Foresight 101

The Art & Science of
Foresight and the Creative Future

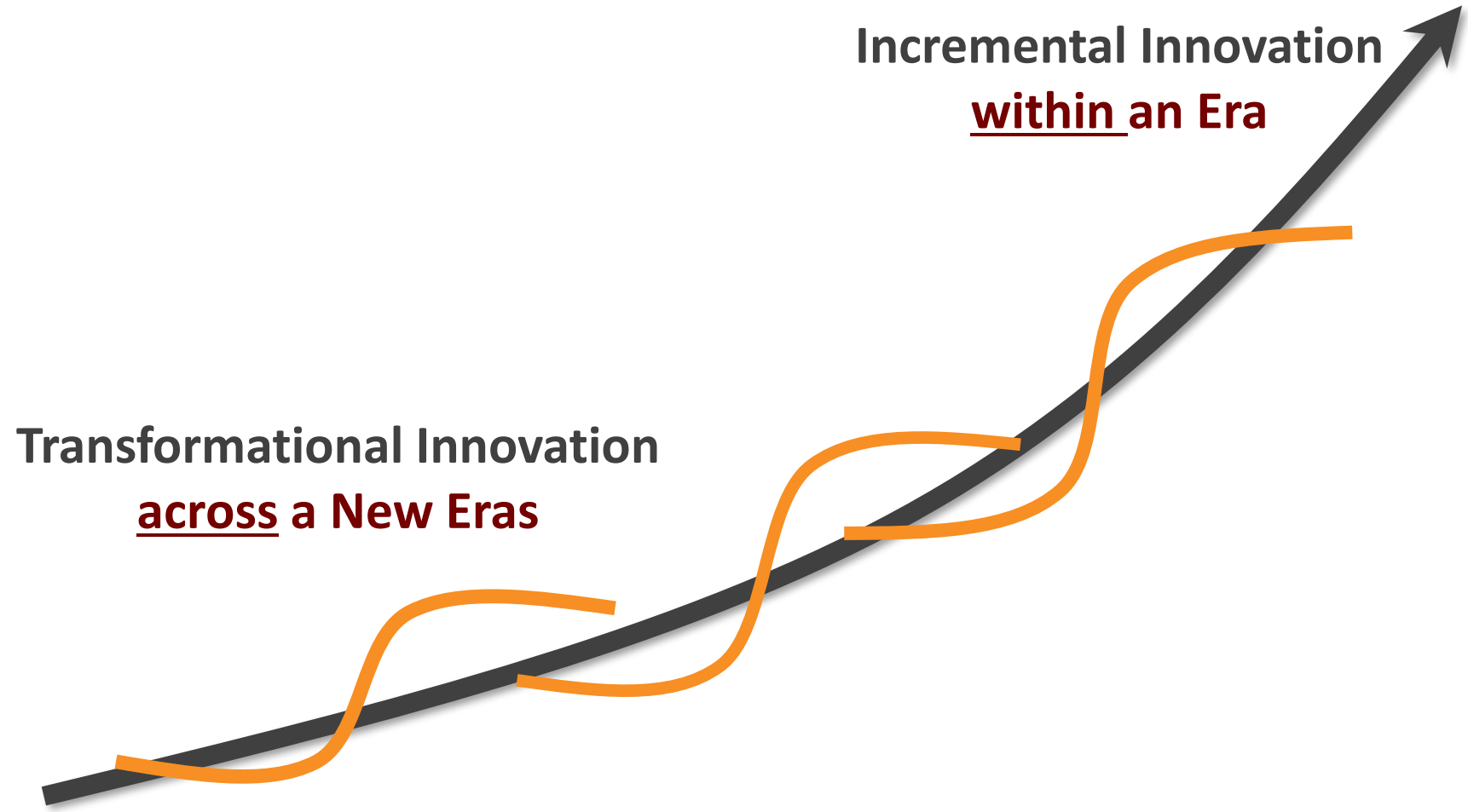
GREY

Garry Golden

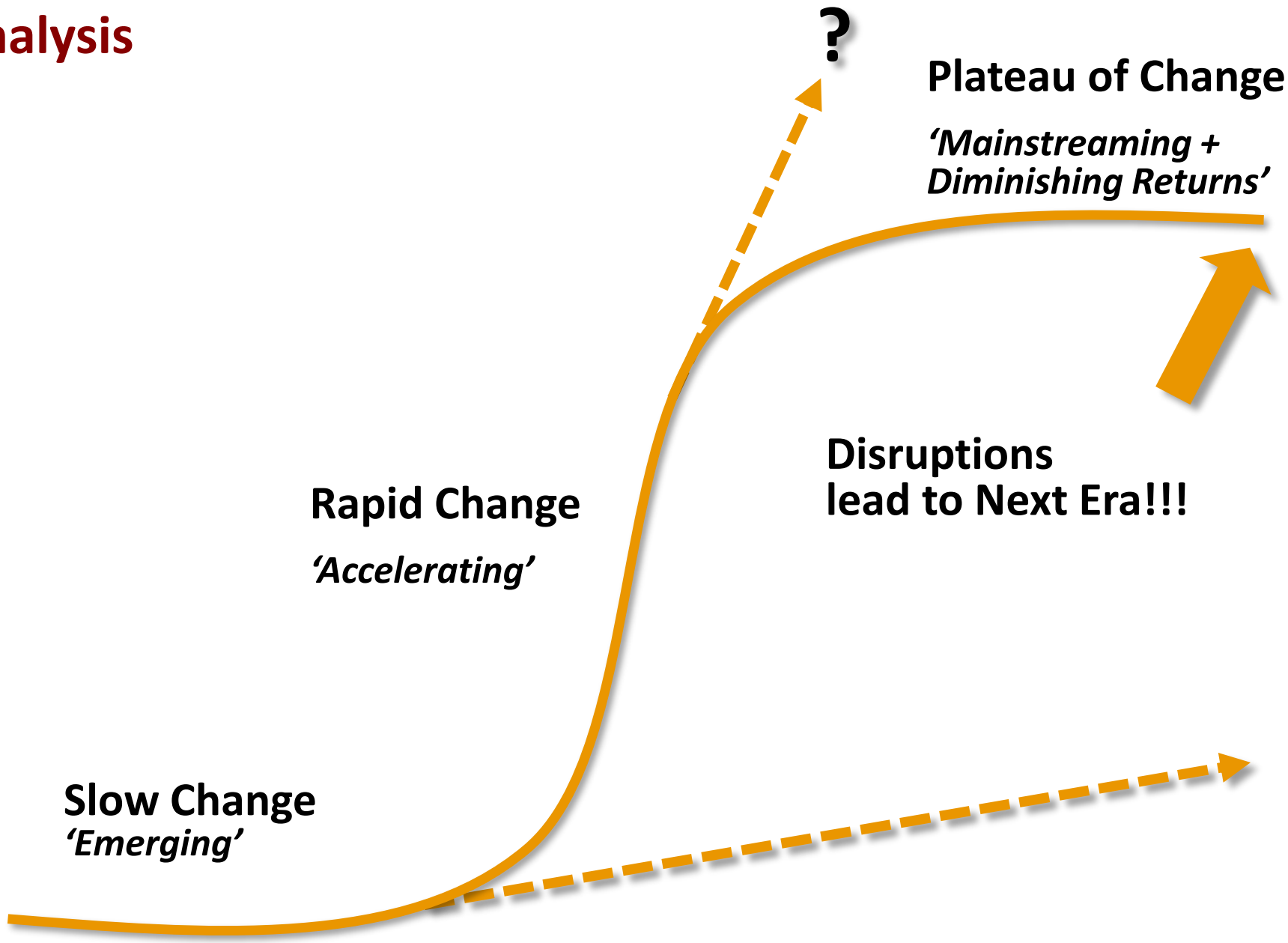
Forward Elements

April 10, 2019

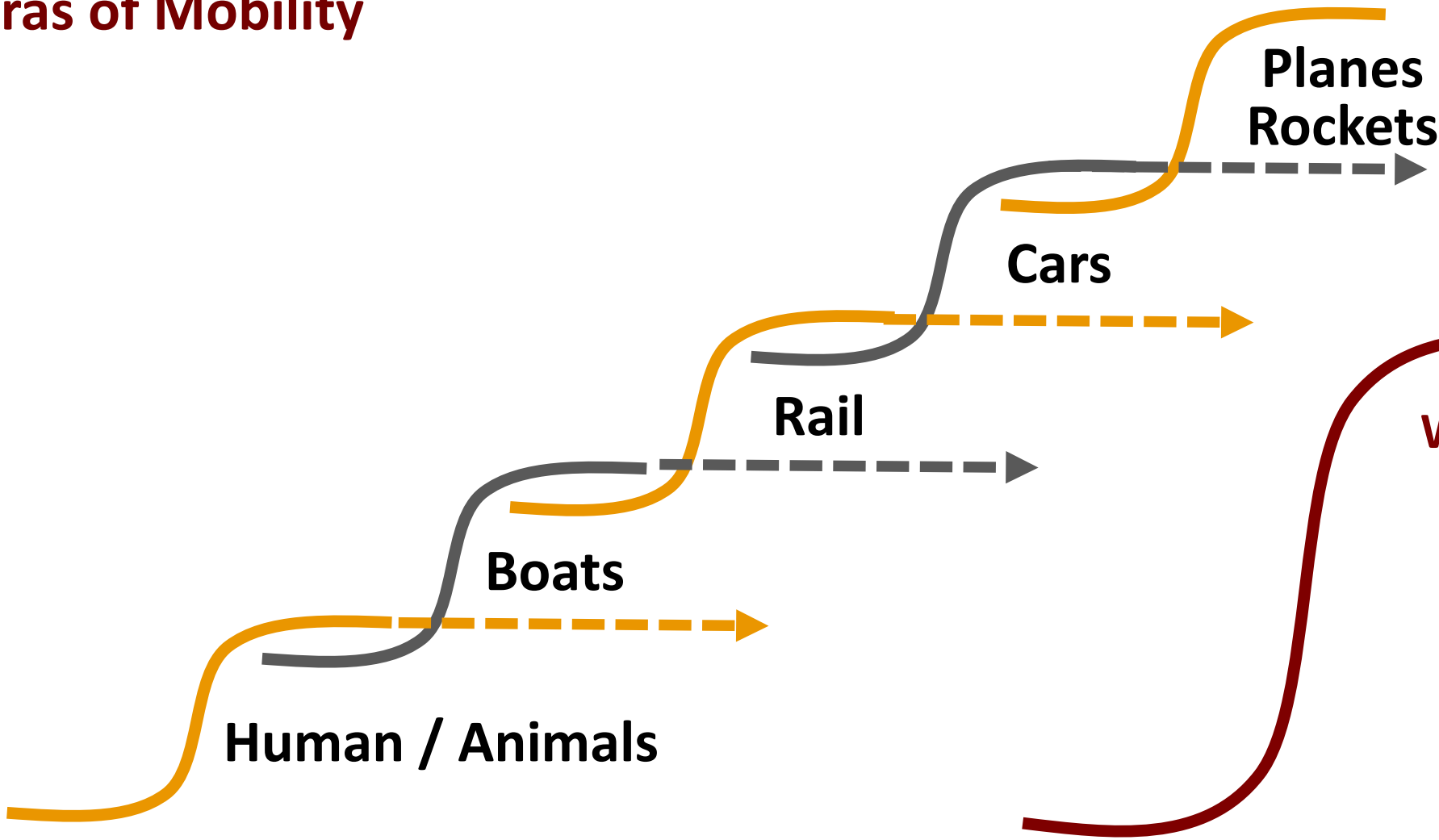
Era-based Growth Strategies



S-Curve Analysis



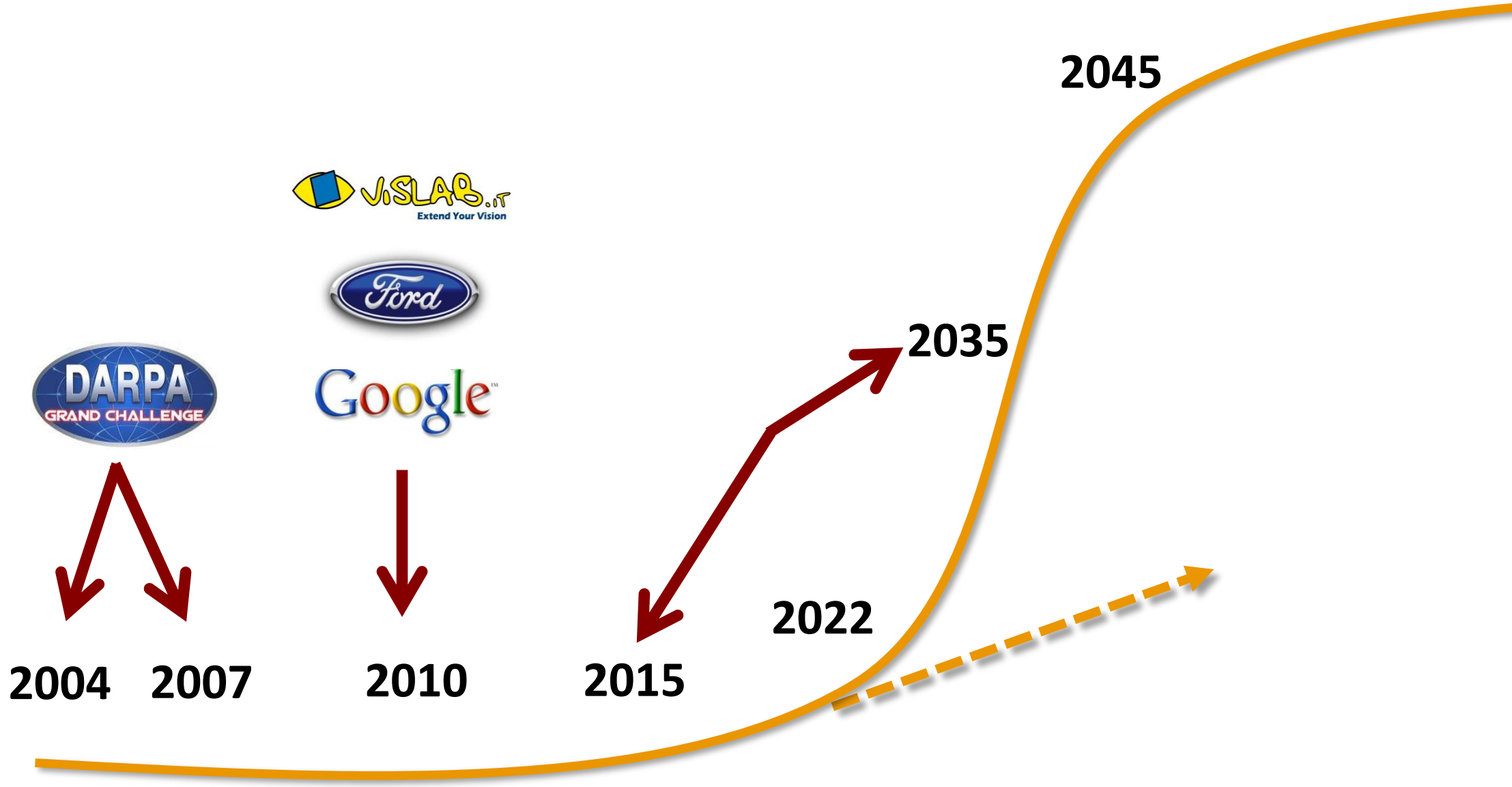
Eras of Mobility



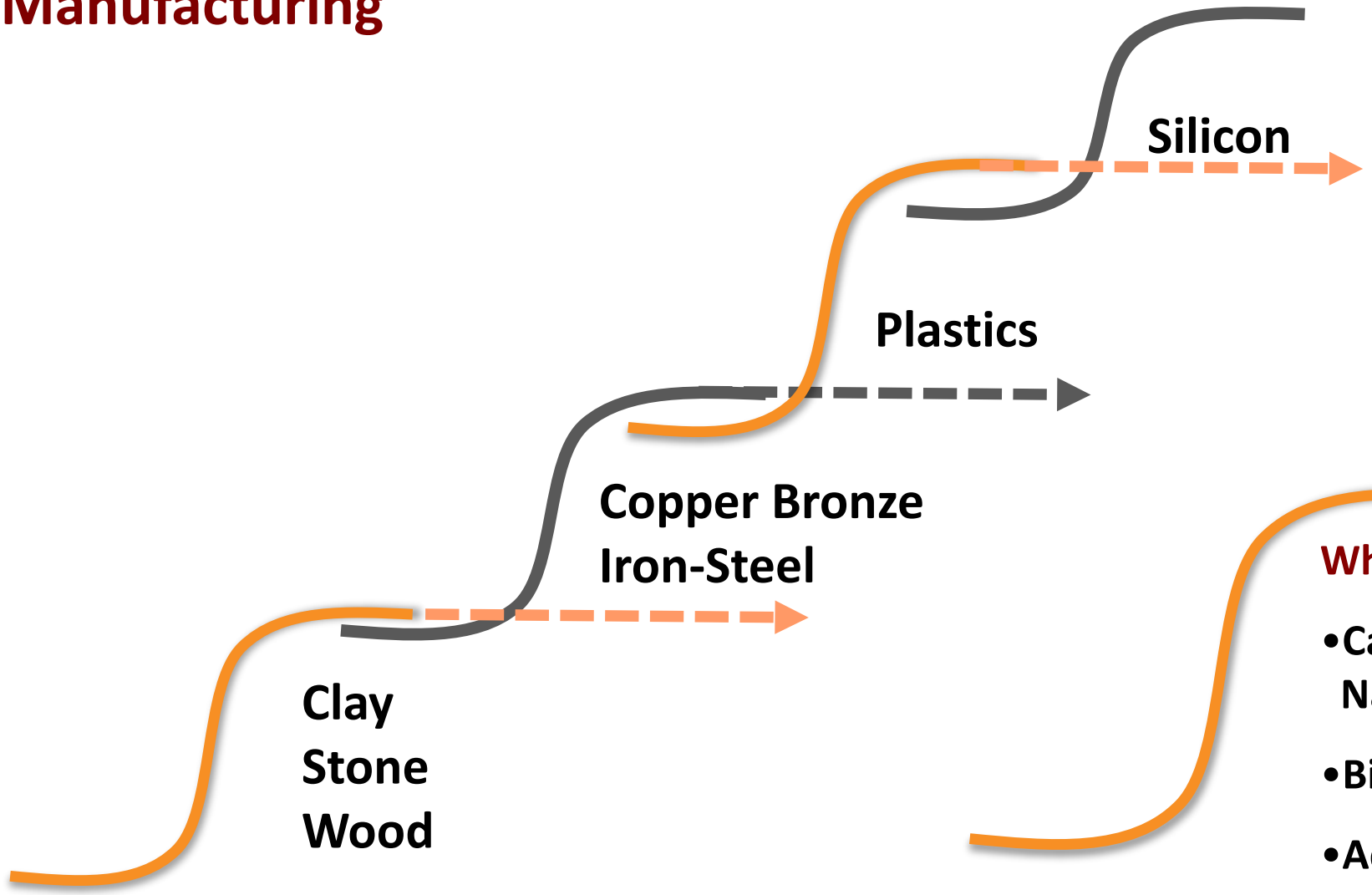
What is next?

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

Monitoring Signals of Change



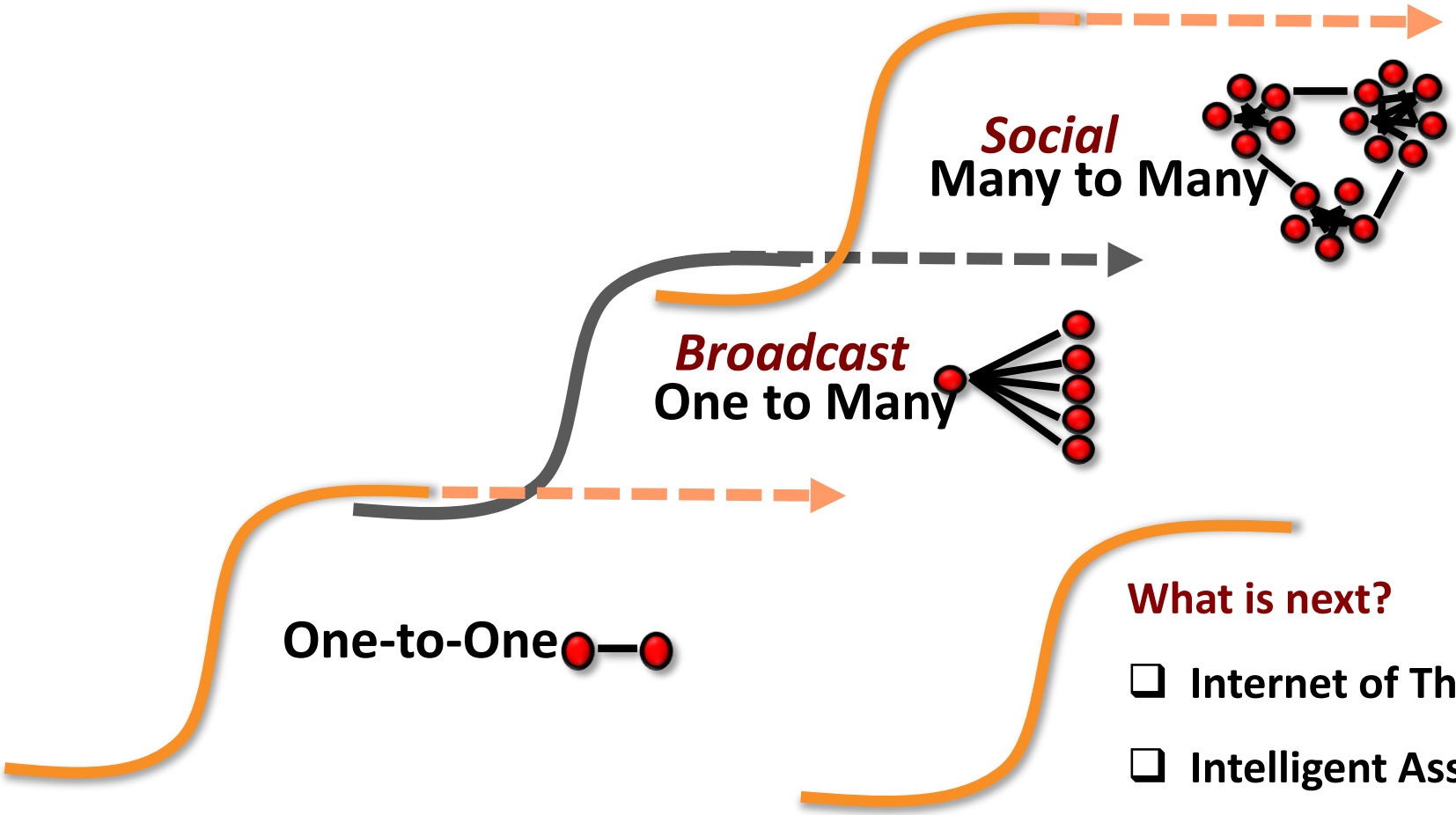
Eras of Manufacturing



What is next?

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

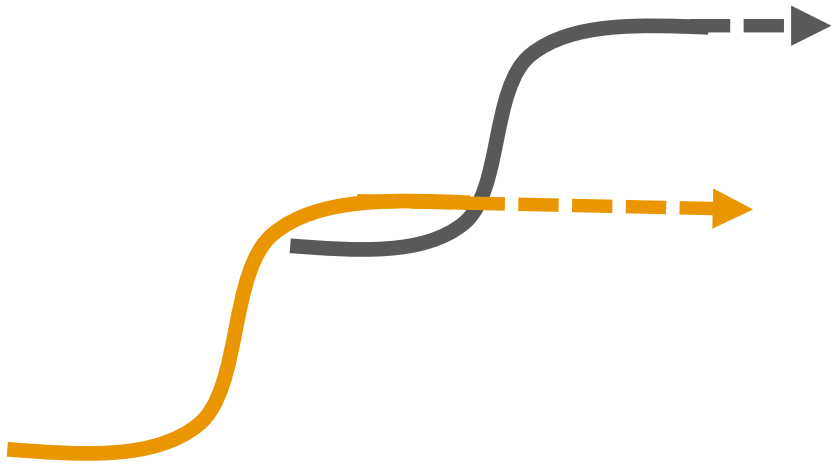
Eras of Media/Communication



What is next?

- ❑ Internet of Things (IoT)
- ❑ Intelligent Assistants

How will companies navigate S-curve transitions for…?



Transportation/Mobility

Convergence – EVs, AVs, TNCs; Empowered Cities

Healthcare / Wellness

Population Health; Outcomes-based Care; Genomics

Agriculture / Farming / Food

Precision Ag; Automation; Urban; Bio-; Small-scale Farming

Retail

Online; Hybrid Brick+Mortar; Localization

Education / Learning

Life stage to Lifelong; AI / Augmented

Media / Communication

Authentication/Verification; AI; IoT; Agents/Assistants

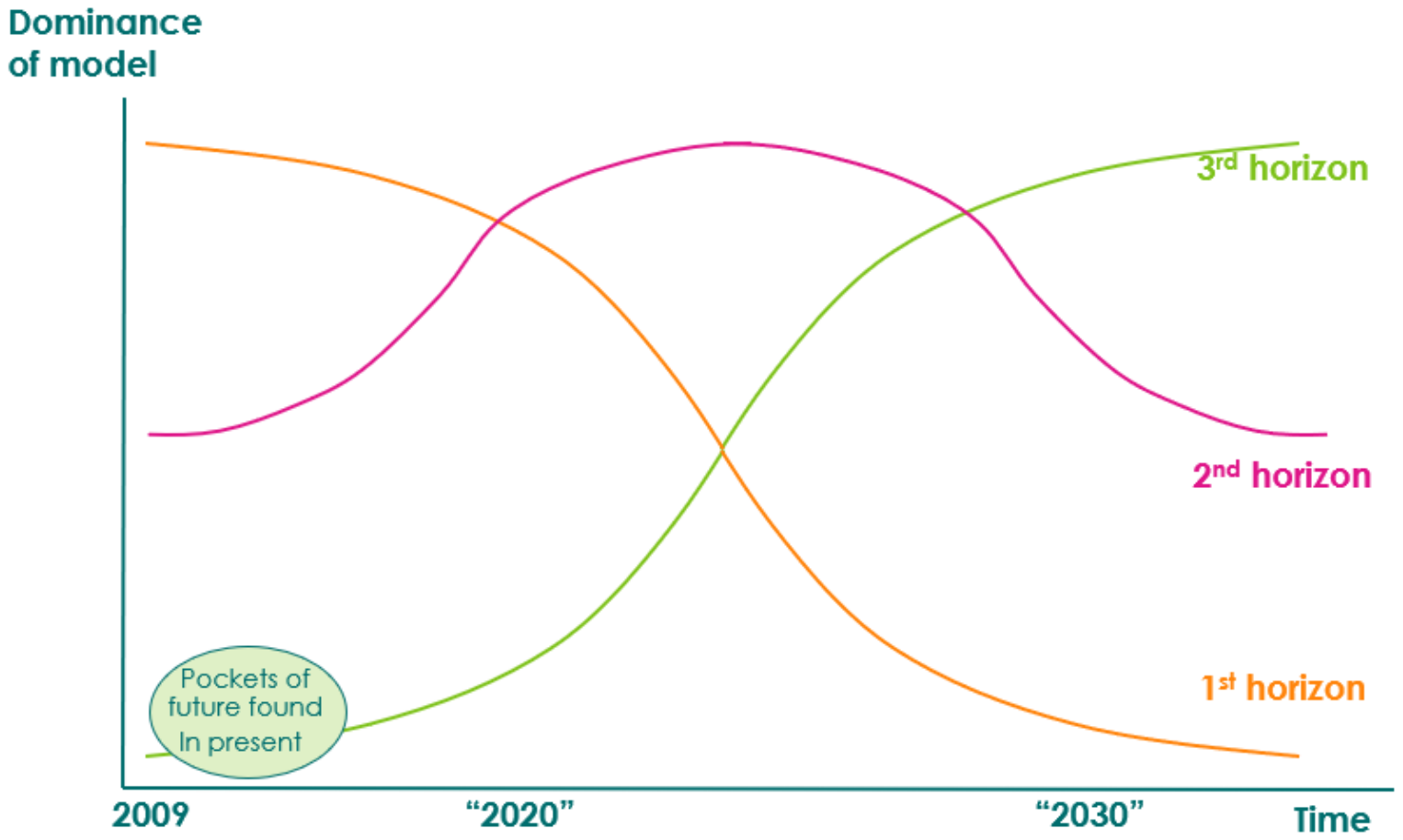
Entertainment

AI; Mixed Reality; Wellness Impact

Era-based Analysis

Related Frameworks

"Three Horizons" Model of Change (Bill Sharpe)

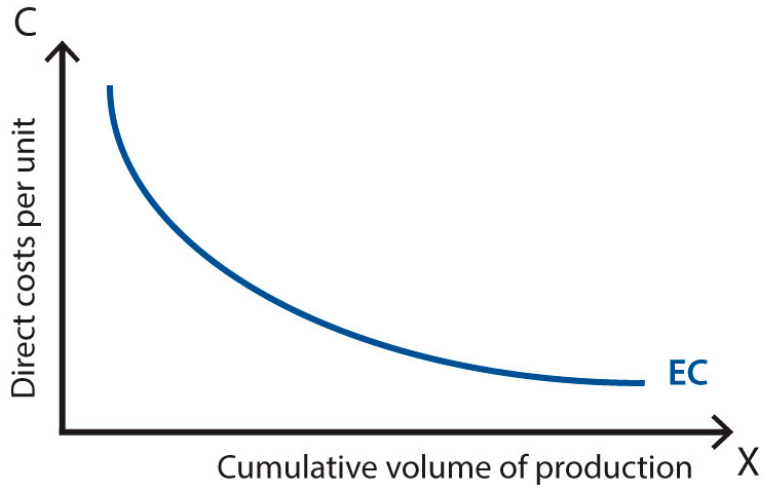


Graphic courtesy of Andrew Curry, The Futures Company

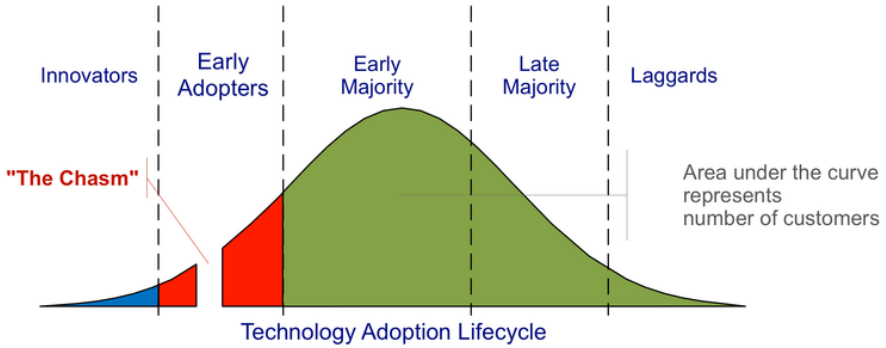
Foresight = Second & Third Horizon

Era-based Analysis: Related Frameworks

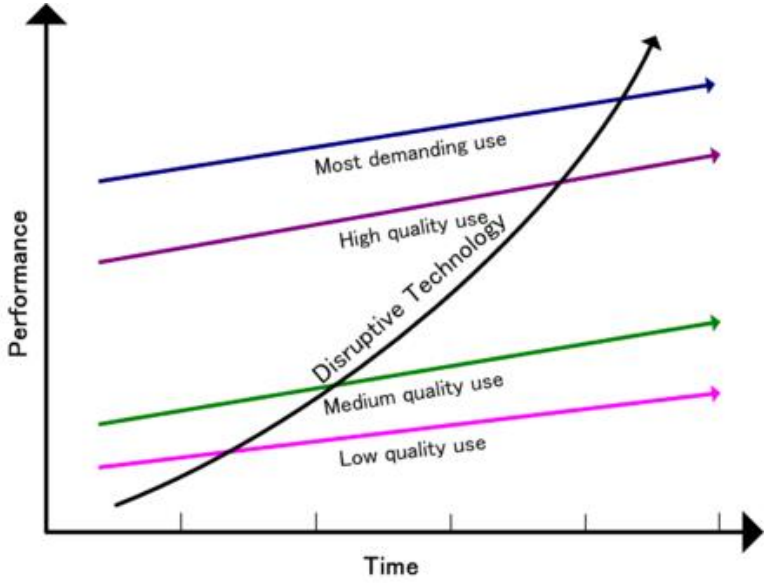
Experience Curve



Crossing the Chasm



Low-end Disruption



Gartner Hype Cycle

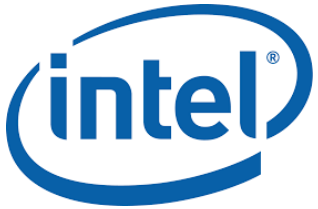
Hindsight

Insight

Foresight

… the ability to anticipate and lead change

Organizations with Futurists or Foresight Practices

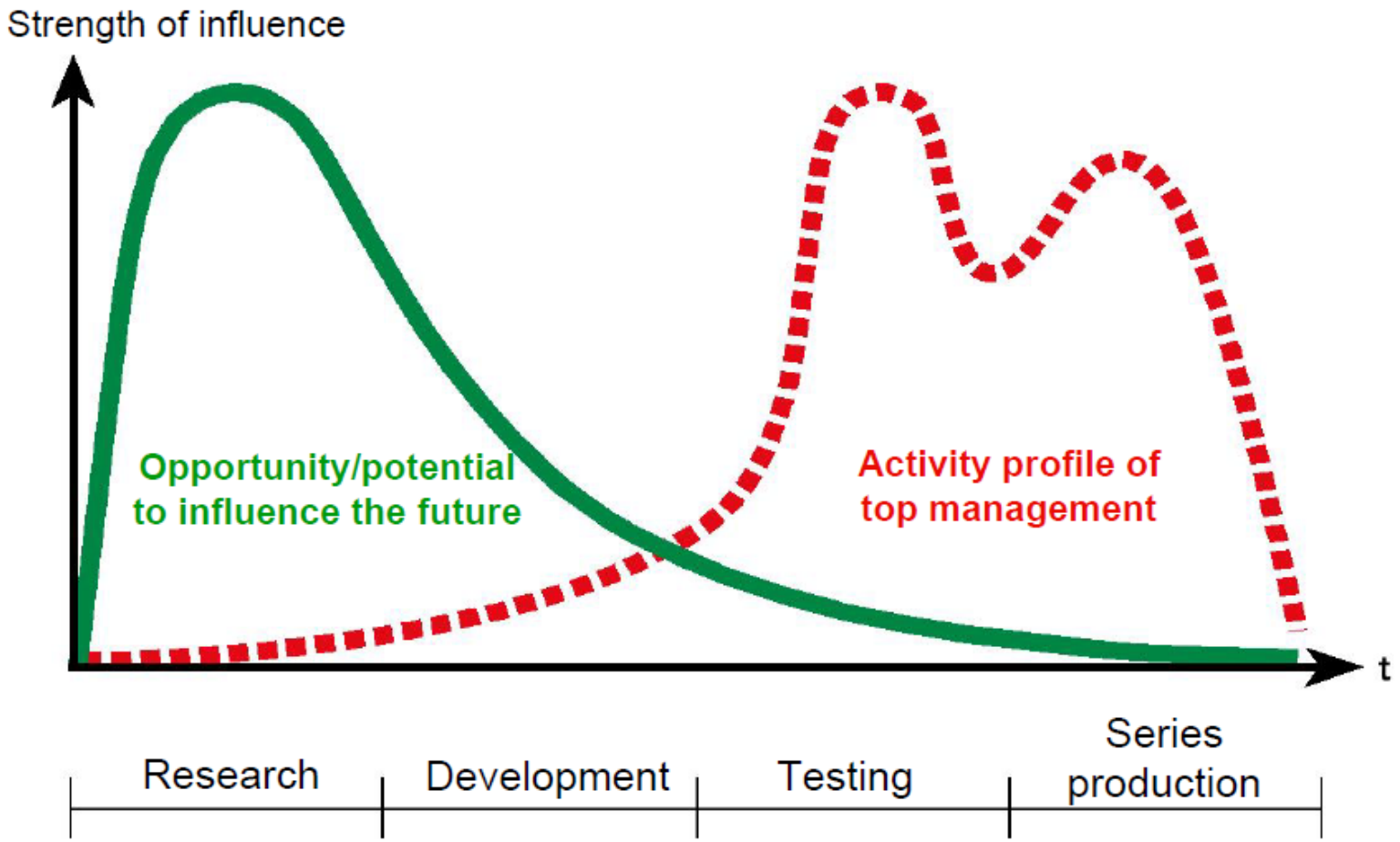


Expanding Leadership Capabilities

DAIMLER

Why Corporate Foresight?

Knowledge about the future and the reach of decisions



Foresight Stages + Activities

Investigate
Identifying & Monitoring Change

- ❑ Horizon Scanning
- ❑ Emerging Issues Analysis
- ❑ Indicator Analysis (Leading vs Lagging)

Imagine
Exploring Implications

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

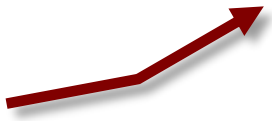
Inspire
Communicating the Need for Change

- ❑ Visioning & Backcasting
- ❑ Planning, Goal Setting & Roadmapping
- ❑ Transformation Management

Wendy Schultz/Garry Golden

Foresight 101: Mechanisms of Change

Trends
(Continuities)



Plausible Future

Forecasts

Events
(Discontinuities)

Possible Futures

Scenarios

Choices
(Discontinuities)

Preferred Future

Visions

Popularized by Peter Bishop

Questions on Foresight?

Value of Process
(Tools, Techniques, Behaviors)

Value of Content
(Domain expertise; Knowledge)

The Foundation is
Scanning for Signals of Change

Fundamental Stages + Activities of Foresight

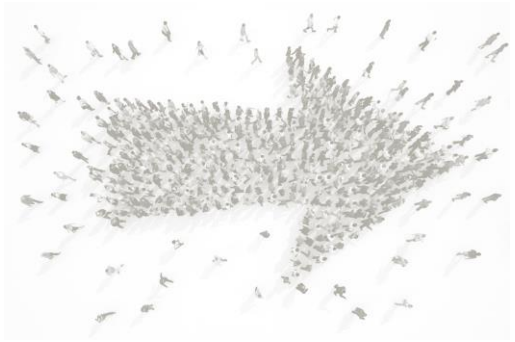
Investigate
Identifying & Monitoring Change

- ❑ **Horizon Scanning**
- ❑ **Emerging Issues Analysis**
- ❑ **Indicator Analysis (Leading vs Lagging)**

Imagine
Exploring Implications

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

Inspire
Communicating the Need for Change



- ❑ Visioning & Backcasting
- ❑ Planning, Goal Setting & Roadmapping
- ❑ Transformation Management

Signals

Strap on the Fitbit: John Hancock to sell only interactive life insurance

BUSINESS NEWS SEPTEMBER 19, 2018 Suzanne Barlyn

REUTERS

(Reuters) - John Hancock, one of the oldest and largest North American life insurers, will stop underwriting traditional life insurance and instead sell only interactive policies that track fitness and health data through wearable devices and smartphones, the company said on Wednesday.

Judging Signals

Scanning: Criteria and Considerations

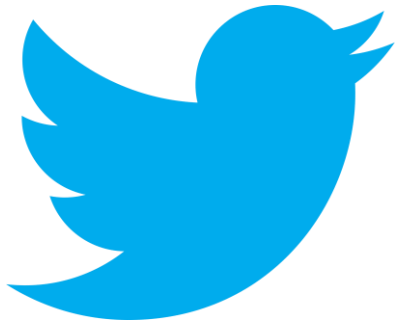
- ❑ Source Credibility
- ❑ Newness/Uniqueness
- ❑ Degree of Uncertainty
- ❑ Degree of Impact
- ❑ Momentum (e.g. slowing down, speeding up)

When applied to scenario thinking or customer research a *signal* may do one of three things:

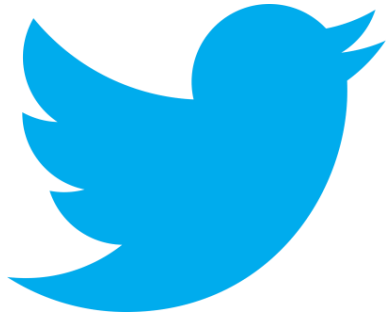
- ❑ **Confirm** assumptions of one scenario outcome
- ❑ **Diminish** the likelihood of a particular scenario
- ❑ **Create** a new scenario to consider

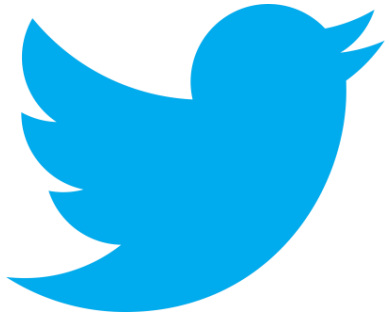
Scanning Across
S.T.E.E.P. Categories of Change

Techniques: Signals Sourcing Strategy



Why Twitter?





Outcome:
Informed & Inspired by following fascinating people & conversations

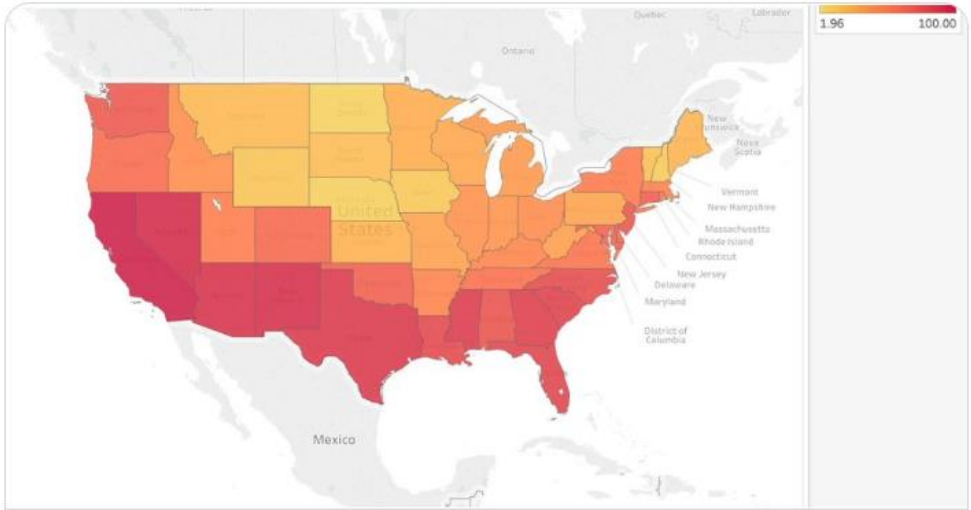
Learning the Language and Code of Thematic Conversations

Social Determinants of Health

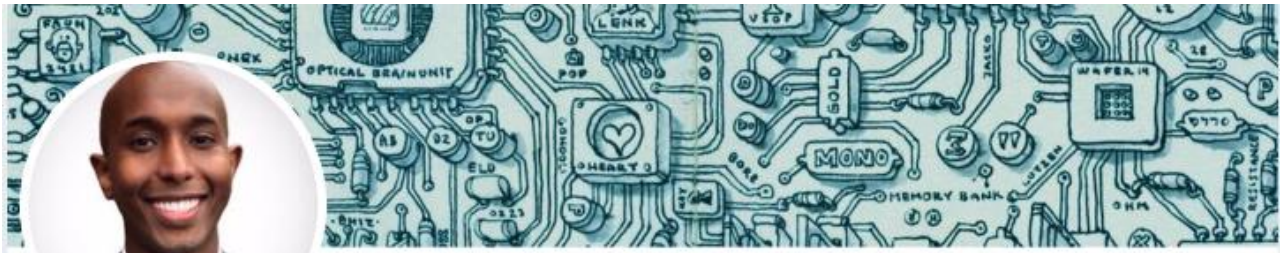
#SDOH

Ahmed Ali @MrAhmednurAli · 39m
John Oliver exposes the sinister side of the mobile home Industryhttp://ow.ly/roGg30omKxu **#sdoh**

David Nace MD @DavidNaceMD · 20h
I recently co-authored a research on understanding **#SDOH** by calculating the social vulnerability indices (SVI) score at zip level, and using SVI to get patient level insights. Here's the report:
bit.ly/2U4icsd
#SDOHTalk
@innovaccer



From Myth to Reality - Revolutionizing Healthcare with Augmented Intelligence and Social Determin...
innovaccer.com



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@MrAhmednurAli

Research Assistant @McMasterForum| #HealthPolicy PhD Candidate @McMasterU| Advocate of evidence-based #publichealth policies| Views my own. RT ≠ Endorsements

Toronto, Canada mcmasterforum.org/lets-collabora... Born February 10
Joined September 2011

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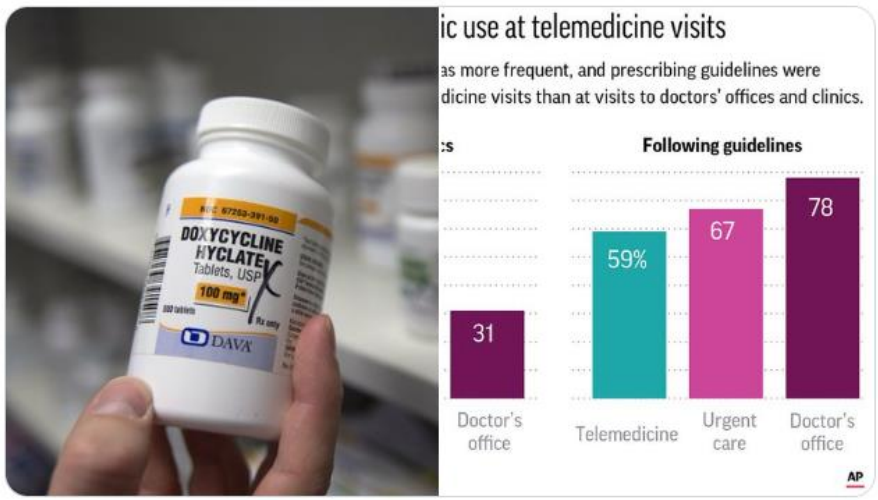
Ahmed Ali @MrAhmednurAli · 7h

#Telemedicine tied to more #antibiotics for kids, study finds.
ow.ly/uZRd30omKqH #HealthPolicy #sdoh



Tool: Organizing Your Signals

‘Tagging’
‘Social Bookmarks’

https://www.mediavillage.com/article/nielsen-auto-cloud-a-dream-for-driving-change-among-marketers/

Nielsen Auto Cloud a Dream for D Change Among Marketers

Automotive marketing for audio media has just taken a major leap forward. It was announced in early November that the Nielsen Auto Cloud -- the new standard in aut marketing, data and measurement capabilities -- has been licensed by both Westwoo One, which reaches 245 million weekly listeners across America, and Panoply Media, leaders in podcast marketing and technology. For marketers this means access to a vast new range of data backed by a powerful marketing and measurement technolog This enables auto brands and their agencies to generate high-reach, high-engagemer audio interactions with actual car buyers.

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Nielsen Auto Cloud a Dream for Driving Change Among Marketers | MediaVillage

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automotive media marketing advertising business+model+design

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Private Read Later Cache

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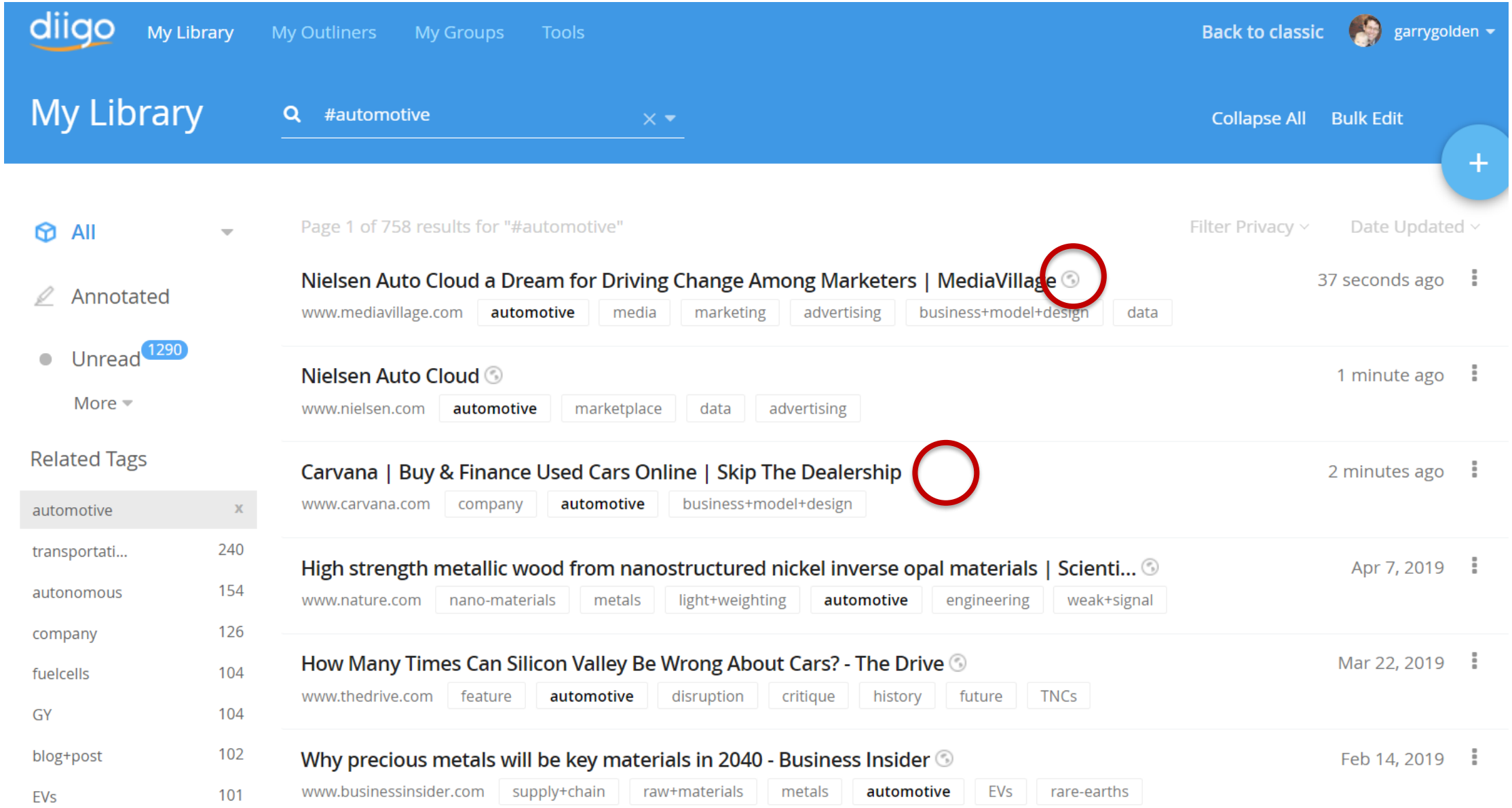
Collect & Share Signals as Social Bookmarks



+ diigo

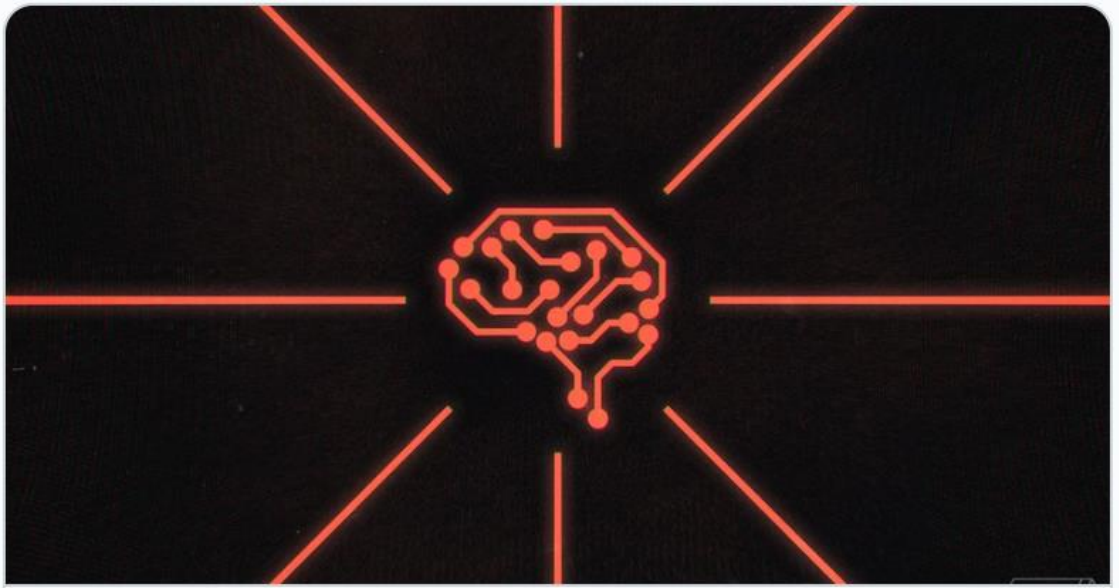
Ars Technica @arstechnica · 13m

"Project Kuiper is a new initiative to launch a constellation of Low Earth Orbit satellites that will provide low-latency, high-speed broadband connectivity to unserved and underserved communities around the world," Amazon said in its statement.

Amazon follows SpaceX into satellite broadband, plans worldwide service

Amazon says it'll launch 3,236 low-Earth satellites for fast, low-latency service.

arstechnica.com



Warner Music signed an algorithm to a record deal — what happens next?

It's all about the playlists

theverge.com

https://www.diigo.com/user/garrygolden/amazon

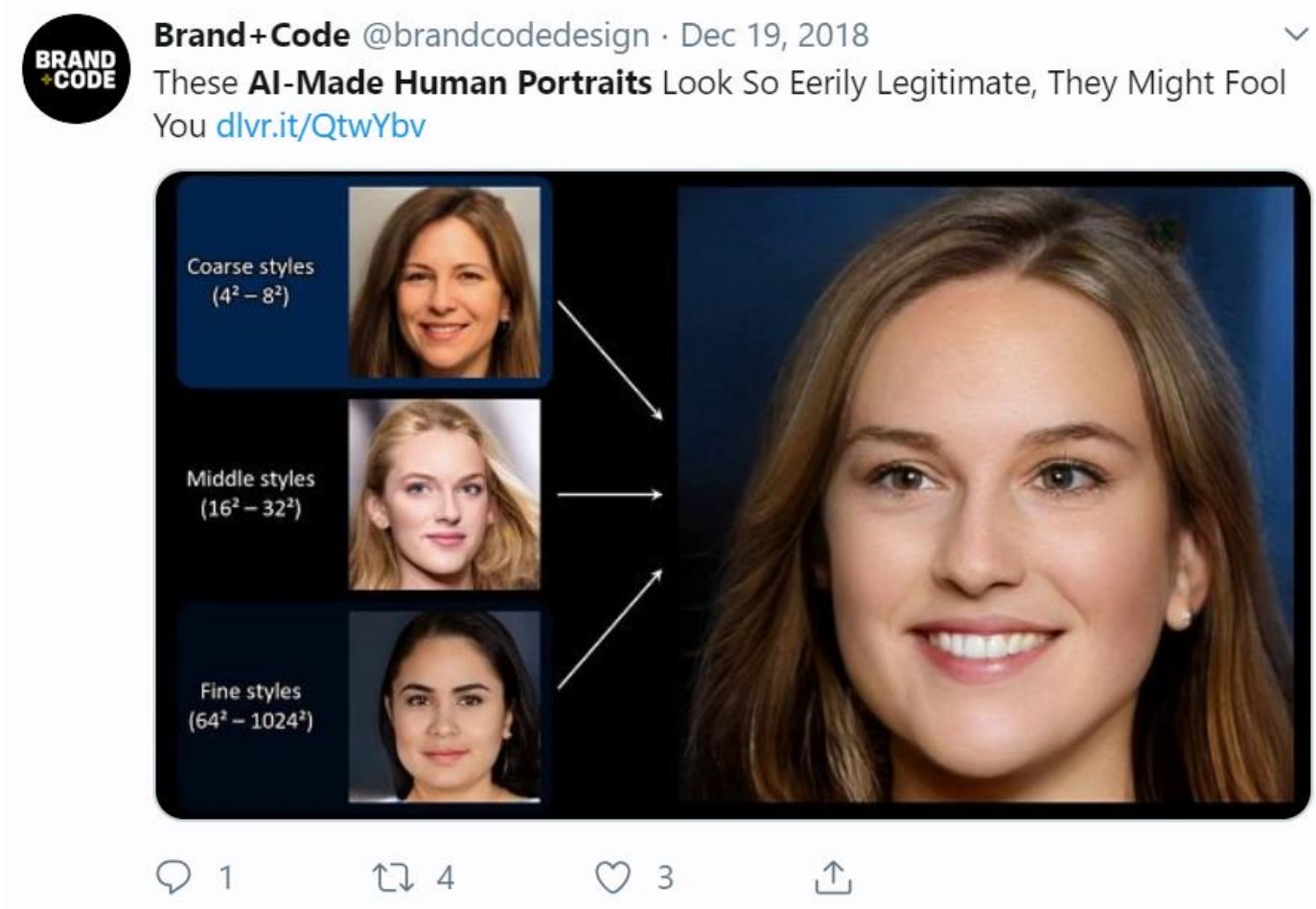
https://www.diigo.com/user/garrygolden/AI

Tip: Focus on Conferences & Communities

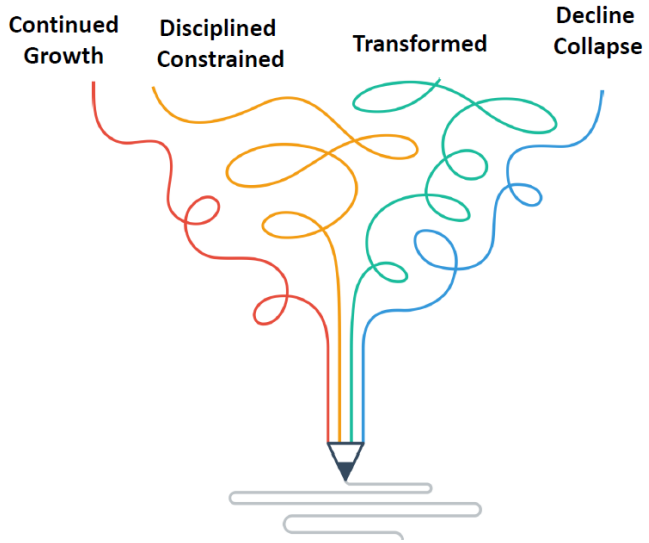
NVIDIA

ACMSIGGRAPH

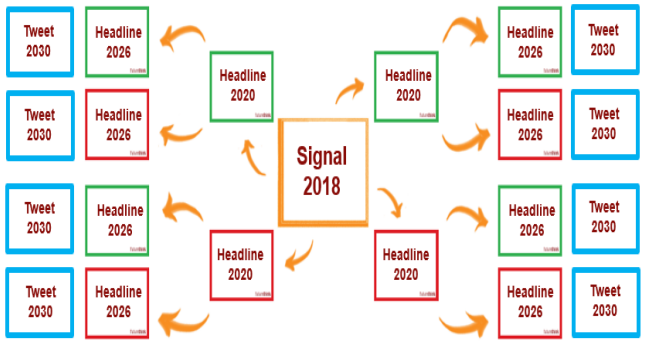
arXiv.org



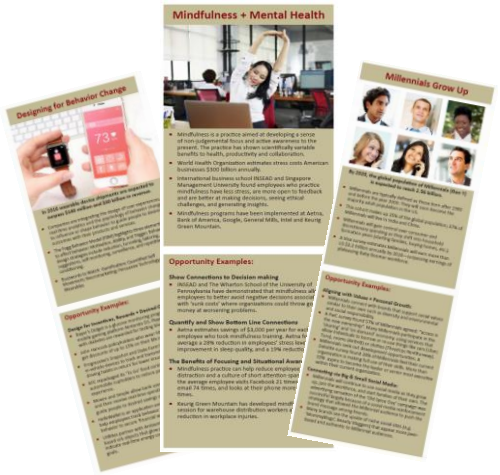
Turning Signals into Stories



Four Futures



Futures Wheel



Trend Cards

Four Futures Thinking

?

Continued Growth

Peabody ENERGY

Microsoft

Disciplined Constrained

IBM

Transformed

BlackBerry

NOKIA

Decline Collapse

Popularized by Jim Dator

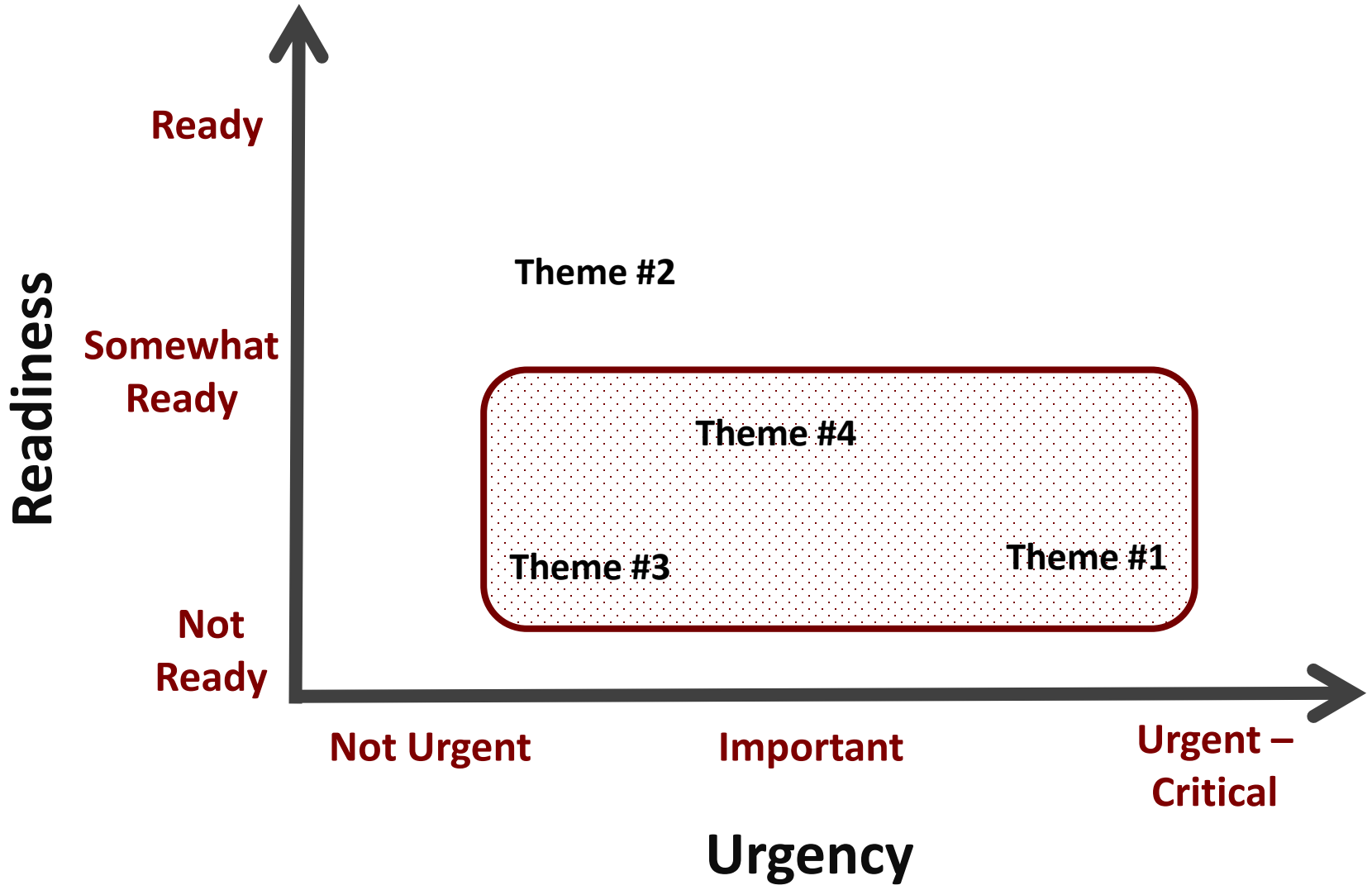
Telling Stories of Your Client's Four Futures

?	?	?	?
Continued Growth	**Disciplined Constrained**	**Transformed**	**Decline Collapse**

Take a Pulse Check on Emerging Trends vs Organizational Appetite

Top Trends/Themes

1)
2)
3)
4)
5)



More or Less Change Ahead?

Last ten years

2009 – 2019

Next ten years

2019-2029

2007

2017

2027

?

?

?

?

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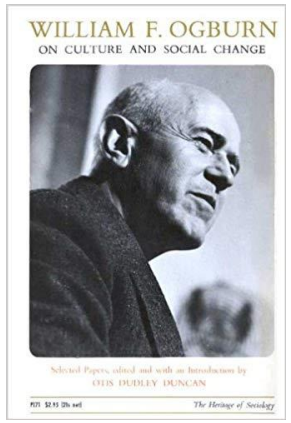
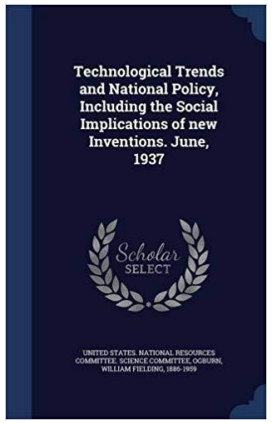
?

?

History and Evolution of Foresight





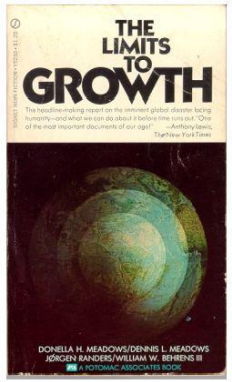
William Ogburn (1930s)

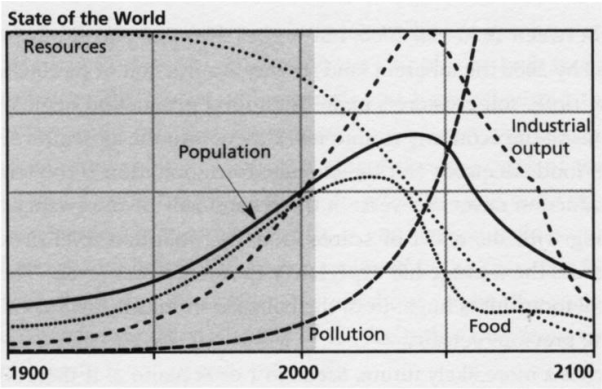
Social Change
(Society + Technology)

RAND CORPORATION
HUDSON INSTITUTE
The CENTER for GLOBAL PROSPERITY

Herman Kahn (‘50/60s)
RAND / Hudson Institute

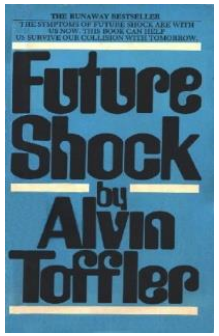
Scenario-based Decisions

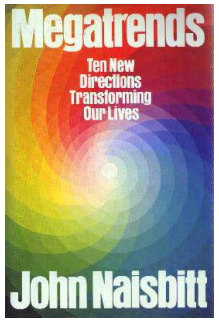




Club of Rome / *Limits to Growth (70s)*

Systems-based Simulations

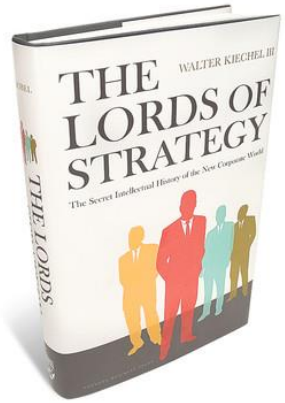




BCG
THE BOSTON CONSULTING GROUP

MONITOR

McKinsey&Company



(’80-Present)

Rise of Strategy Industry

2010s + Beyond

Era of Integration, Inclusivity & Intervention?

Challenges of Talking About *the Future*

Addressing Foundations

Purpose, Happiness vs Helplessness

Self-Work on Equity & Justice

Imperative of Being Local

Feeling 'Futuristic'

Techno-Solutions

Empowered Self

Globalization

Growth

Identifying S.T.E.E.P. Dynamics of Change Shaping the Future of _____