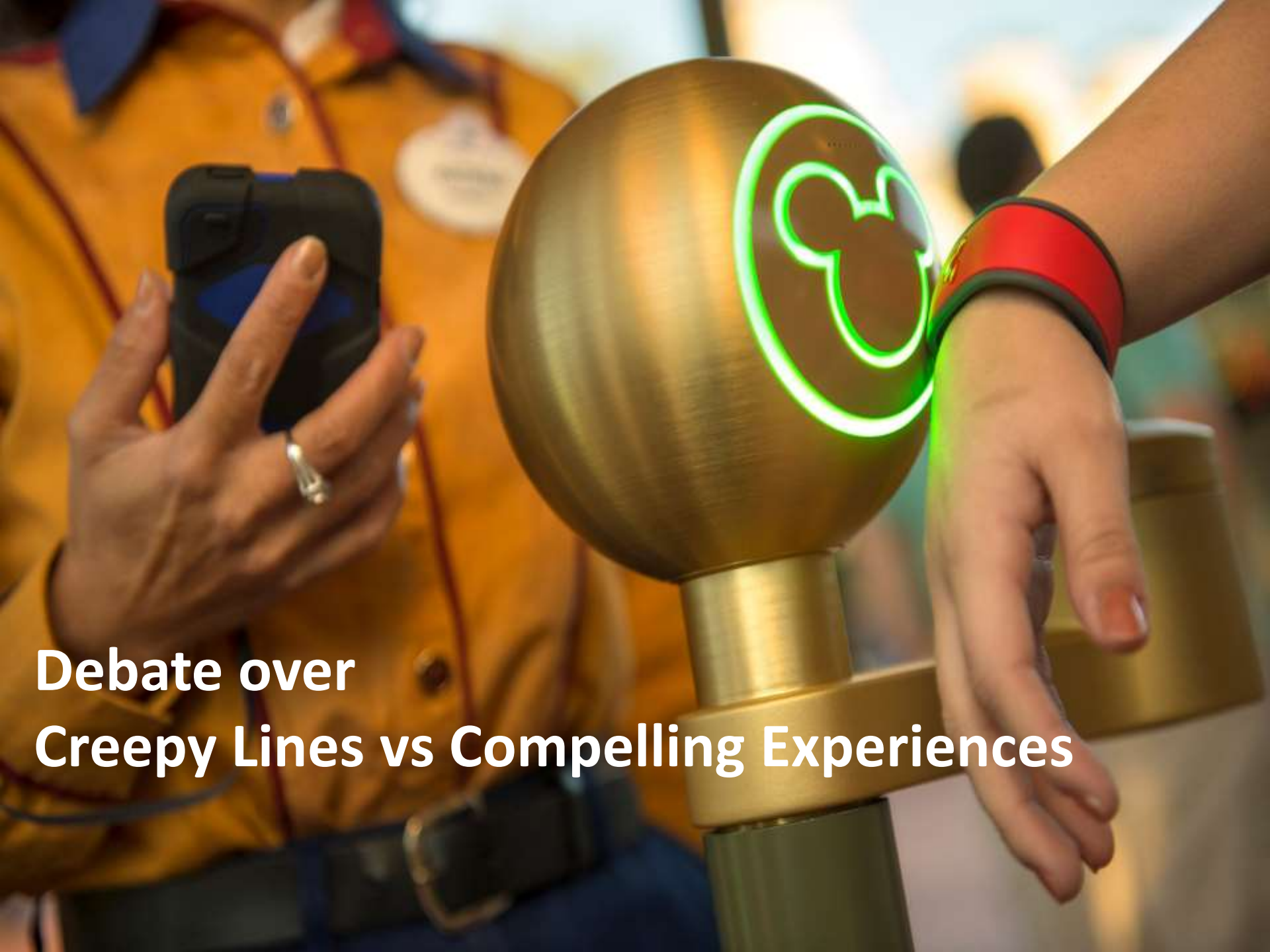
Device Data

EXPERIENCE API

"I did this…"

Learning & Work Performance Data

Assumption to Explore:
Businesses must adapt to policies & relationships based on a new era of data-analytics that drive experiences, behavior change & outcomes


Debate over
Creepy Lines vs Compelling Experiences

Anticipation = Advantage

How might your industry be forced to confront the data-driven debate over creepy line vs compelling experiences?

Barclays bank has developed an empathy-based training program that uses an *mobility impairment suit* to simulate the experience felt by aging and disabled populations

True

False

Compassion = Advantage

How might your ability to see the world through the eyes and experiences of others help you be more valuable in life and workplace?

A Hong Kong equity investment firm has elected a software program to its Board of Directors as a voting member on key investment decisions.

True

False

Deep Knowledge Venture's Appoints Intelligent Investment Analysis Software VITAL as Board Member

Hong Kong Venture Capital Fund Appoints Machine Intelligence as Board Member.

**VITAL (Validating Investment Tool for Advancing Life Sciences)

IBM's Watson is going to college

Image Credit: IBM

May 8, 2014 12:23 PM
Richard Byrne Reilly

VB NEWS

Big Blue supercomputer Watson and eager computer science students are about to get a whole lot closer.

Assumption to Explore:

Humans + *Machines that Learn* = Workforce & Leadership Revolution

What is a Futurist?

+ What does your Mother say to her friends?

UNIVERSITY of HOUSTON
FUTURES STUDIES

School

2003-05

the Futures Lab

FastFuture
Accelerating Innovation

andspace consulting

futurethink

Mentoring + Training

2005 - 10

Texas Department of Transportation

ALLIANT ENERGY

The Kennedy Center

PHILADELPHIA MUSEUM OF ART

PEPSICO INTERNATIONAL

GOODYEAR

AMERICAN EXPRESS

Fidelity INVESTMENTS

Learning the Craft

IF YOU HIT THIS SIGN
YOU WILL HIT THAT BRIDGE

WAIT FOR IT

.....Wait for it.....

motifake.com

Every day I make an effort to move toward what I do not understand.

- Cellist, Yo-Yo Ma

How do we think about the future of society + business?

Four Futures Thinking

?

Continued Growth

Peabody ENERGY

Microsoft

Disciplined - Constrained

IBM

Pfizer

Transformed

BlackBerry

NOKIA

Decline - Collapse

* Jim Dator, University of Hawaii

Foresight Fundamentals

Identifying & Monitoring Change

- Horizon Scanning
- Emerging Issues Analysis
- Milestones + Indicators (Leading vs Lagging)

Exploring Implications

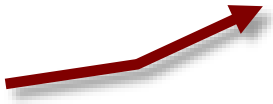
- Forecasts (Trend Extrapolation)
- Scenarios (Alternative Assumptions)

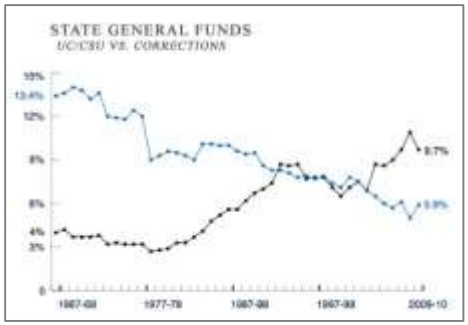
Communicating the Need for Change

- Visioning (Backcasting / Roadmap)
- Strategic Planning
- Organizational Change

Foresight 101: Three Mechanisms of Change

Trends
(Continuities)

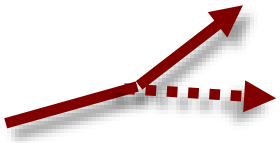




Plausible Future

Forecasts

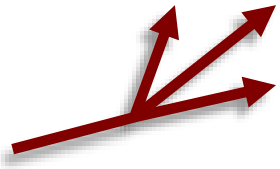
Events
(Discontinuities)



Possible Futures

Scenarios

Choices
(Discontinuities)



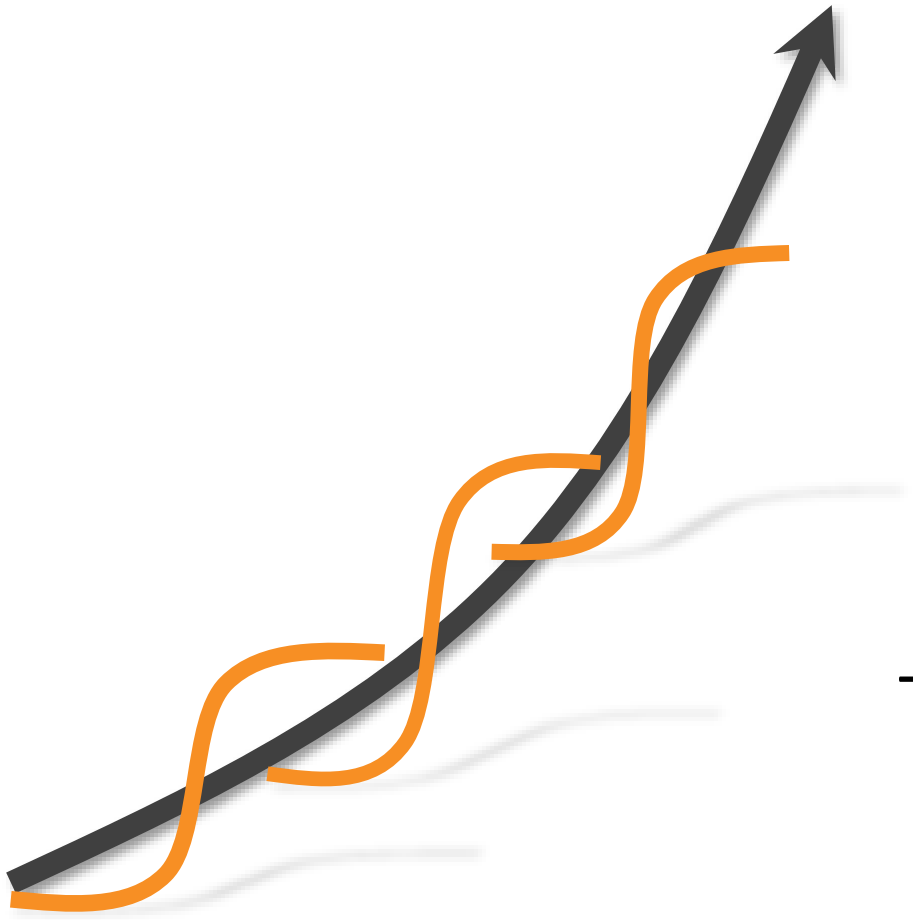
Preferred Futures

Visions

Where does foresight intersect with innovation + strategy?

Foresight = Front end of Innovation

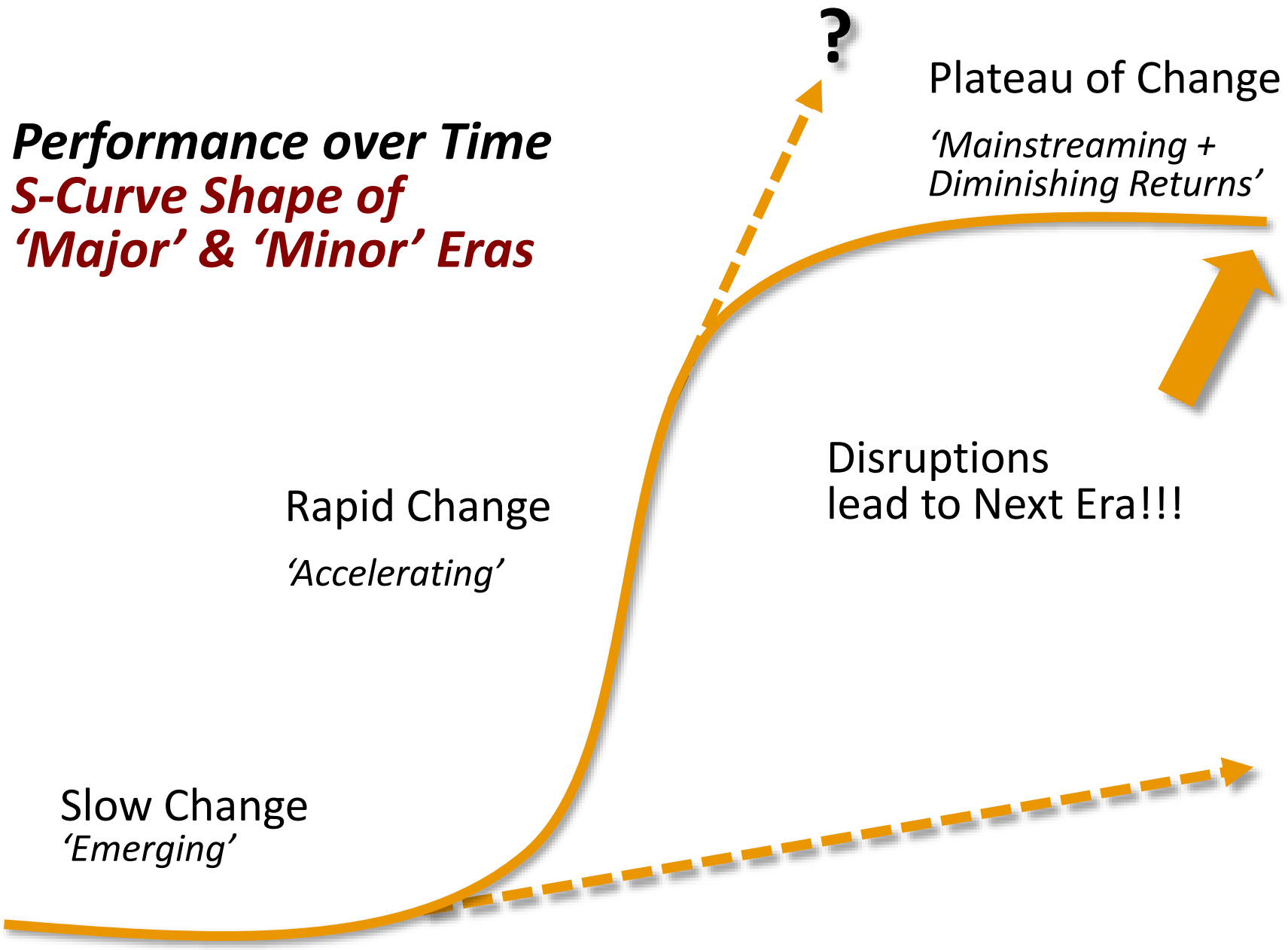
Era-based Growth Strategies



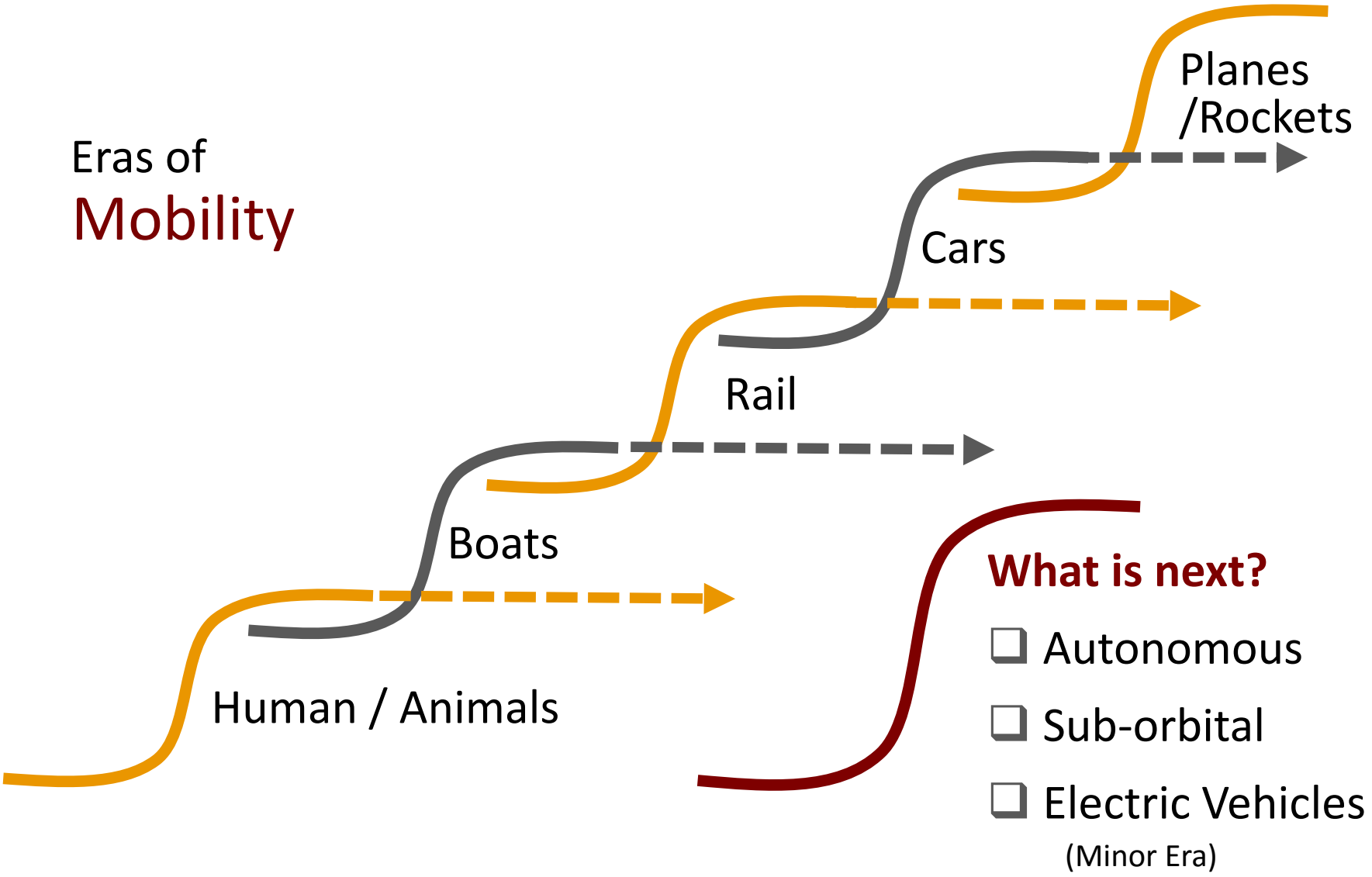
Incremental Innovation
Within an Era

Versus

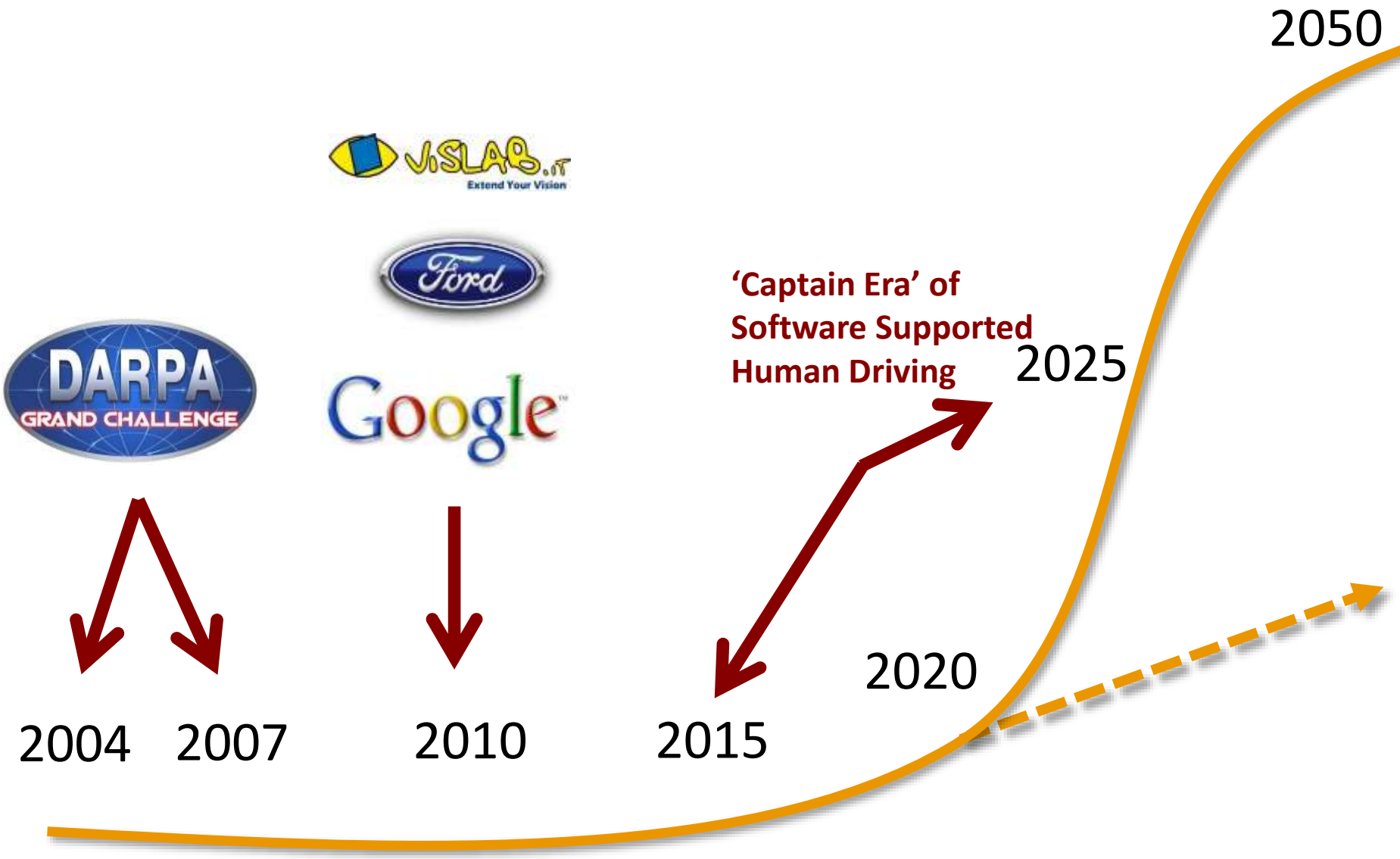
Transformational Innovation
Across a New Era


Performance over Time
S-Curve Shape of
'Major' & 'Minor' Eras
?
Plateau of Change
'Mainstreaming +
Diminishing Returns'
Disruptions
lead to Next Era!!!
Rapid Change
'Accelerating'
Slow Change
'Emerging'

Era-based Social Change & Market Transitions



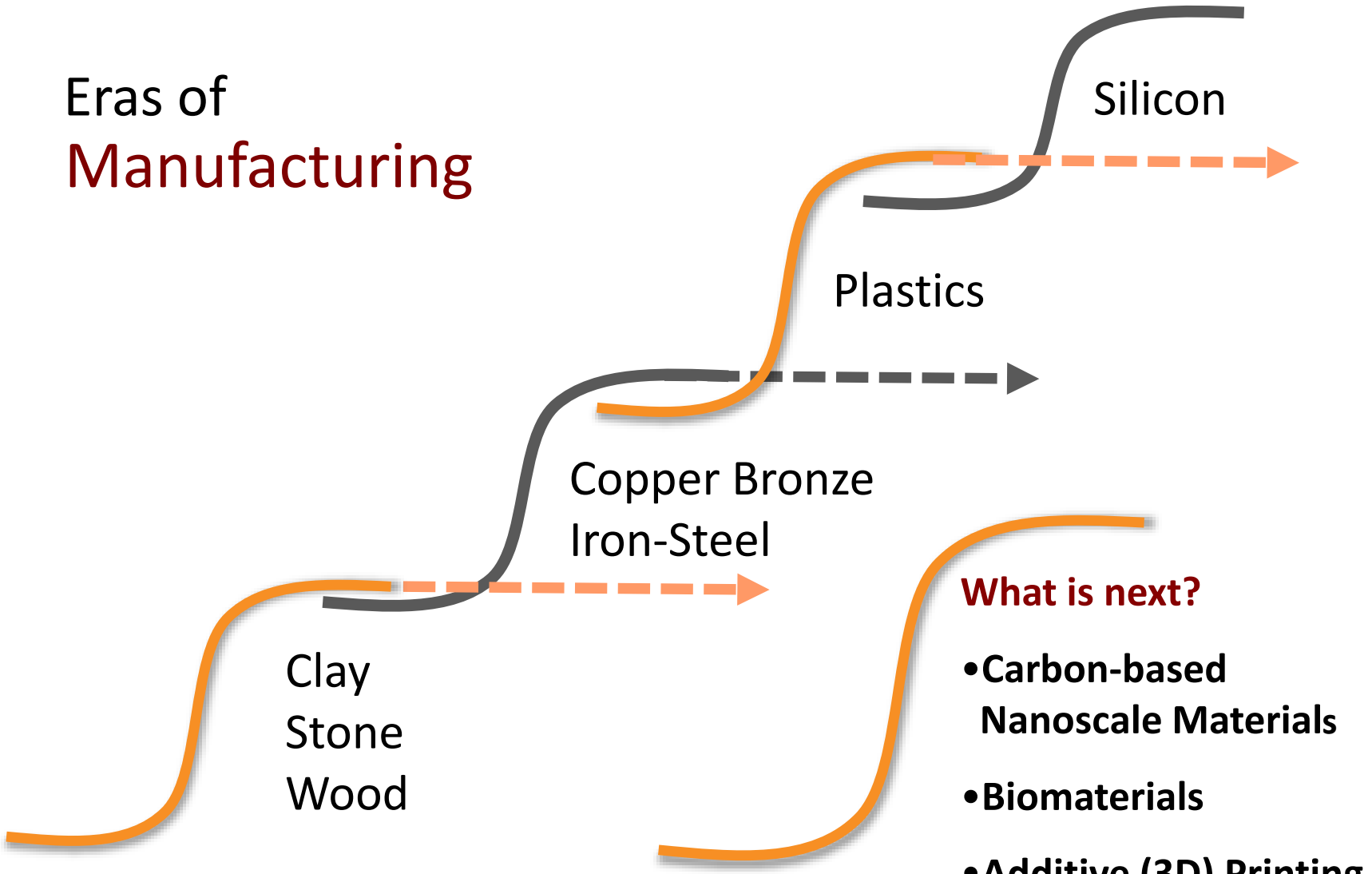
Monitoring & Anticipating Changes



Captains + Connected Vehicles
Road Platoons for Freight, Rush Hour + Overnight Leisure Travel

SARTRE
Safe Road Trains for the Environment

Eras of
Manufacturing



What is next?

- **Carbon-based Nanoscale Materials**
- **Biomaterials**
- **Additive (3D) Printing (Minor Era)**

Popular Term: 3D Printing

MakerBot
INDUSTRIES

Industry Term: Additive Manufacturing

Functionalization:
Active Nanostructures

2050

2030

Characterization:
Passive Nanostructures

Functionalization:
Passive Nanostructures

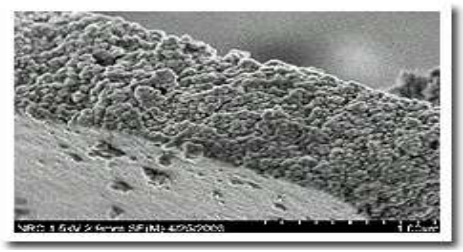
2025

1990

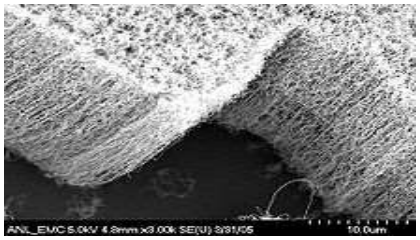
2009

2010

Nano-Materials = Low Cost, High Performance



Nano**particles**



Nano**tubes**

Nano**sheets**
(Graphene)

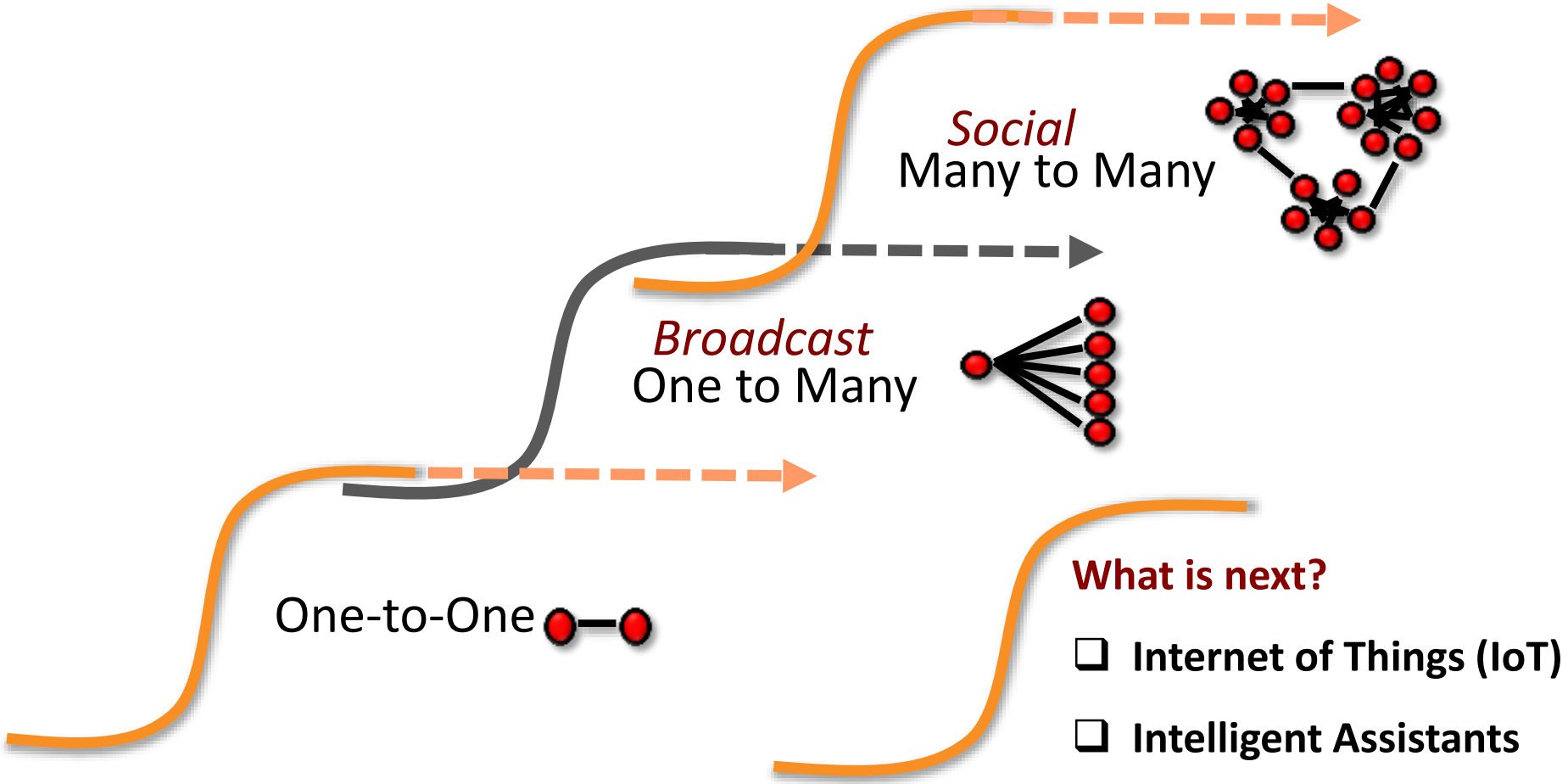
Coatings

Sensors/Controllers

Thin Films

Eras of

Media/Communication



Era of
Apprenticeship

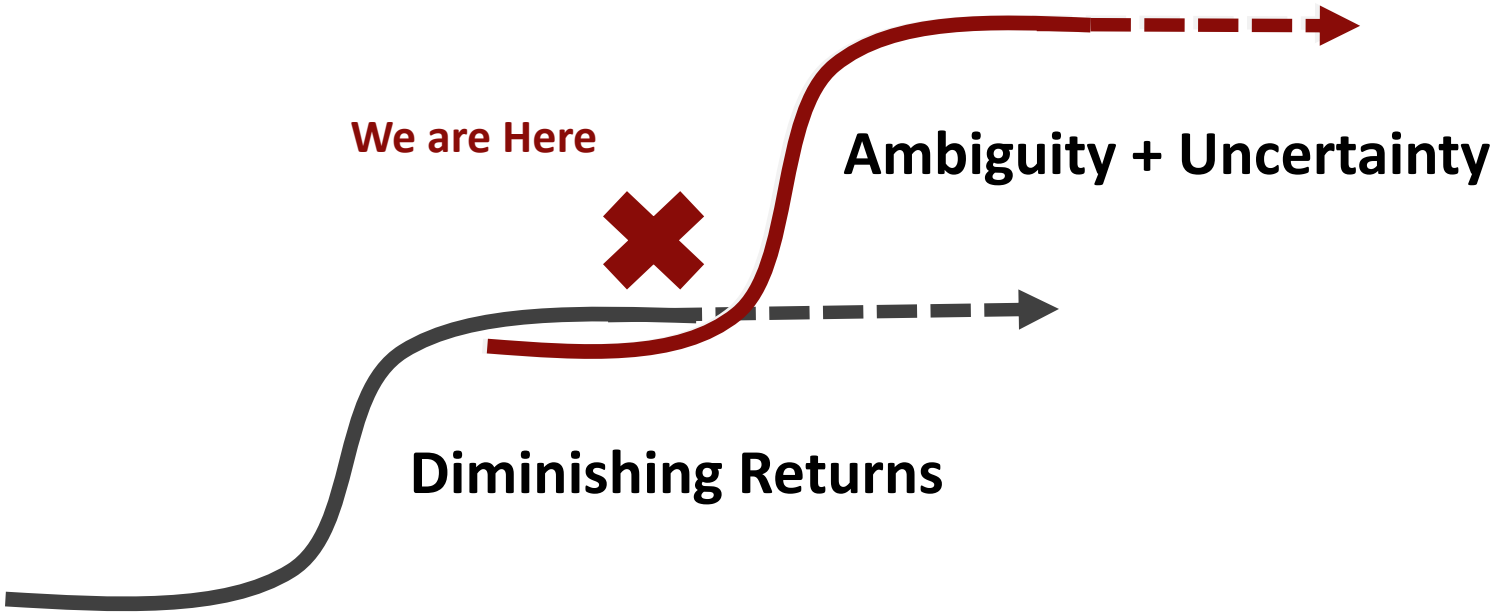
Era of
Institution

Era of (Networked)
Learner

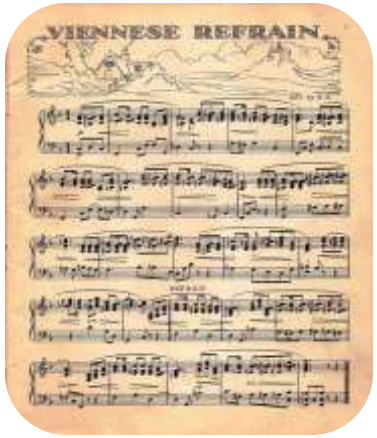
Disruptions of
Books & Industrial Work

Disruptions of
Web & Knowledge Economy

Foresight Focuses on Front-end of Innovation Across Social Change + Market Transitions



Face to Face



Printed & Recorded

I am an Artist living through eras of...

Broadcast Media (Audio / Visual)

iTunes

facebook

Social Media (Digital/Networked)

More please!!

End

Warm up
Foresight 101

Slow Pace
of Fast Change

What to do..?!

Future of Business
Implications of Emerging Trends & Issues

Adaptive Experiences

Intelligent Assistants

The Overwhelmed Life

1993

Web = Distribution Platform

"On the Internet, nobody knows you're a dog."

2008

Web = Social Platform

Everyone knows I'm working on some personal growth issues
BARRON'S
DOG TRAINING BIBLE
Assumption:
The web is becoming a platform for driving behavior change.

Design for Behavior Change

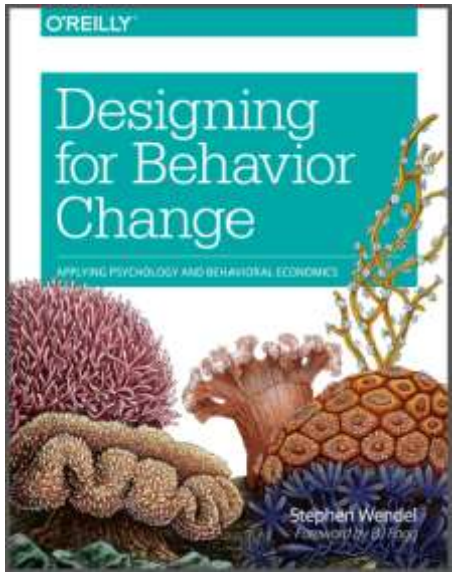
Why Software is Eating the World…

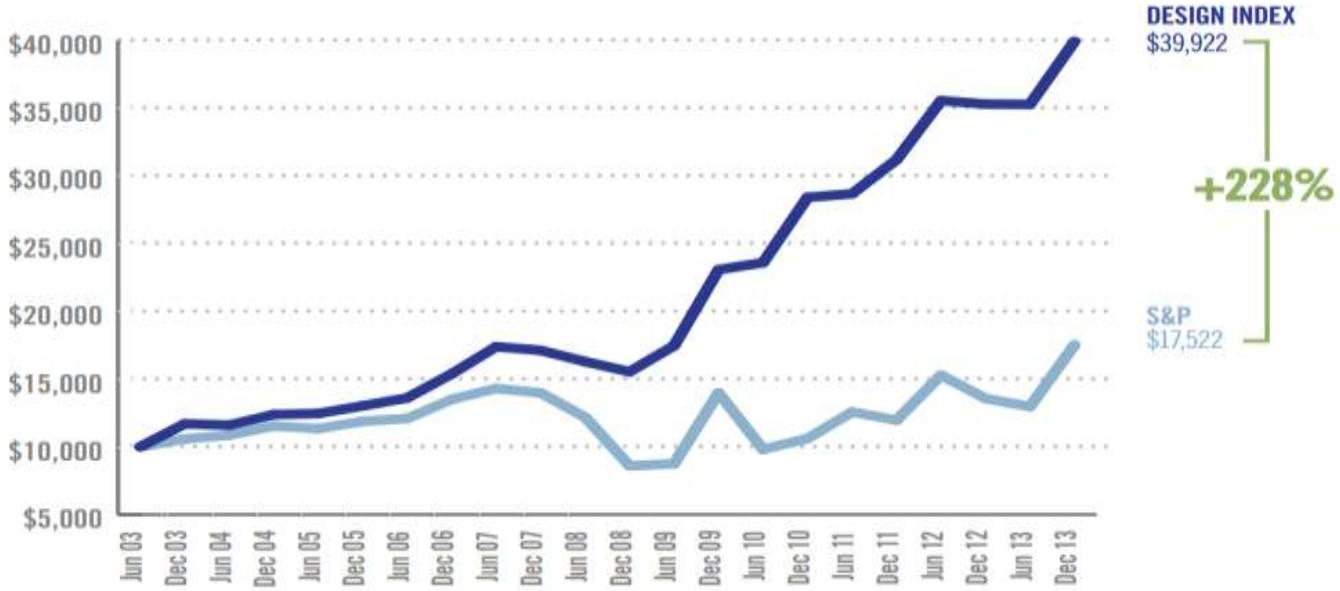
THE WALL STREET JOURNAL.

By MARC ANDREESSEN

August 20, 2011

Assumption:
Design Drives Value as it Evolves into Behavior Change Arena





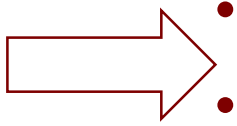
dmi:review

motiv

Design Management Review & Jeneanne Rae

What does it mean to be innovative w/ ‘adaptive’?

- **Online vs Offline**
- **Desktop or Mobile**
- **Web-based or App**

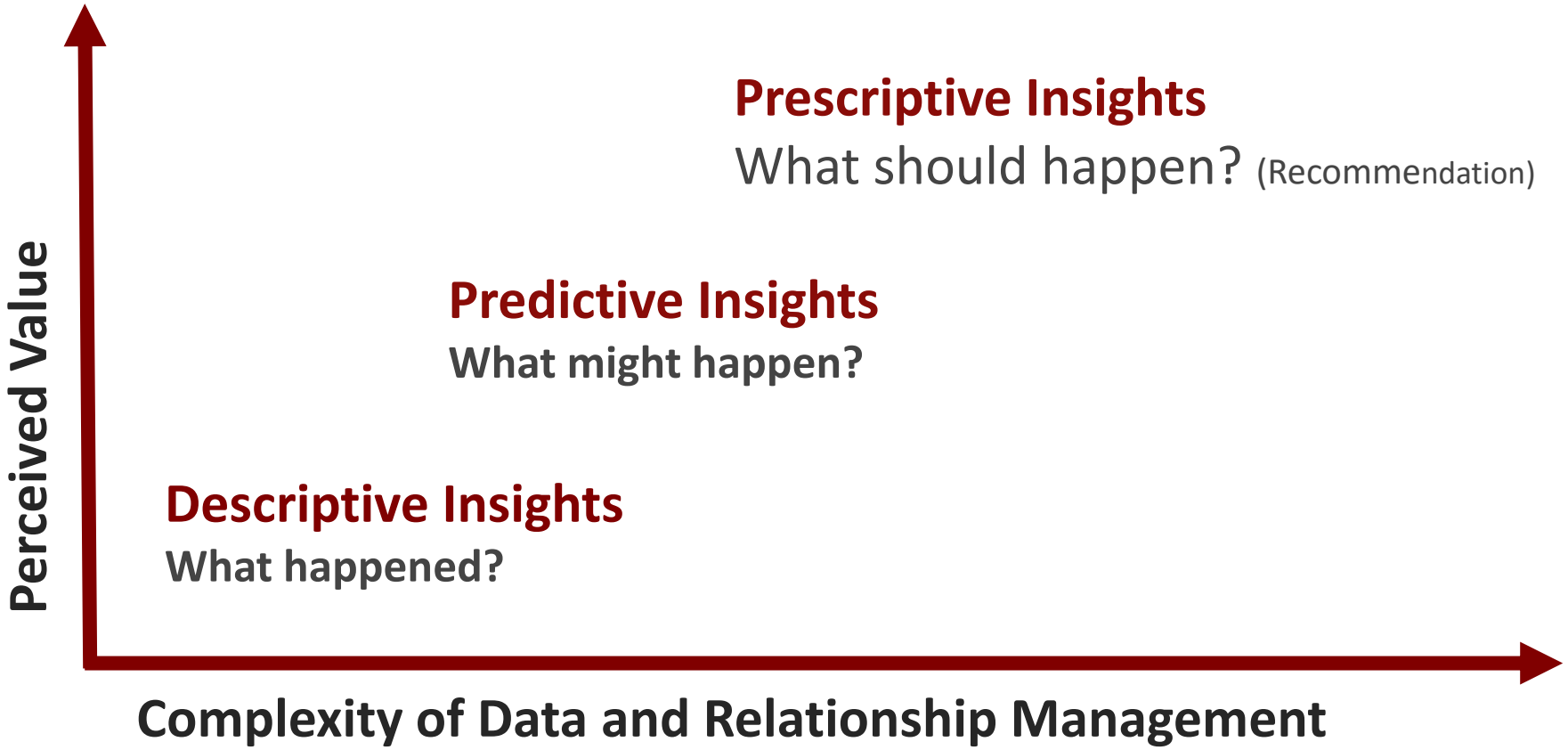


- ***Software-Guided*** *or Not*
- ***Does it Guide Outcomes*** *or Not*

Creepy **Assumption to Explore:**

It will feel creepy — then we will wonder how we did business before the age of algorithmic-driven experiences

Nature of Adaptive Experiences

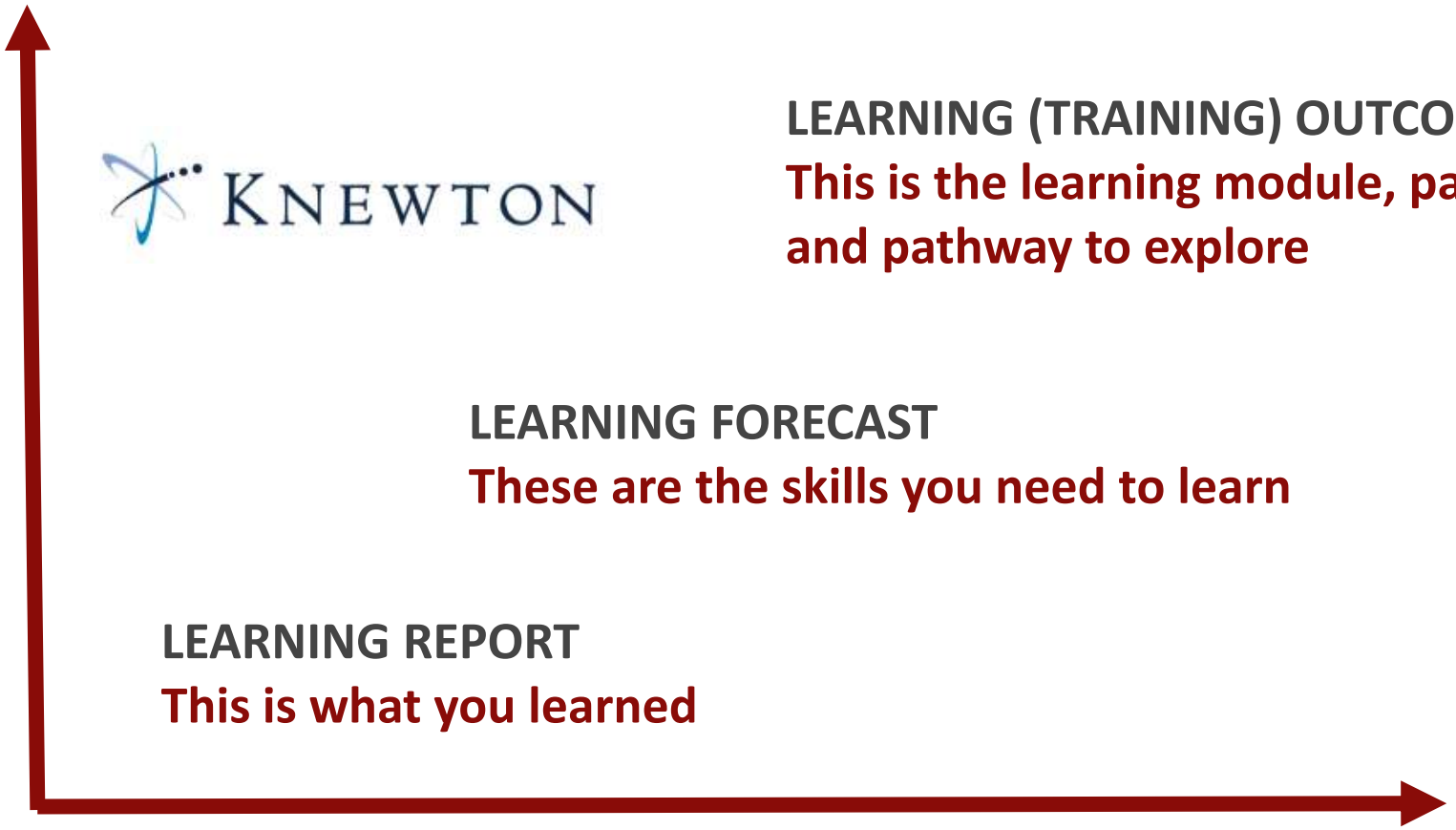


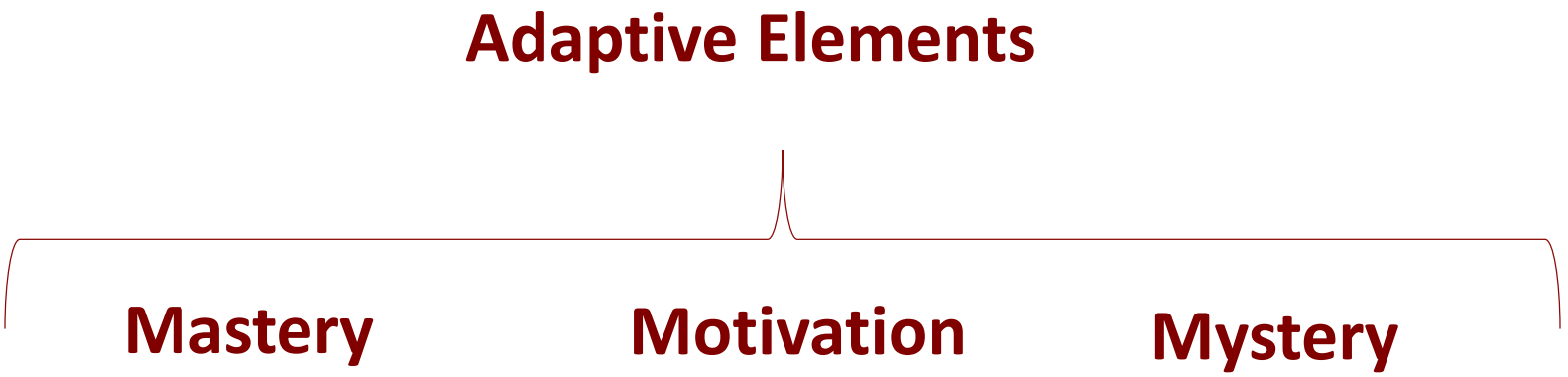
Descriptive – Predictive - Prescriptive

Guided Financial Experiences

Descriptive – Predictive - Prescriptive

Guided Learning (Training) Experiences

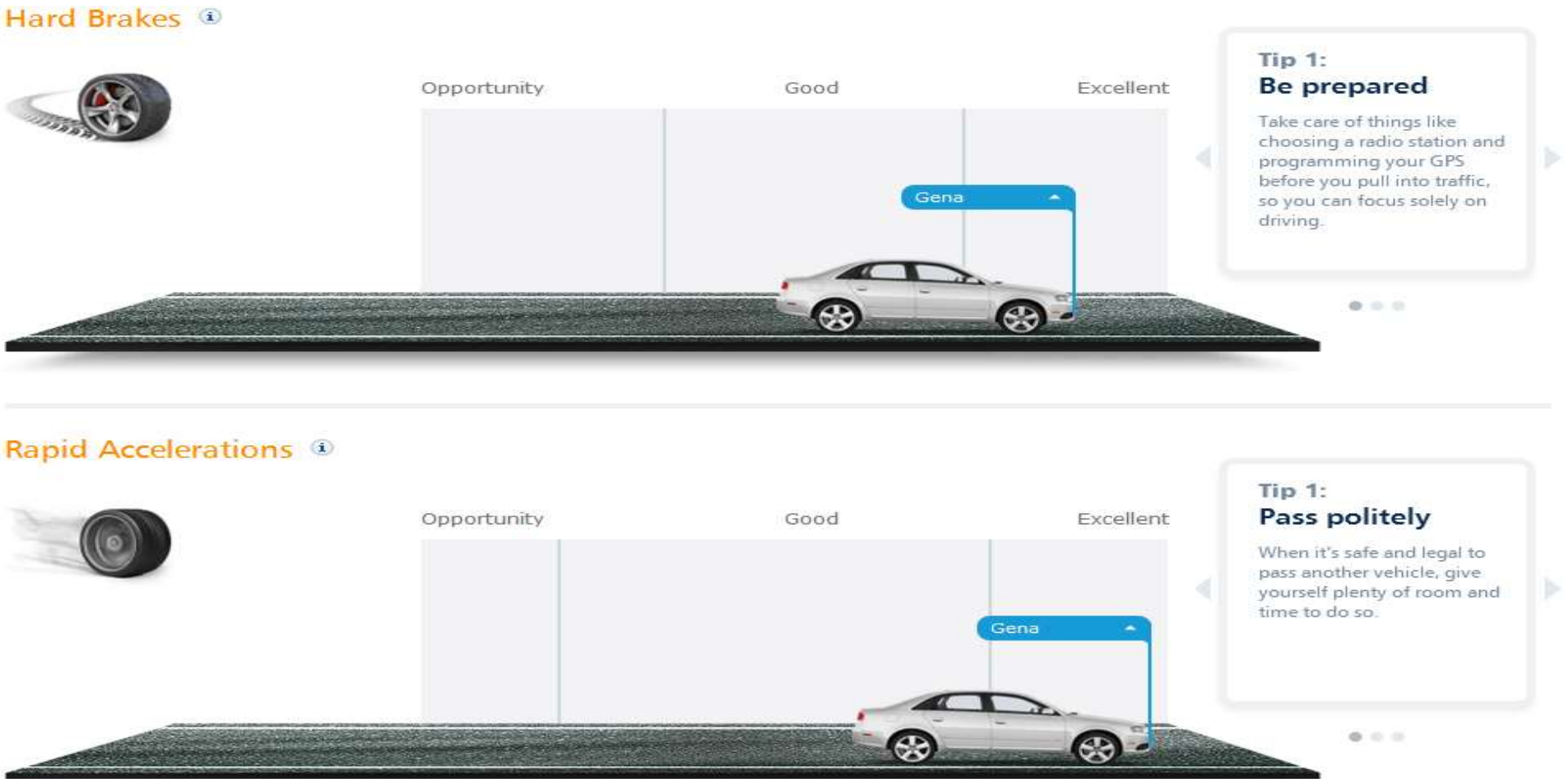



Adaptive Elements
Mastery
Motivation
Mystery

Adaptive Experience Design: Flow for Wellness

reflexion health

Insurance Innovations: Pay How You Drive goes mainstream



CloverNet

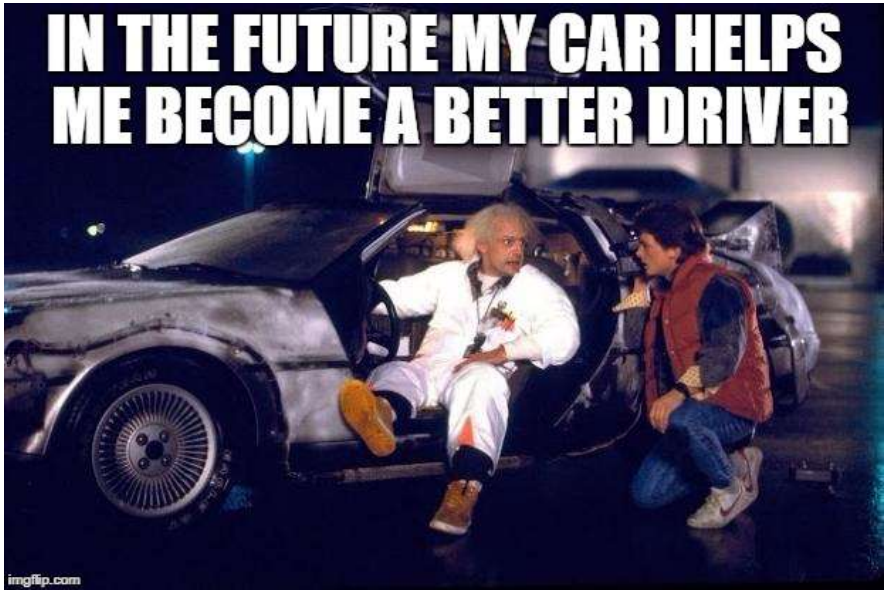
- ❑ Operations
- ❑ Customer Experience
- ❑ Staff Productivity

Products Designed to Improve User Behavior

The coming age of product-based instruction & on-demand learning in manufacturing & retail work settings

Shift:
POS to Point of Learning Devices

How might your industry be transformed by ‘prescriptive’ analytics and ability to better guide outcomes?

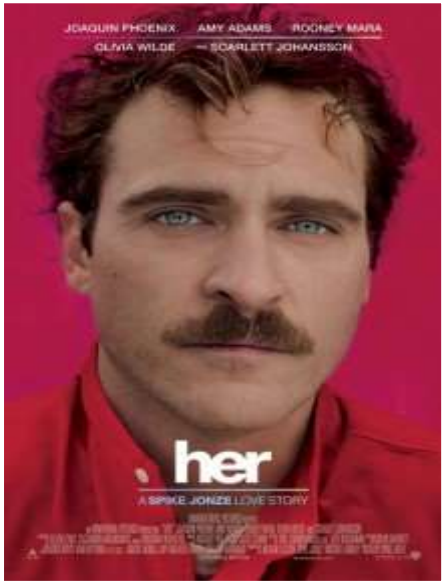


What should I learn about?

- ❑ Design for Behavior Change
- ❑ ‘Connected Data’ Movement (Graph Databases like Neo4j)
- ❑ Privacy (Cryptography + Blockchain Community)

Intelligent Assistants

Science Fiction is Becoming Reality



?

Race to Build Intelligent Assistants

ARTIFICIAL SOLUTIONS

next IT

Google now

MindMeld

KASISTO

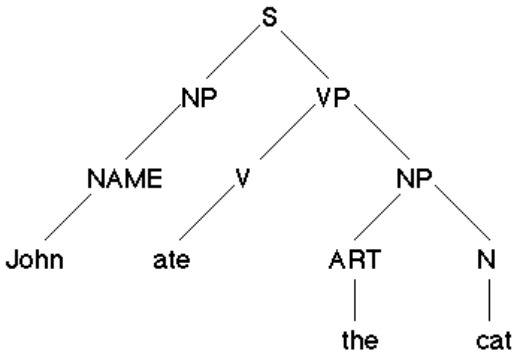
WARREN

….the most powerful technology companies are investing immense resources to make virtual intelligent assistants ubiquitous **before the end of the decade.**

- Daniel Nadler, CEO of Kensho

Why is this Trend Accelerating?

Drowning in data, thirty for insights & knowledge



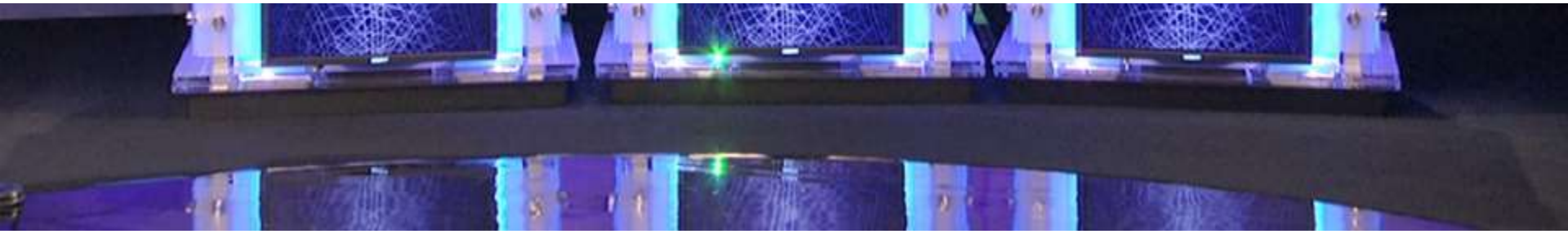
Demands of Data-driven Decisions

Machine Learning (NLP; Knowledge Graphs)

Work & Major Eras of Computing

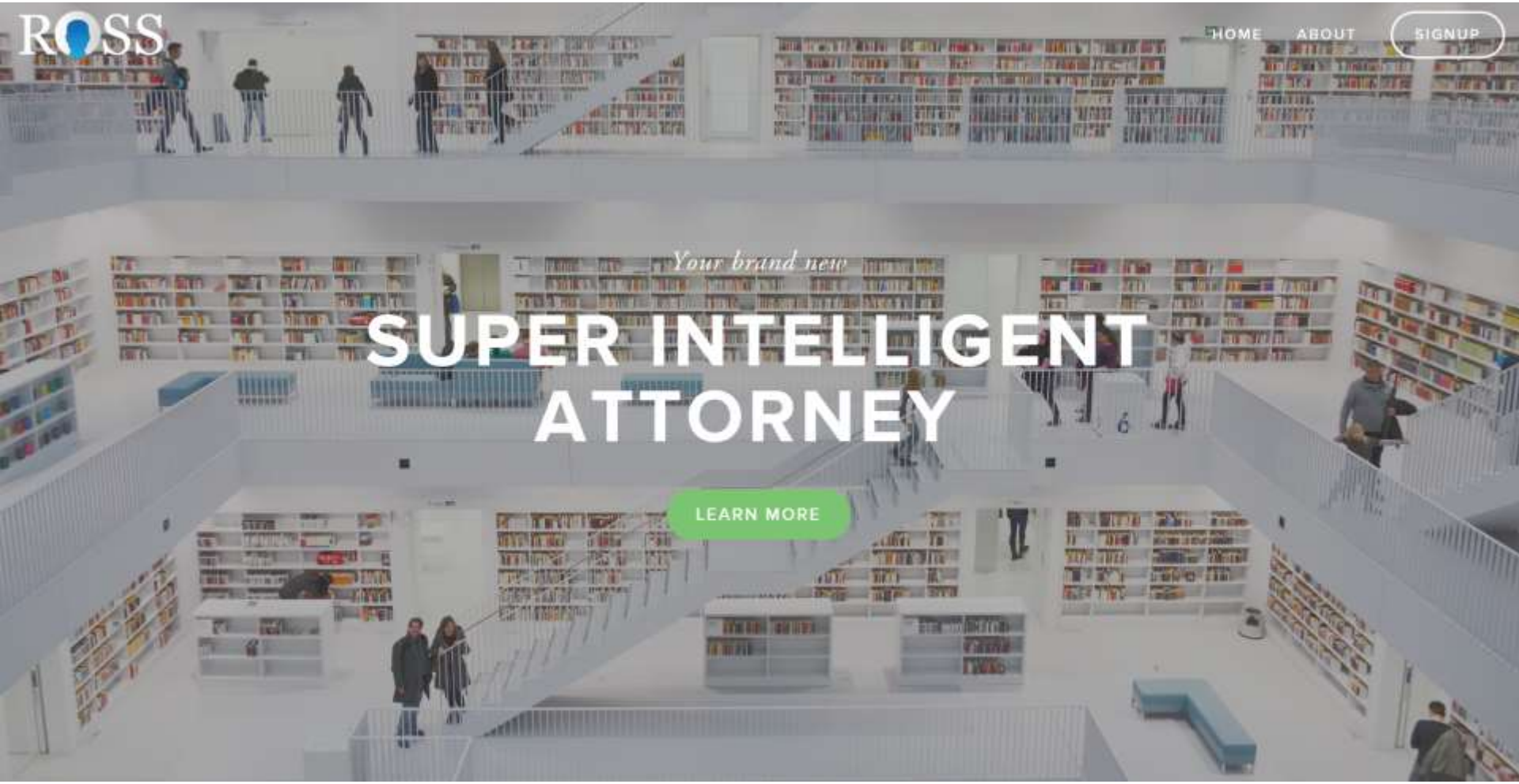
Tabular Computing	**Programmable** Computing	**Cognitive** Computing
Calculate	Tell machine what to do	Machine will learn what to do

IBM's Watson in 2011



IBM Watson in 2014

IBM Watson in 2015



Assumption to Explore:

Intelligent Assistants will be used by 20% of the U.S. service + knowledge workforce by 2020 (90% by 2030)

Assumption to Explore:

Intelligent Assistants will be embraced by kids and the (adult) Millennials will complain about ‘technology’!

CogniToys: Internet-connected Smart Toys that Learn and Grow

We bring toys to life with speech and a personality, allowing them to interactively engage and grow with a child.

Created by

Elemental Path

2,256 backers pledged $275,000 to help bring this project to life.

- ❑ **Question + Answer**
  (Age-appropriate)
- ❑ **Child-centered**
  (Tell me a story)
- ❑ **Learns with Child**
  (Connects interests)
- ❑ **Parent Panel**

Garry, this is the real creepy line

Age of Intelligent Assistants

How might intelligent assistants transform organizational culture? (e.g. pride in work; manager roles)

How might natural language experiences and/or intelligent assistants support existing or new business models?

My
brain
hurts....

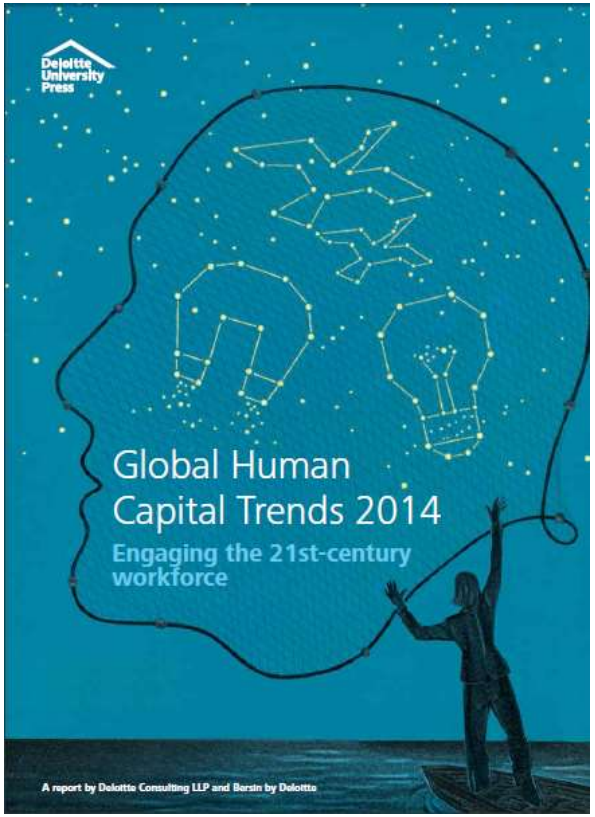
Future of Business
Implications of Emerging Trends & Issues

Adaptive
Experiences

Intelligent
Assistants

The Overwhelmed Life

Signal to Watch: The Overwhelmed Employee



*Meet "**the overwhelmed employee**" — dealing with the flood of information, text messages, tweets, emails, meetings, and conference calls every day.*

People check their phones almost 150 times a day, which causes distraction, stress, and general reduction in productivity.

*Research shows that the average office worker can only focus for seven minutes at a time before they either switch windows or check Facebook! (*Neurologist Larry Rosen)*

- Deloitte 2014 Human Capital Trends Study

Stress in America™

AMERICAN PSYCHOLOGICAL ASSOCIATION

- Teens report that their stress level during the school year (5.8/10) far exceeds what they believe to be a healthy level of stress (3.9/10)

.

- 42 percent of teens say that they're either not doing enough to manage their stress or they're not sure if they're doing enough.

Assumption:
The Overwhelmed Student (& Teacher) becomes a public health issue

By 2020, students & employees will seek non-traditional solutions to overcome mental wellness challenges

Intentional, accepting and non-judgmental focus

Mindfulness:

Presence

State of active, open attention on the present. Observing your thoughts and feelings from a distance, without judging them good or bad. (Psychology Today)

The 'Business Case' Mindfulness

… may help:

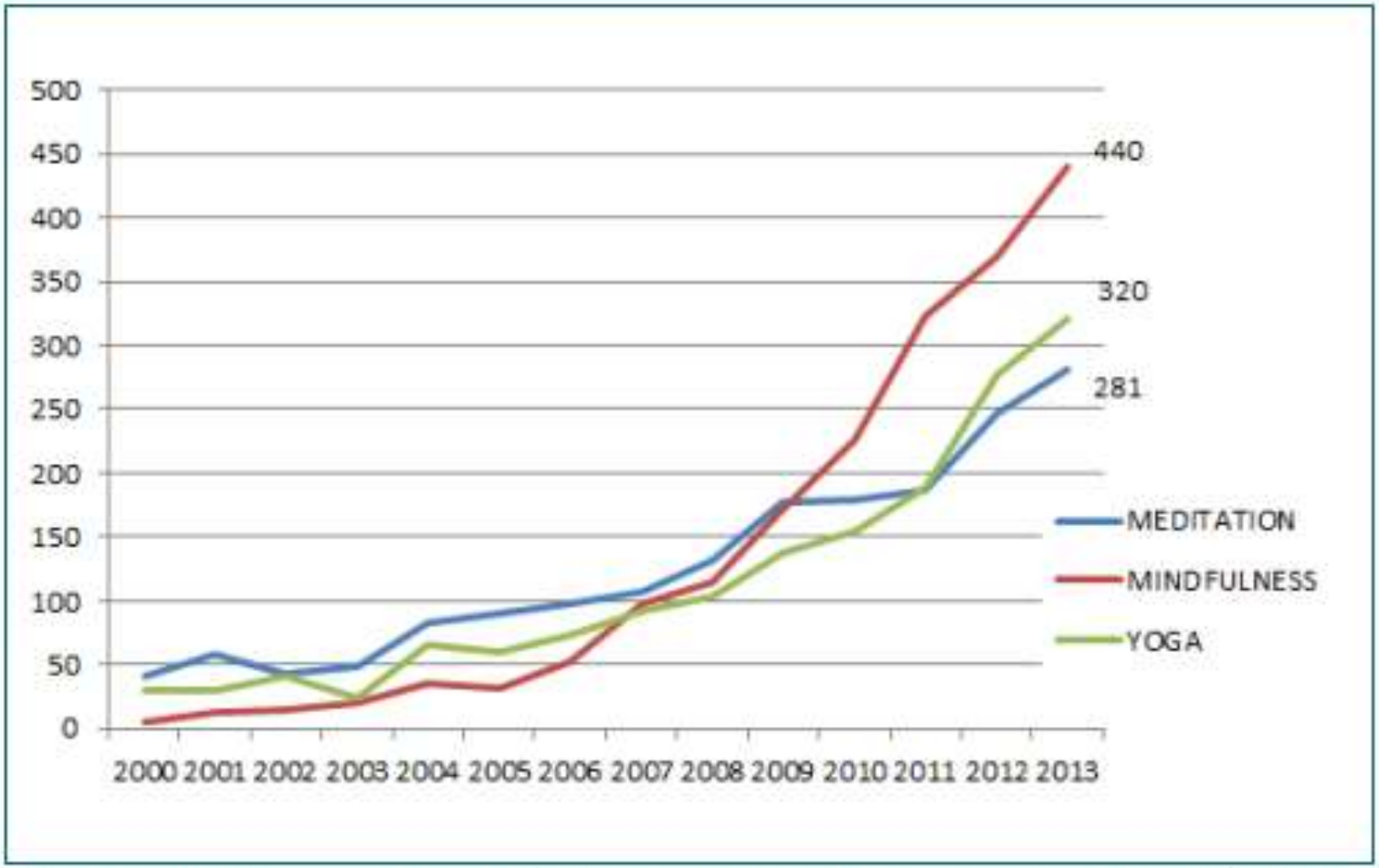
- ❑ Notice when a decision should or could be made; See ethical challenges
- ❑ Increase goal awareness
- ❑ Gathering information and insights; Facilitate option generation
- ❑ More Open to Feedback & Collaboration

INSEAD
The Business School for the World®

SMU
SINGAPORE MANAGEMENT UNIVERSITY

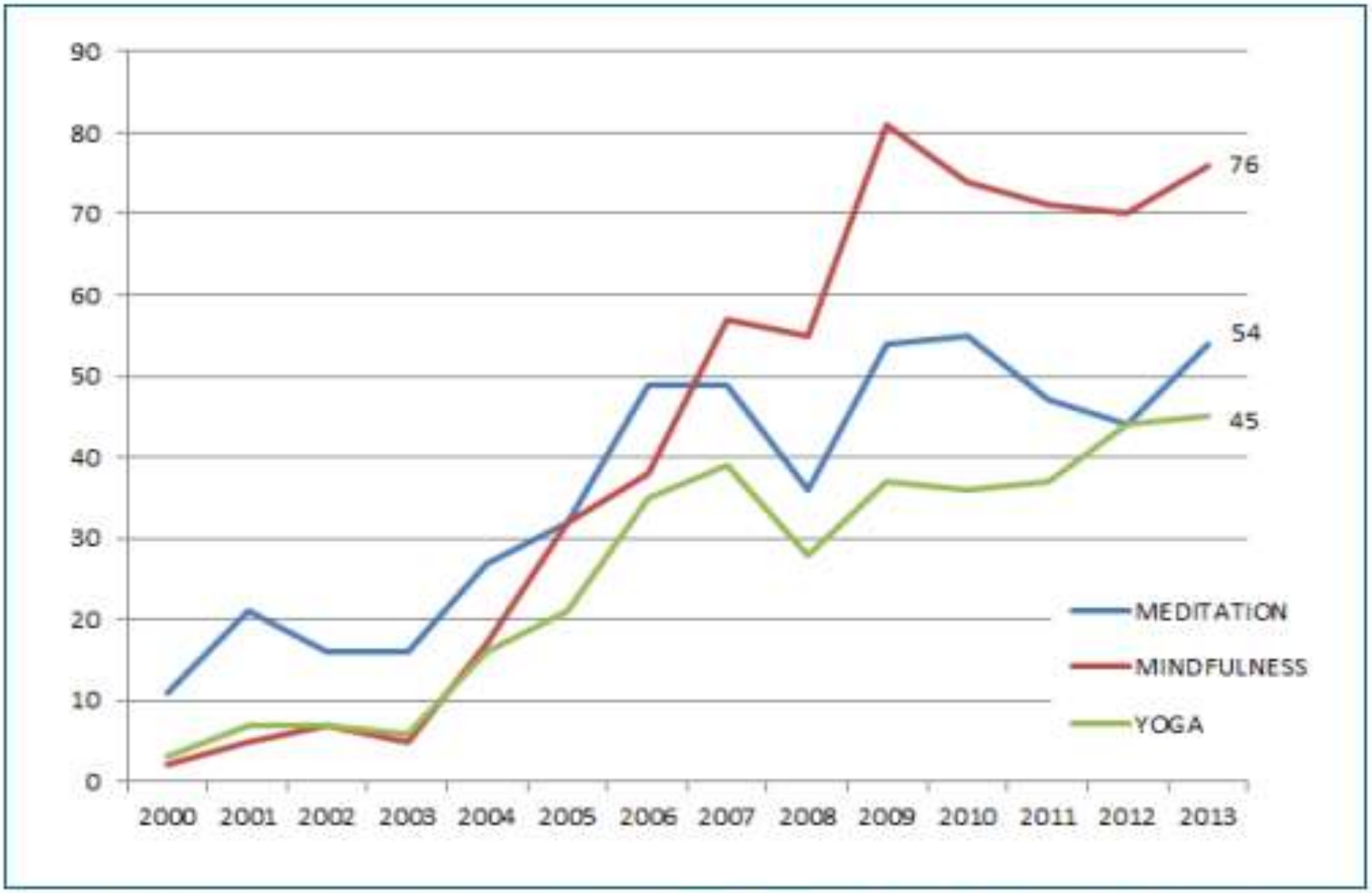
Natalia Karelaia Jochen Reb

Research Case for Mindfulness, Contemplation & Meditation



The graph above represents the number of peer-reviewed publications as referenced by PubMed (through 2013). PubMed is a division of the US National Library of Medicine and the National Institute of Health.

Research Case for Mindfulness, Contemplation & Meditation



The graph above represents the number of grants awarded by the NIH through 2013 based on the RePORTER database. RePORTER indexes data and analyses of NIH research activities.

The Goldie Hawn Effect

The HAWN FOUNDATION

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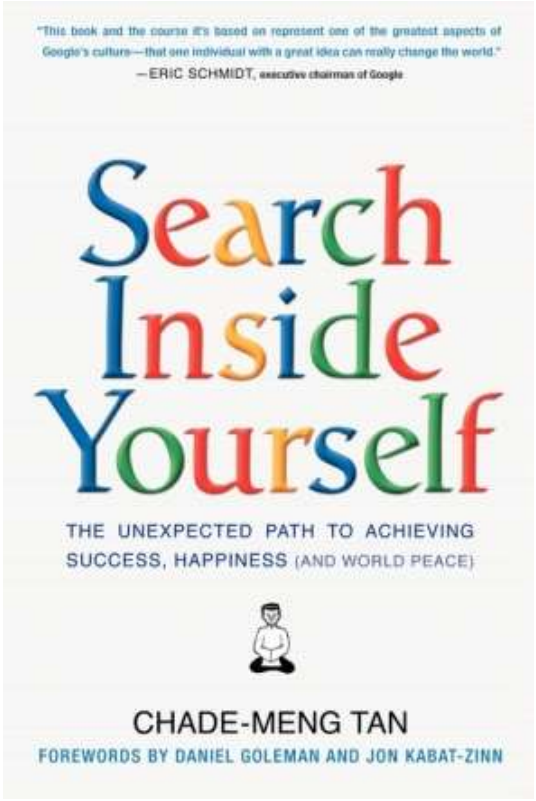
CREATING A WORLD WHERE CHILDREN THRIVE

MINDUP

MindUP™ is the evidenced based, CASEL accredited social and emotional literacy program of The Hawn Foundation built upon neuroscience, positive psychology, mindful awareness training and optimism. With an implementation model designed for sustainable success that includes a five point plan, the MindUP™ tools and strategies increase focus, improve academics and create happiness and resiliency in children throughout six countries and growing everyday.

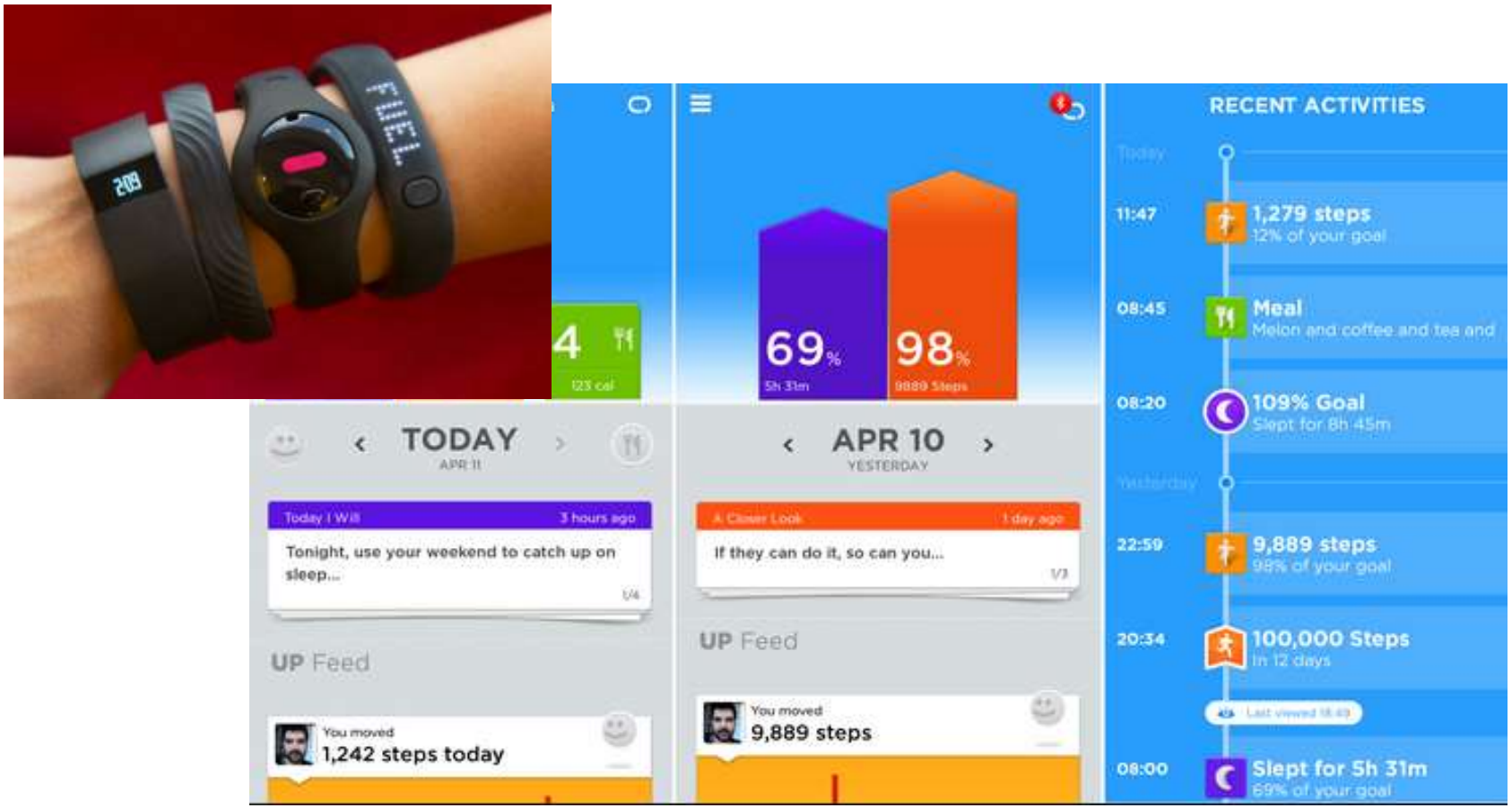
Strategy: Internal Champions
Does our company have or need visible champions?

SEARCH
INSIDE
YOURSELF
LEADERSHIP INSTITUTE



Strategy: Bring the ‘Quantified Self’ Culture to Work

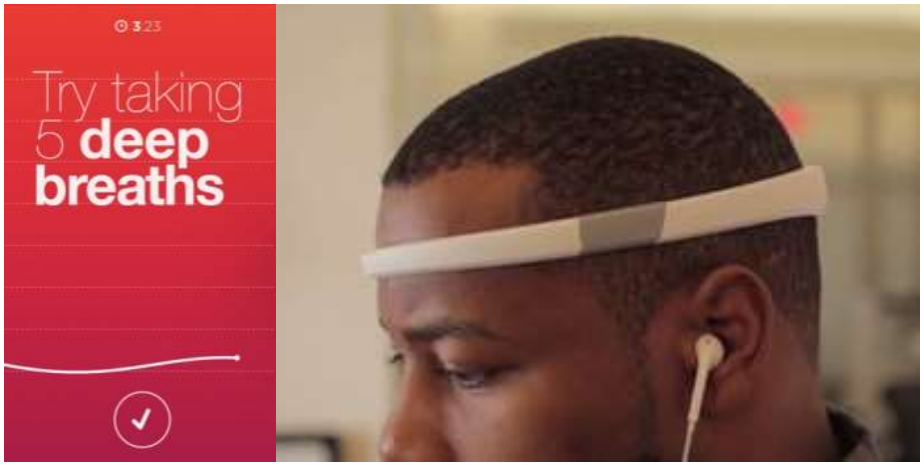
Start with Awareness of Physical State (then the Mind)



BuzzFeed

March 23, 2017

Bloomsburg University
Voted America's
Most Focused Student culture



Bloomsburg University provides all students & teachers with neuro hardware;
Mindfulness training across campus community = Happier students

Our Role? Where to Begin?

- ❑ **Pulse Check to Assess Baseline**
  Signs of Overwhelming Conditions
- ❑ **Identify Communities of Practice**
- ❑ **Develop Spectrum of Techniques**
  (Raisins, Dancing/Tango, Silence Game)
  (Neuro-Hardware for Data wonks)
- ❑ **Reach out to Research &**
  Practitioner Community

I don’t like the future…

Every day I make an effort to move toward what I don’t understand.

Yo-Yo Ma

Start

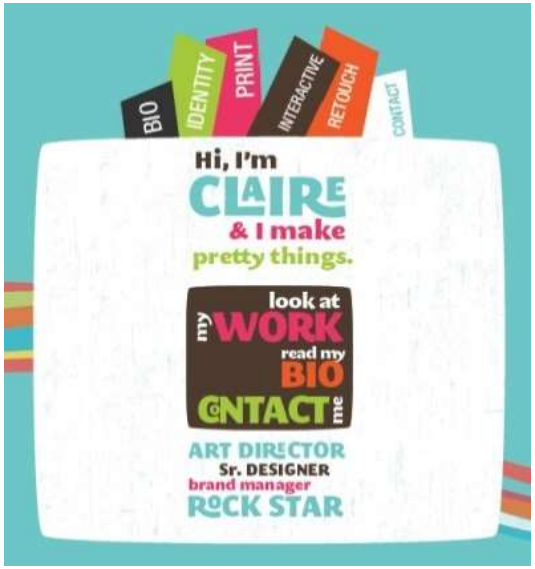
End

Warm up
Foresight 101

Slow Pace
of Fast Change

What to do..?!

Integrate Foresight into Your Portfolio + Online Presence



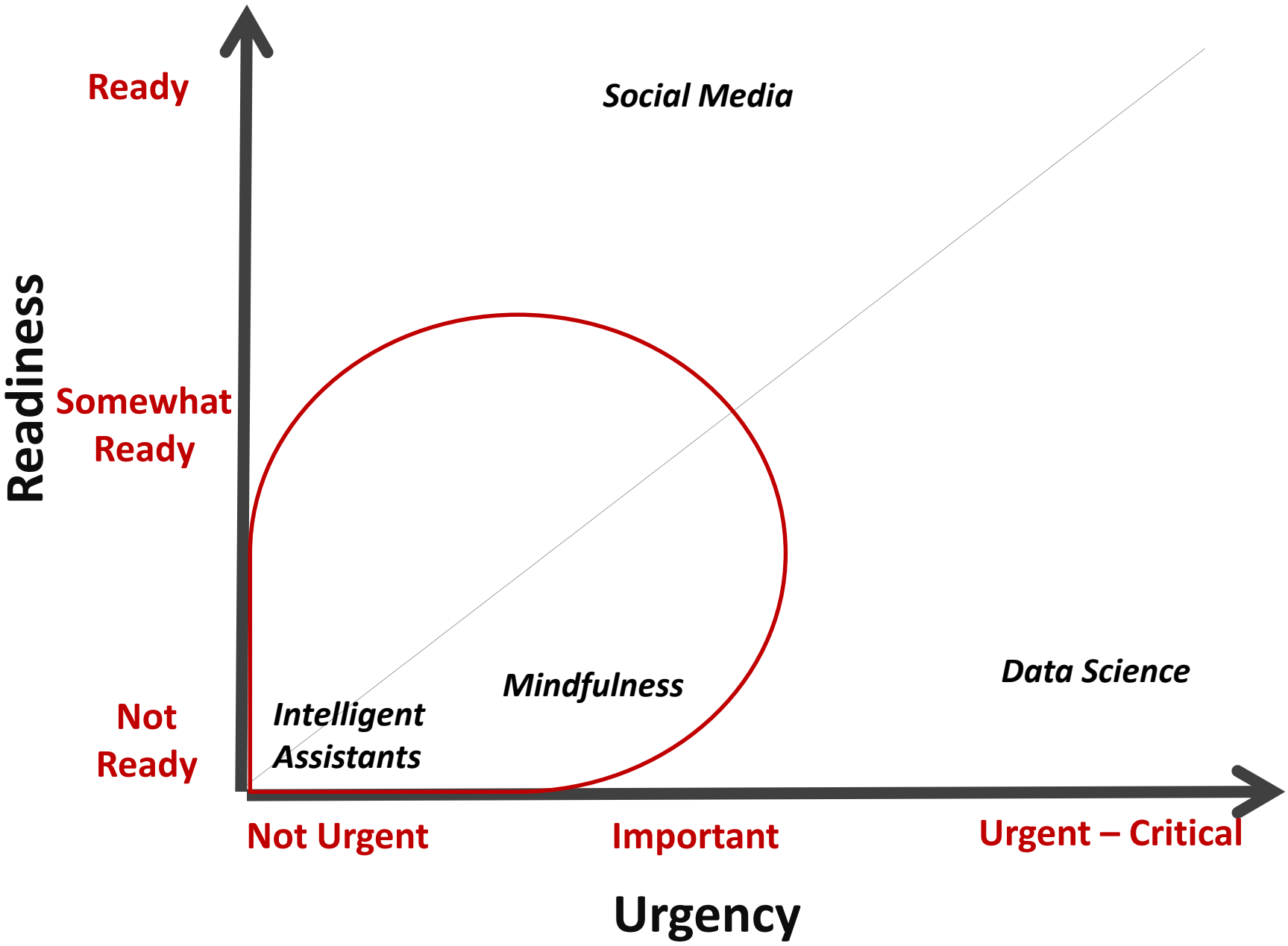
Resume → **Portfolio** → **Presence**

Follow Communities Who Aim to Disrupt the Future

- ❑ Data-Analytics
  [Graph Databases]
- ❑ Design Thinking
- ❑ Active Aging
- ❑ Neuroscience
- ❑ Behavior Change
- ❑ Early Childhood
- ❑ Blockchain DApps
- ❑ Civicware Tech
- ❑ Philanthropy
  [Social Impact Bonds]
- ❑ ExperienceAPI (xAPI)
  [Learning Performance Analytics]
- ❑ 'Drones for Good'
- ❑ Privacy 2.0
- ❑ Quantified Self

Lurk + Learn (then Contribute)

Trends & Issues Mapped Against Readiness & Urgency



Prepare to Stand at Major Intersections of Social Change

Enabling Capabilites

- ❑ *Data*
- ❑ *Analytics*
- ❑ *User Experience Design*
- ❑ *Adaptive Design*
- ❑ *Behavior Change*
- ❑ *Location Technologies*
- ❑ *Policy*
- ❑ *Civicware*
- ❑ *Regulations*
- ❑ *Energy*
- ❑ *Natural Resources*
- ❑ *Blockchain DApps*
- ❑ *Neuroscience*
- ❑ *Robotics*

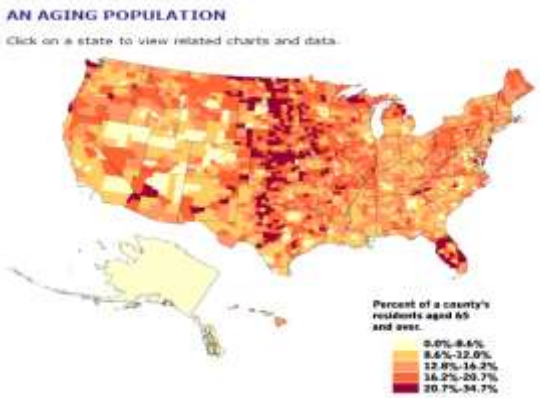
Markets (People, Places, Sectors)

- ❑ *Aging Demographics*
- ❑ *Millennial Family Formation*
- ❑ *Youth Culture*
- ❑ *Small Town – Rural Life*
- ❑ *Cities*
- ❑ *Health-Wellness*
- ❑ *Food*
- ❑ *Textiles – Clothing*
- ❑ *Manufacturing*
- ❑ *Insurance*
- ❑ *Transportation–Mobility*
- ❑ *Education – Training*
- ❑ *Marketing*
- ❑ *Government*

Intersections of

Aging

Baby Boomers



+

Aging in Place

(Internet of Things + Health + Security)

Active Aging

(Mobility + Wellness + Learning)

Intersections of

Millennial Families

+

Childcare Solutions

‘Sharing + On-demand Workforce

Housing

Recreation – Leisure

(Mobility + Wellness + Learning)

Intersections of

Small Towns

+ Rural Life

Farming 2.0

(Data-Analytics + Autonomous)

Small Business +

Workforce Development

(Telepresence Training + Digital Infrastructure)

Intersections of

Urban Lifestyles

Food

(Supply Chains + Wellness + Retail)

Manufacturing

(Design + 3D Printing + Retail)

Intersections of

Government

Blockchain - Crypto

(Regulations + Tax Collection + Voting)

Outcomes-based

Social Services

(Adaptive Design + Experience Design)

Sessions

Signals on Horizon

Scanning for Change

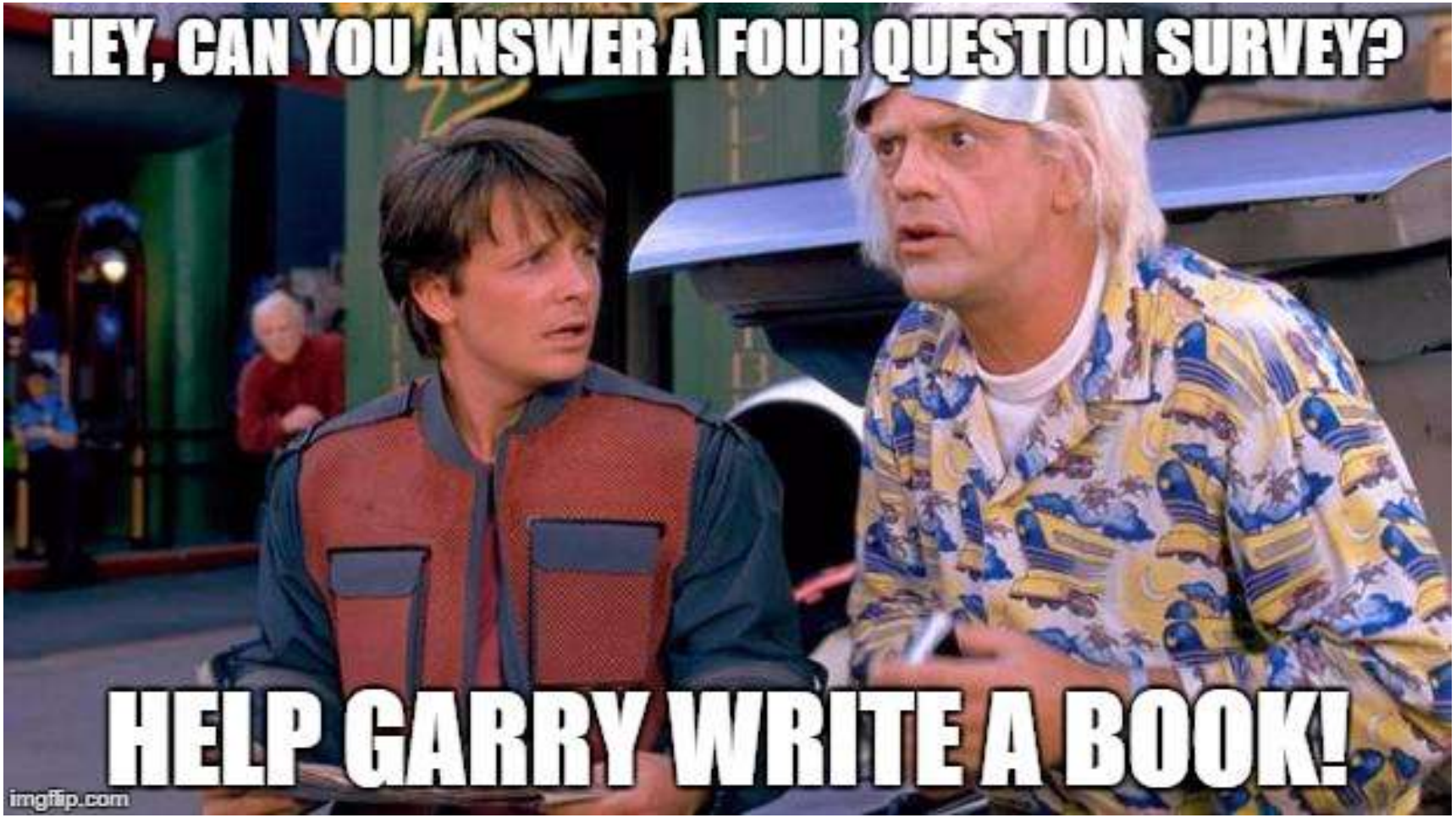
Taking Mental Leaps

Creating Headlines

Futures Wheel

Garry Golden
garrygolden@gmail.com
Two R's

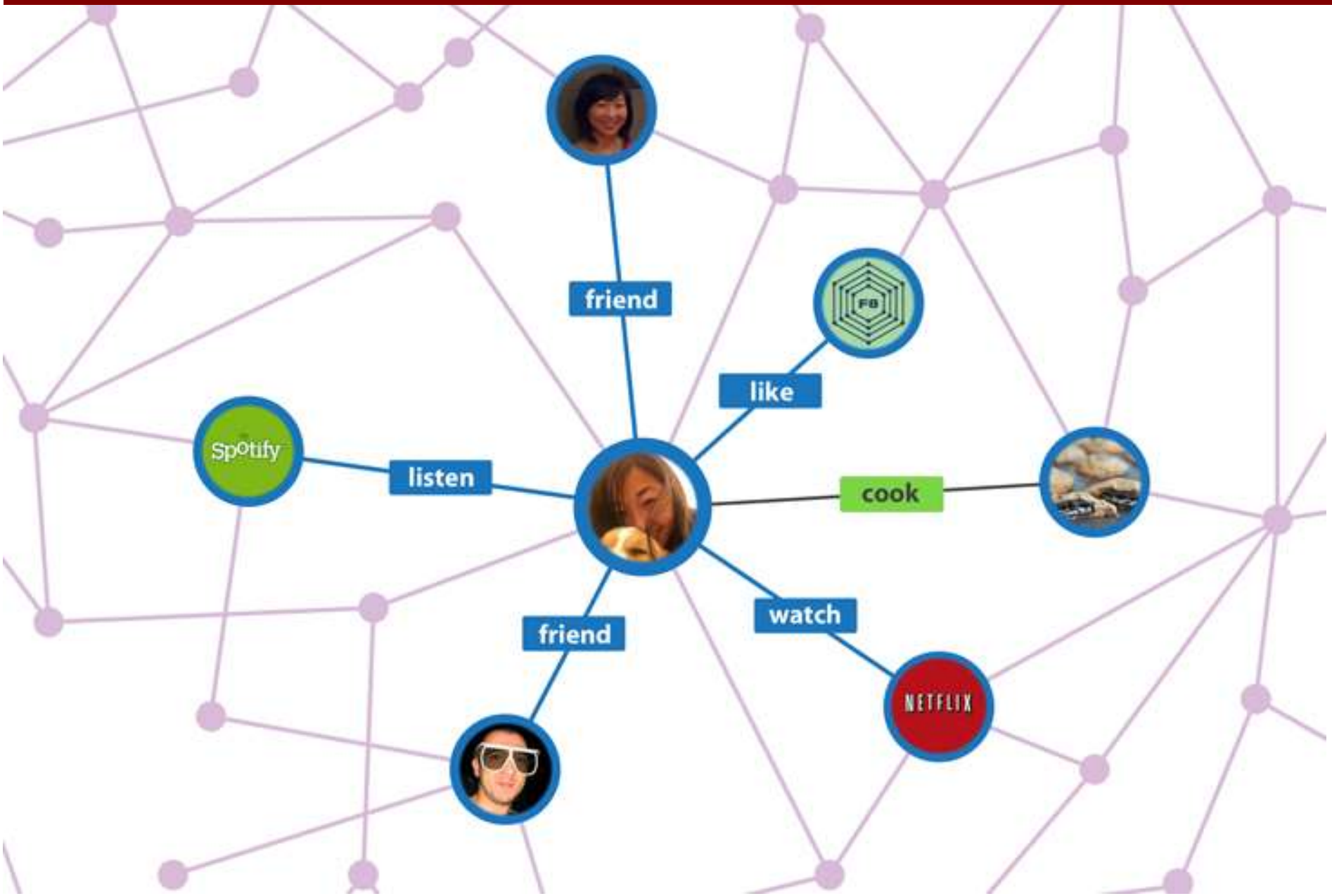
PDF Copy of Presentation
www.garrygolden.com/ZIPD2015



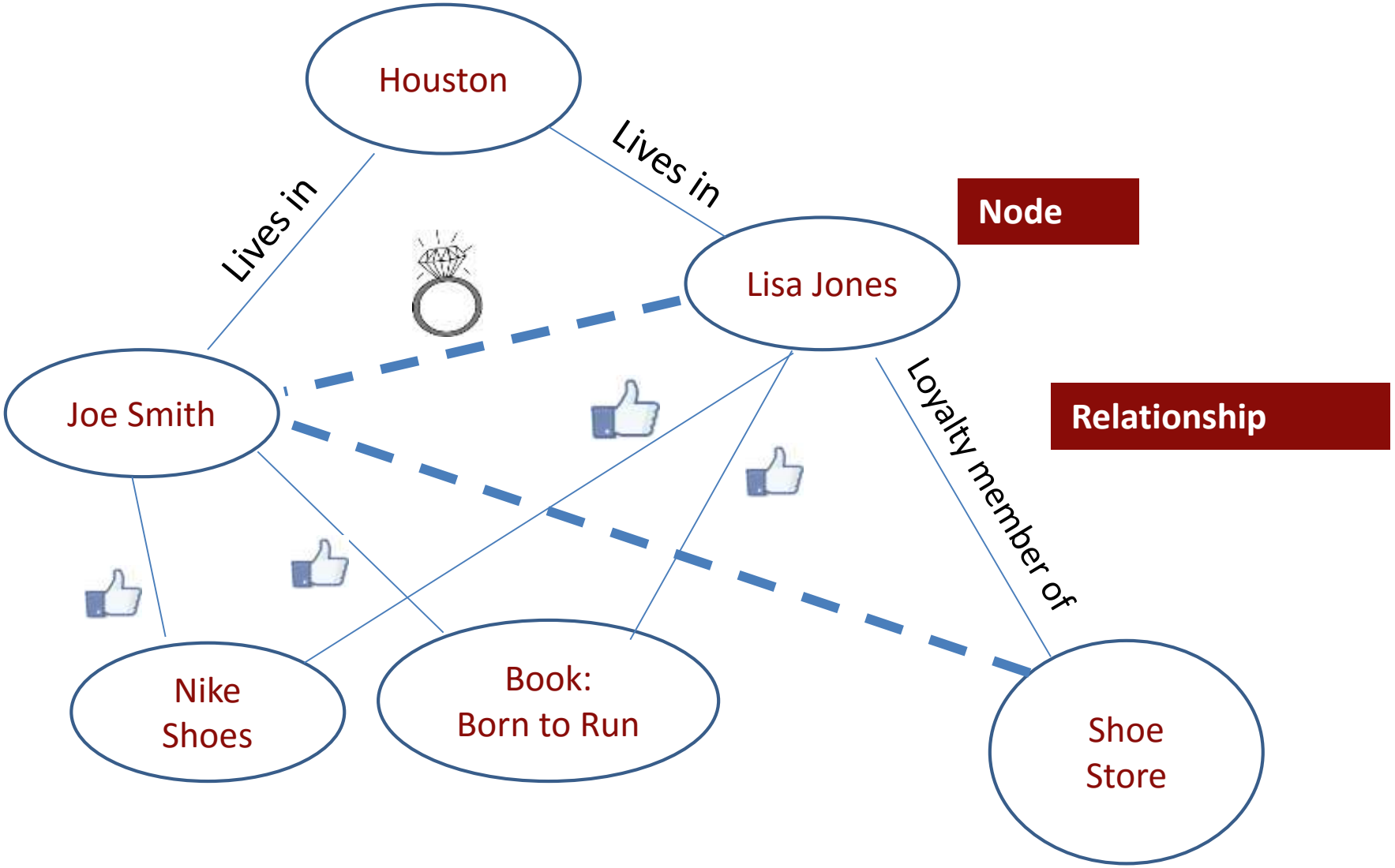
PDF Copy of Presentation + Survey

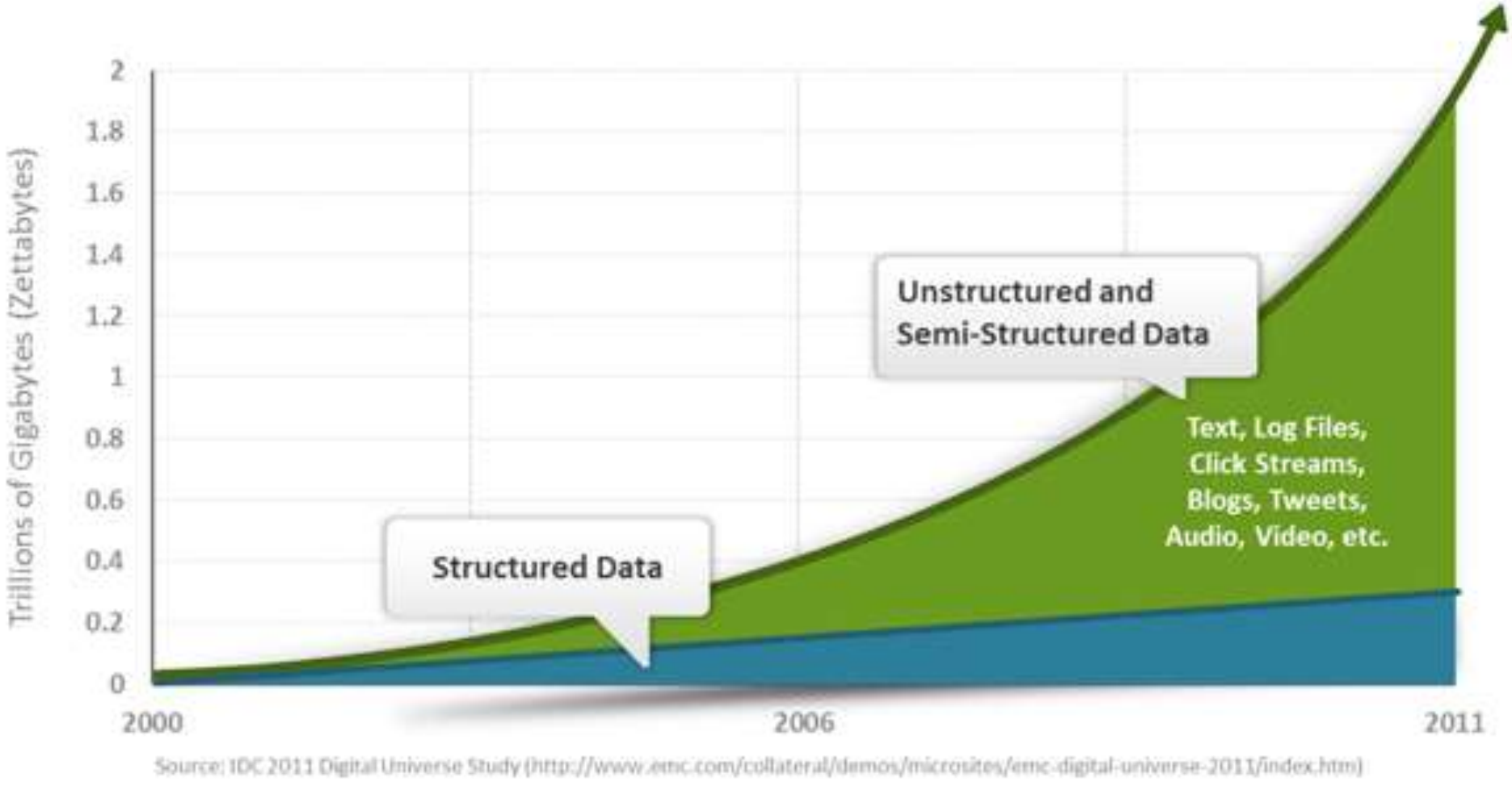
www.garrygolden.com/ZIPD2015

People are not ‘online’ – they are living in a ‘network’



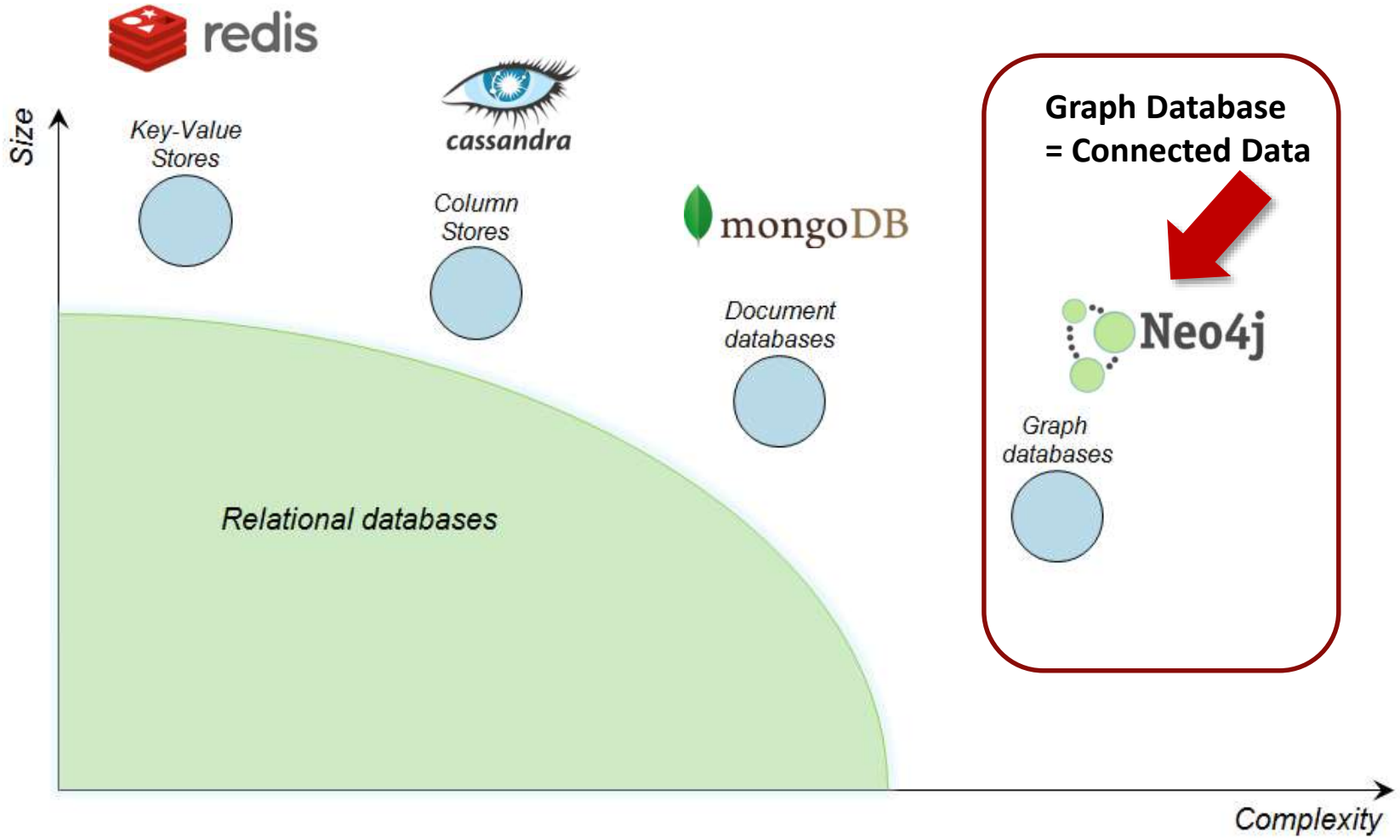
What is happening here?





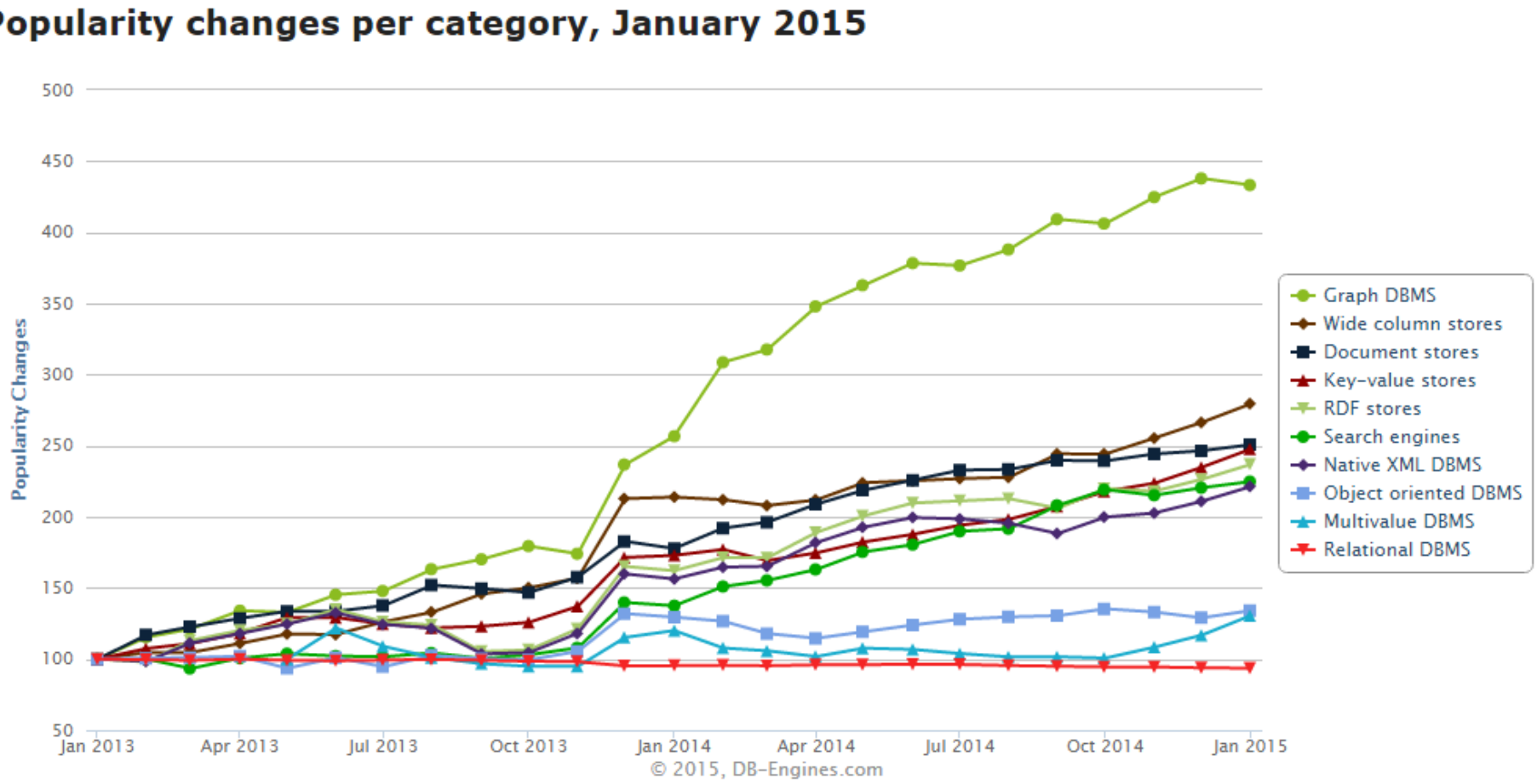
Source: IDC 2011 Digital Universe Study (http://www.emc.com/collateral/demos/microsites/emc-digital-universe-2011/index.htm)

We are moving beyond rows & columns (SQL Tables)

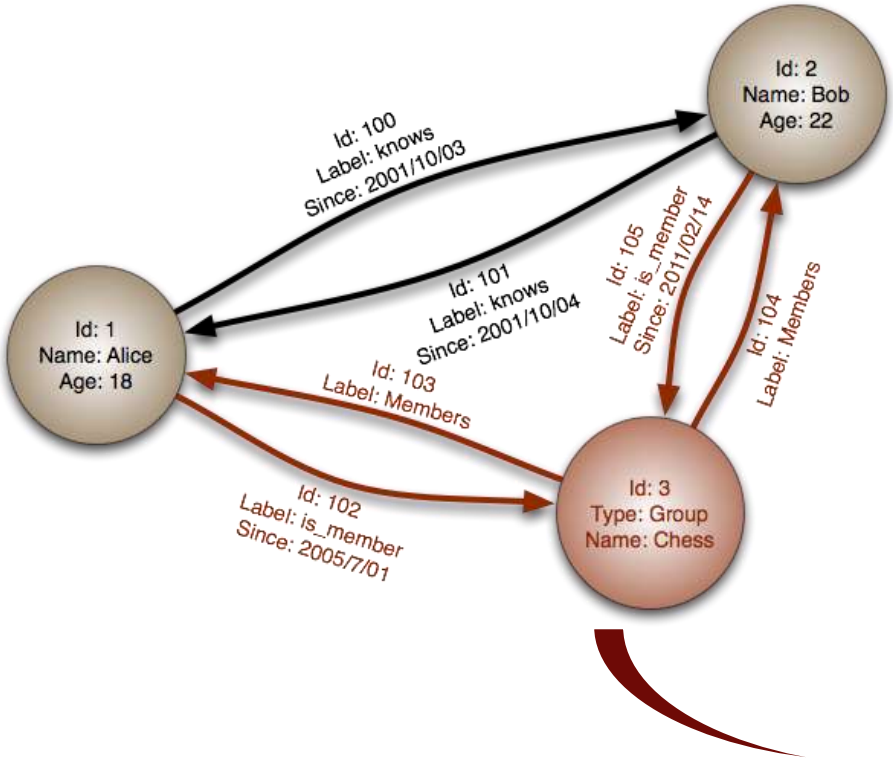


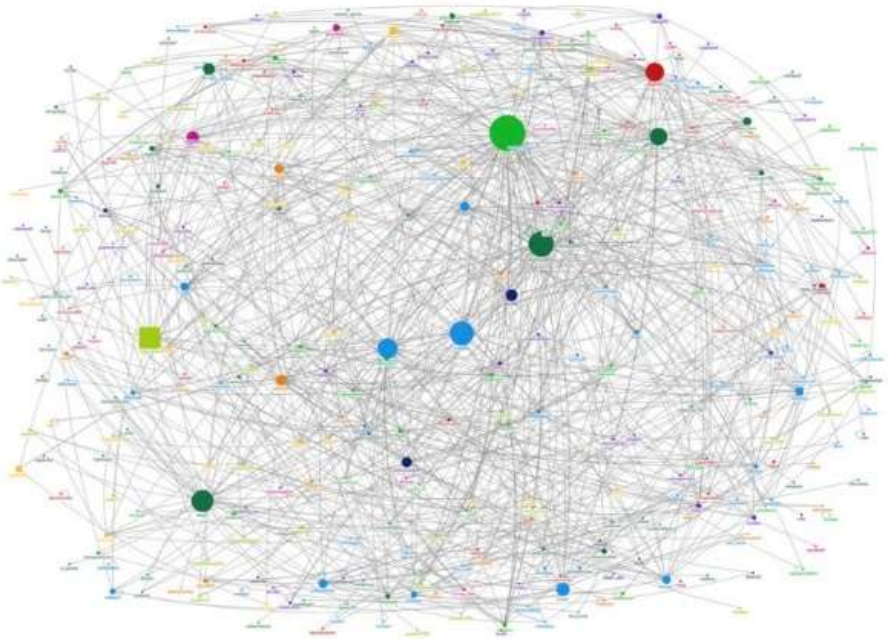
Why is there growing interest in Graph Databases?

Tool makers & Experience Designers Moving to Connected Data



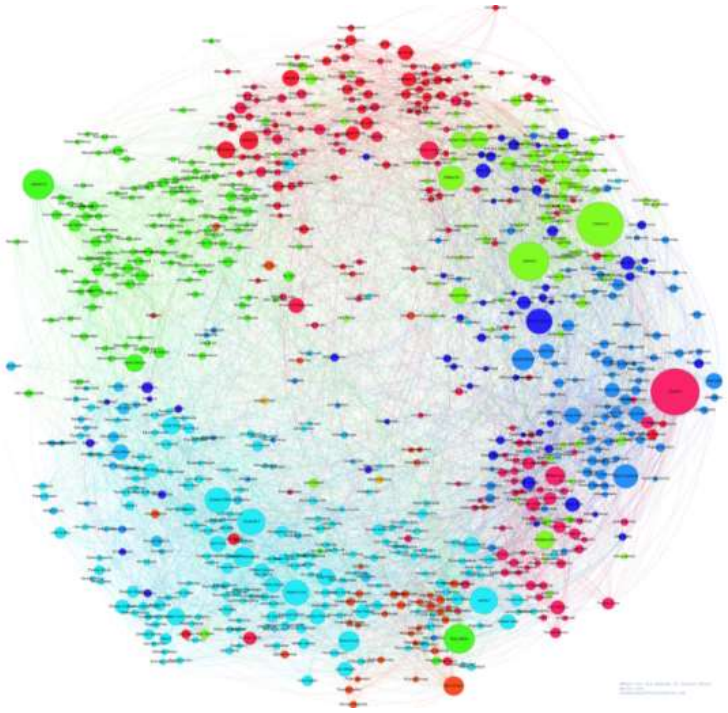
Replace Tables (Rows & Columns) with Relationships

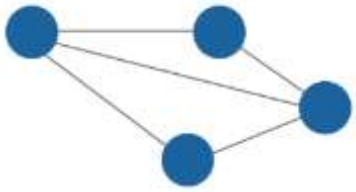




Mirrors the *Real* World to Reveal
Influencer Profiles, Decision Pathways and Recommendations

Industries & Innovators are Connecting Dots





Link Graph Google

Interest Graph match.com Pinterest

Social Graph facebook

Economic Graph LinkedIn

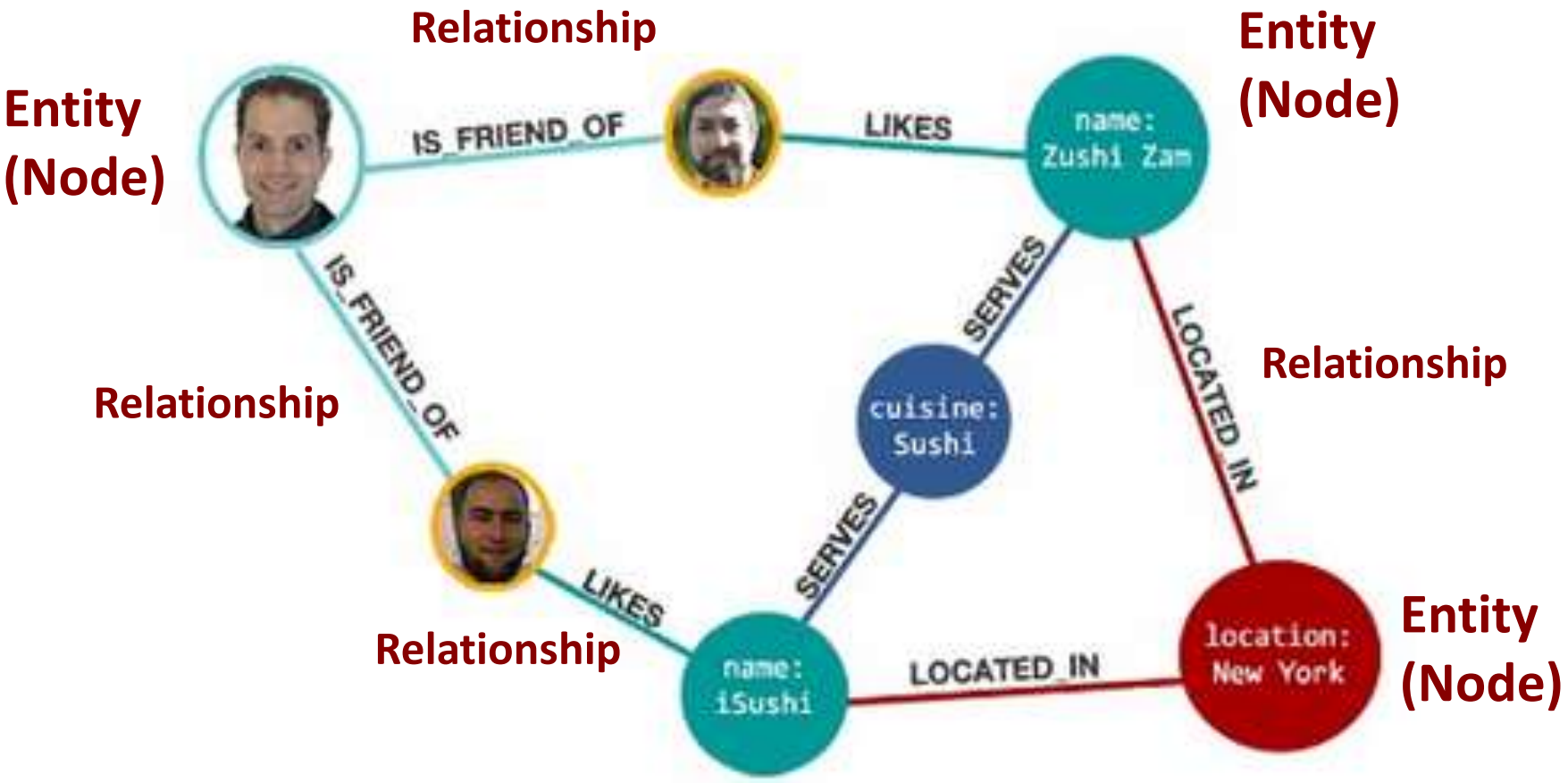
Health Graph ???

Learning Graph EXPERIENCE API

Transportation Graph

(Supply Chains; Logistics)

Graph-Database = Connections are Most Important

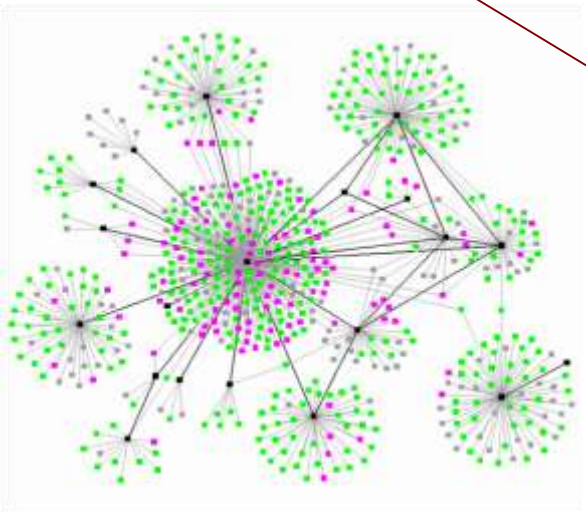


Noah is *Connecting Things on his Learning Graph*

Daddy Loves
Pomegranate

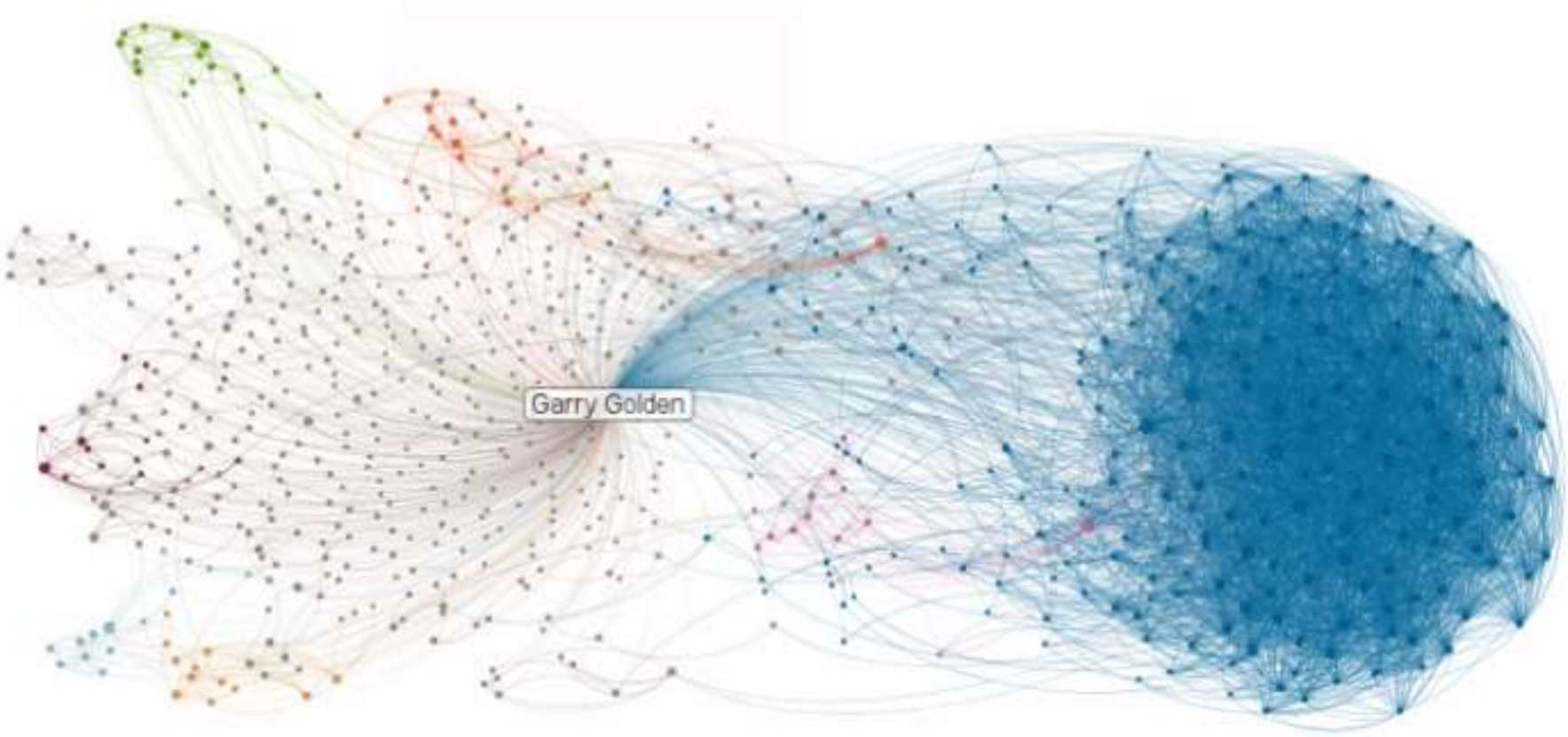
Farmer Videos
How they are grown

Youtube Video
How to Peel?



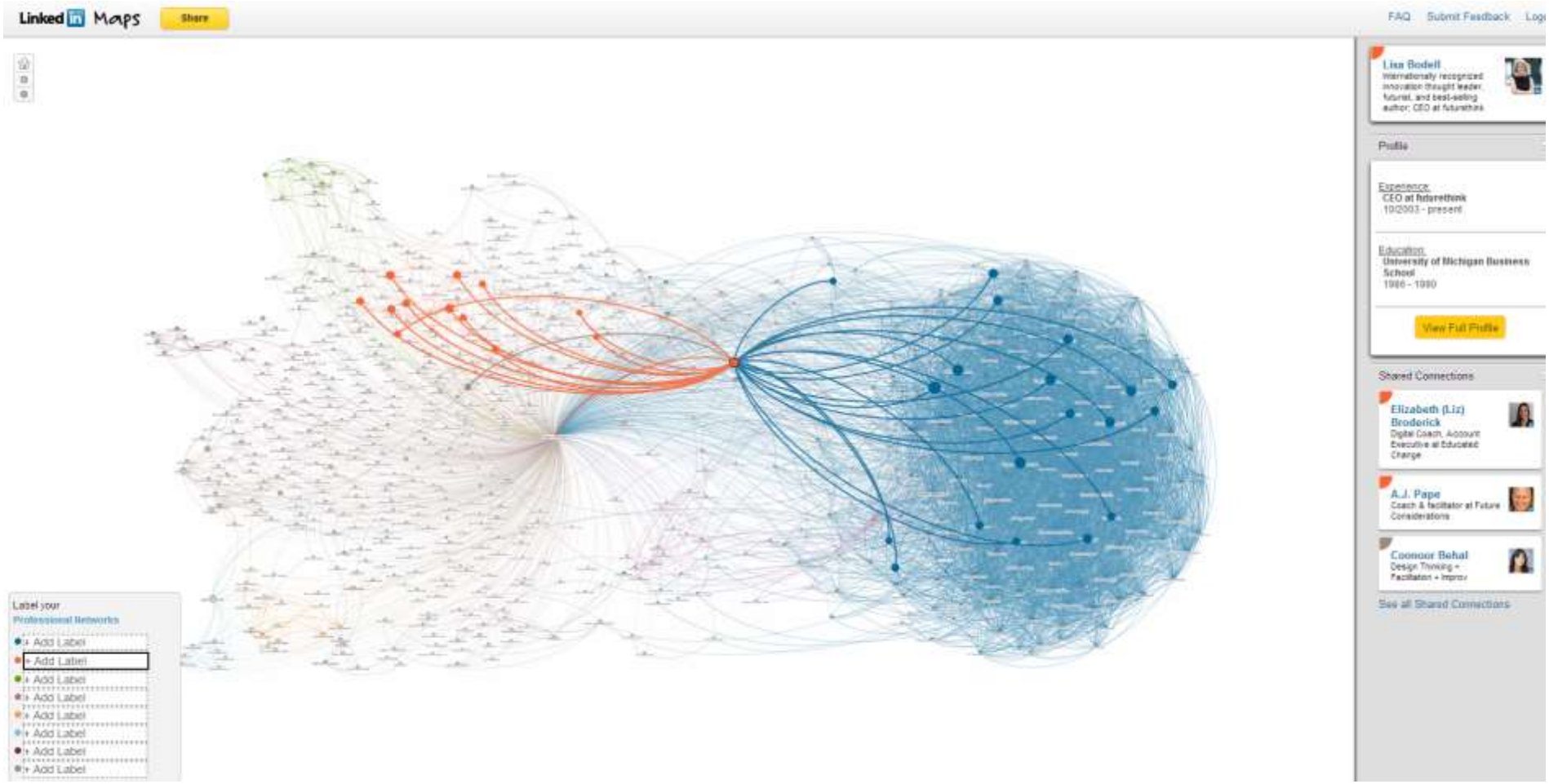
Classroom
Project on Things
that Grow

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

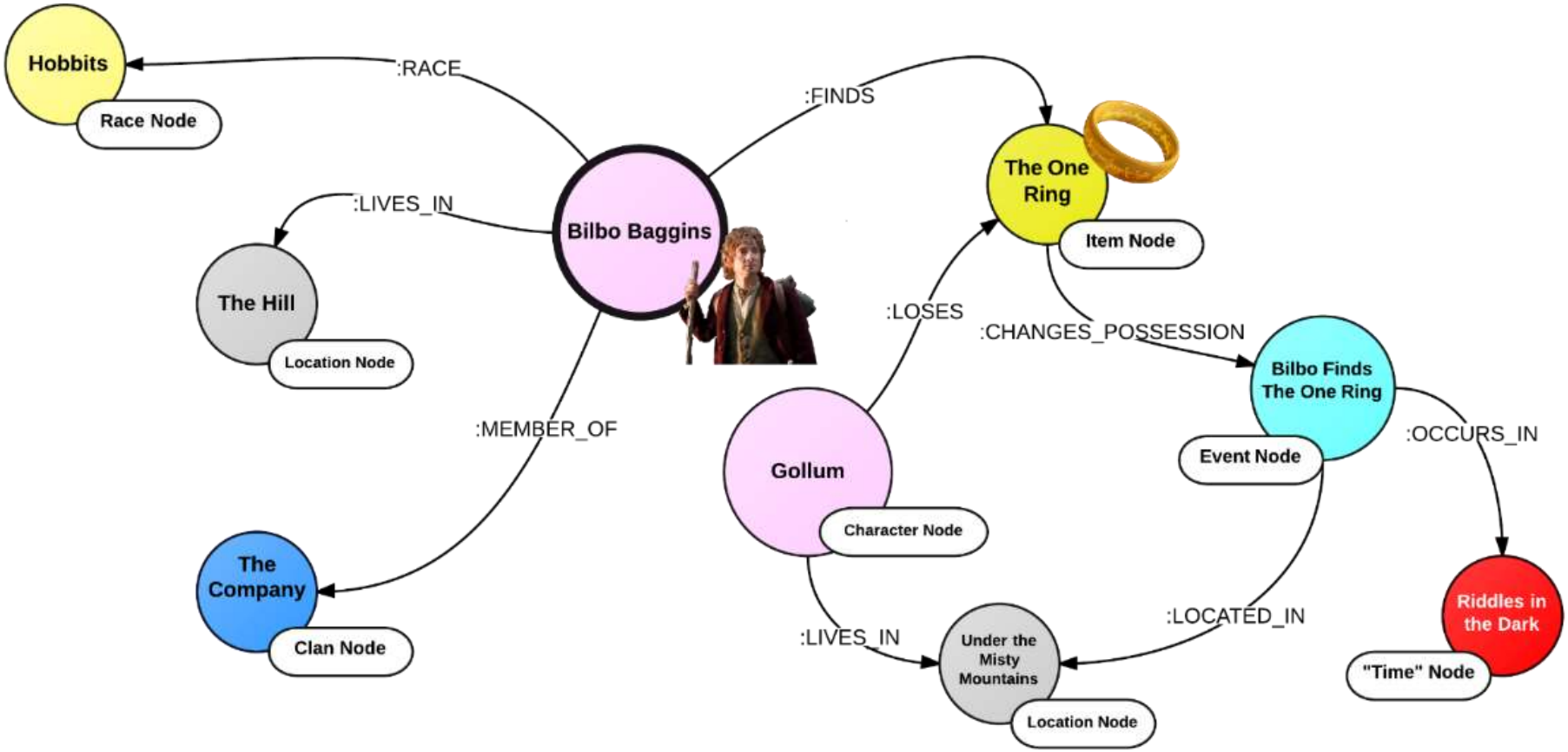


LinkedIn

Garry's Connections via Lisa Bodell



LinkedIn

Learning & Performance Journey Captured in Graph Databases:

Understanding Context of Sharing & Applying Knowledge