

Foresight 101: Futurist Activities

Investigate Identifying & Monitoring Change

- Horizon Scanning
- Emerging Issues Analysis



Imagine Exploring Implications

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



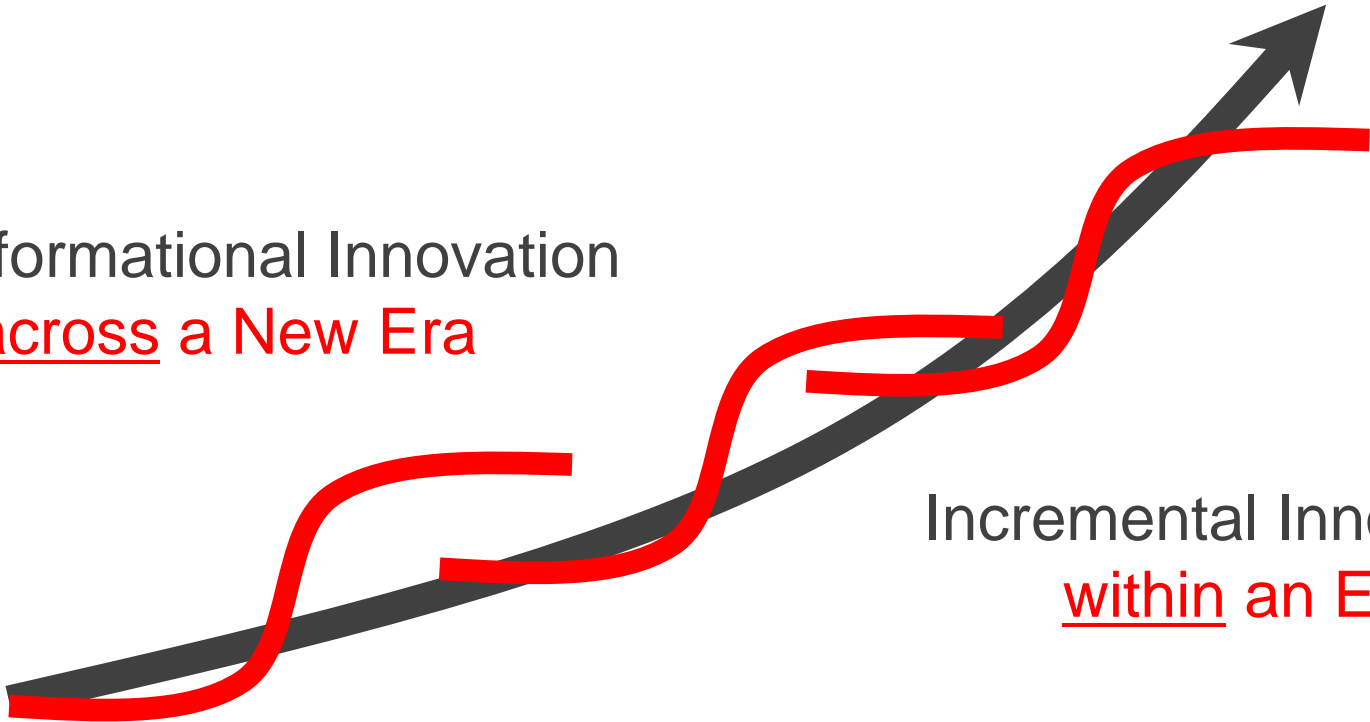
Inspire Communicating the Need for Change

- Visioning & Planning
- Transformation Management



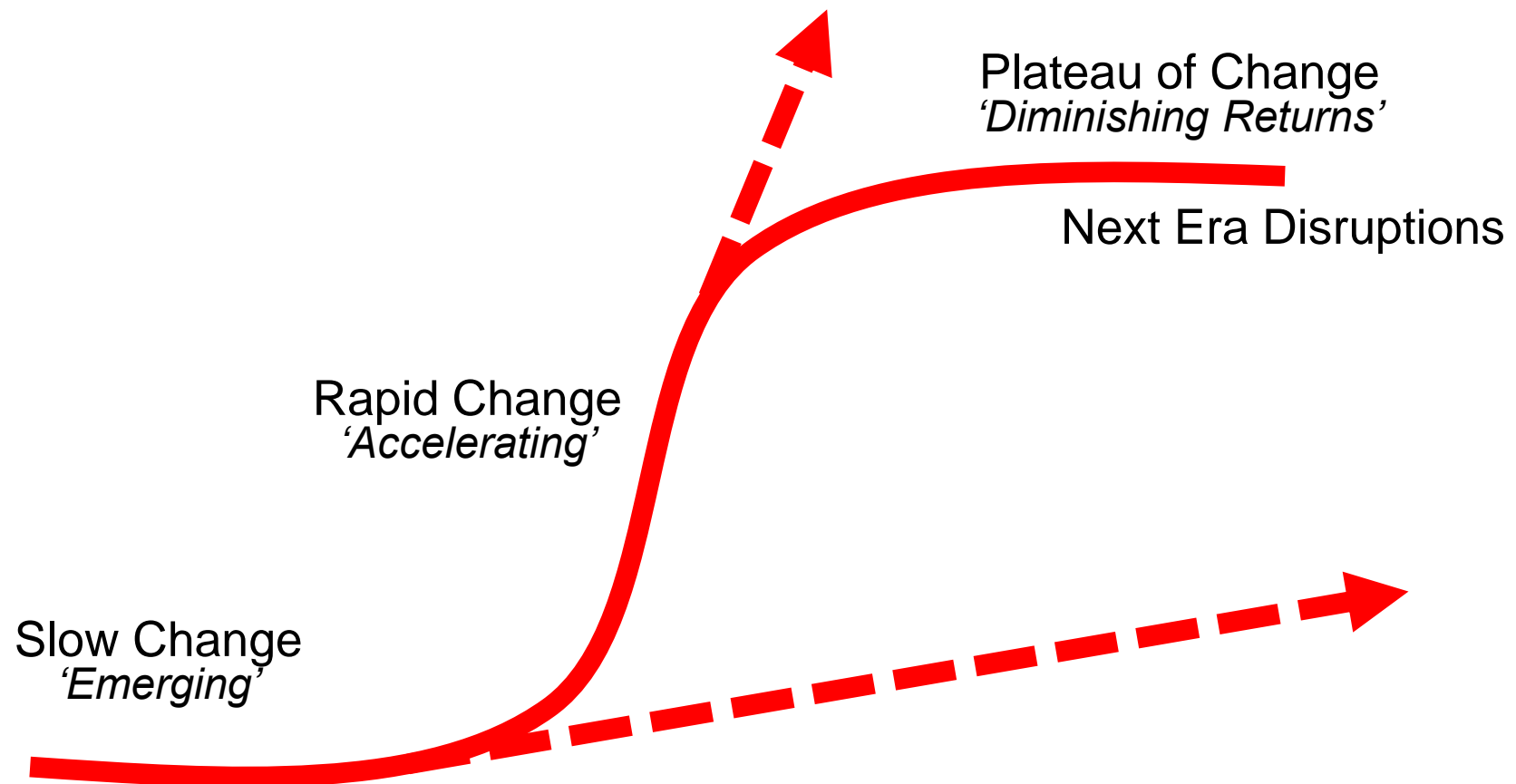
Foresight for Market Transitions

Transformational Innovation
across a New Era

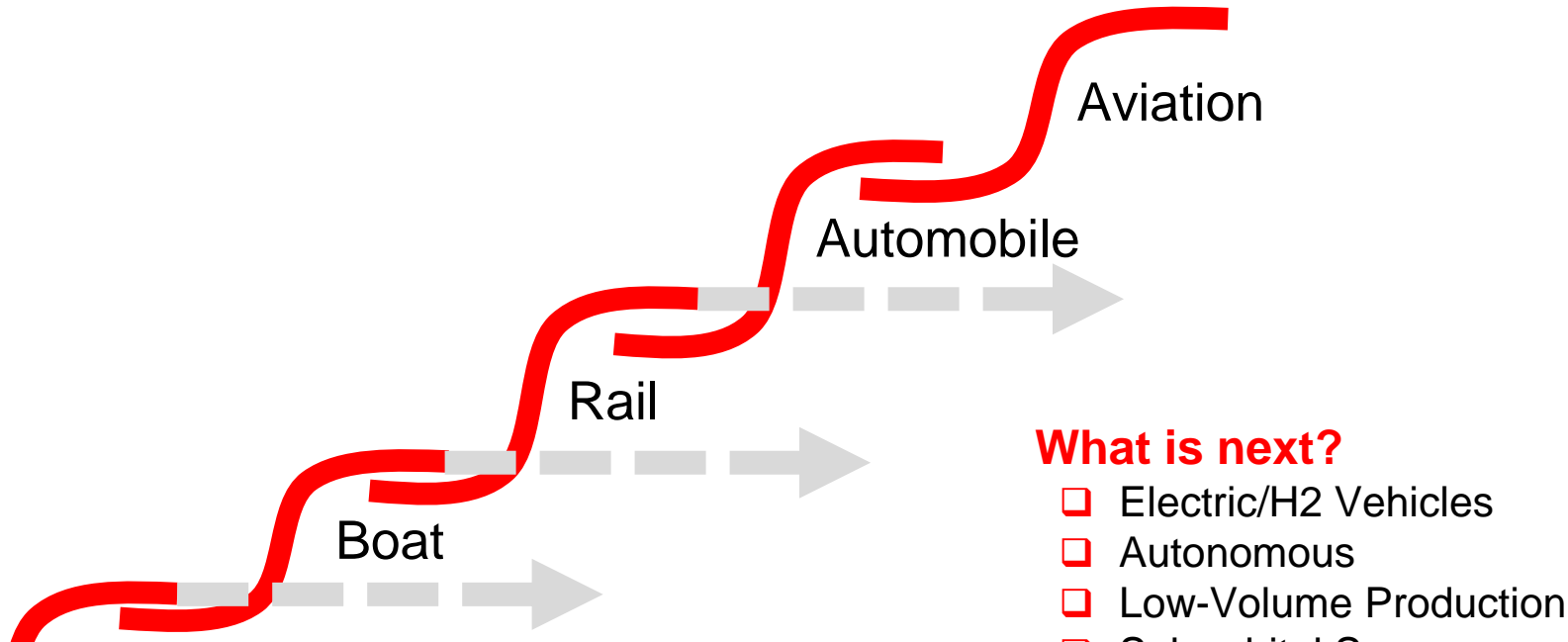


Incremental Innovation
within an Era

S-Curve 'Era' Model of Change



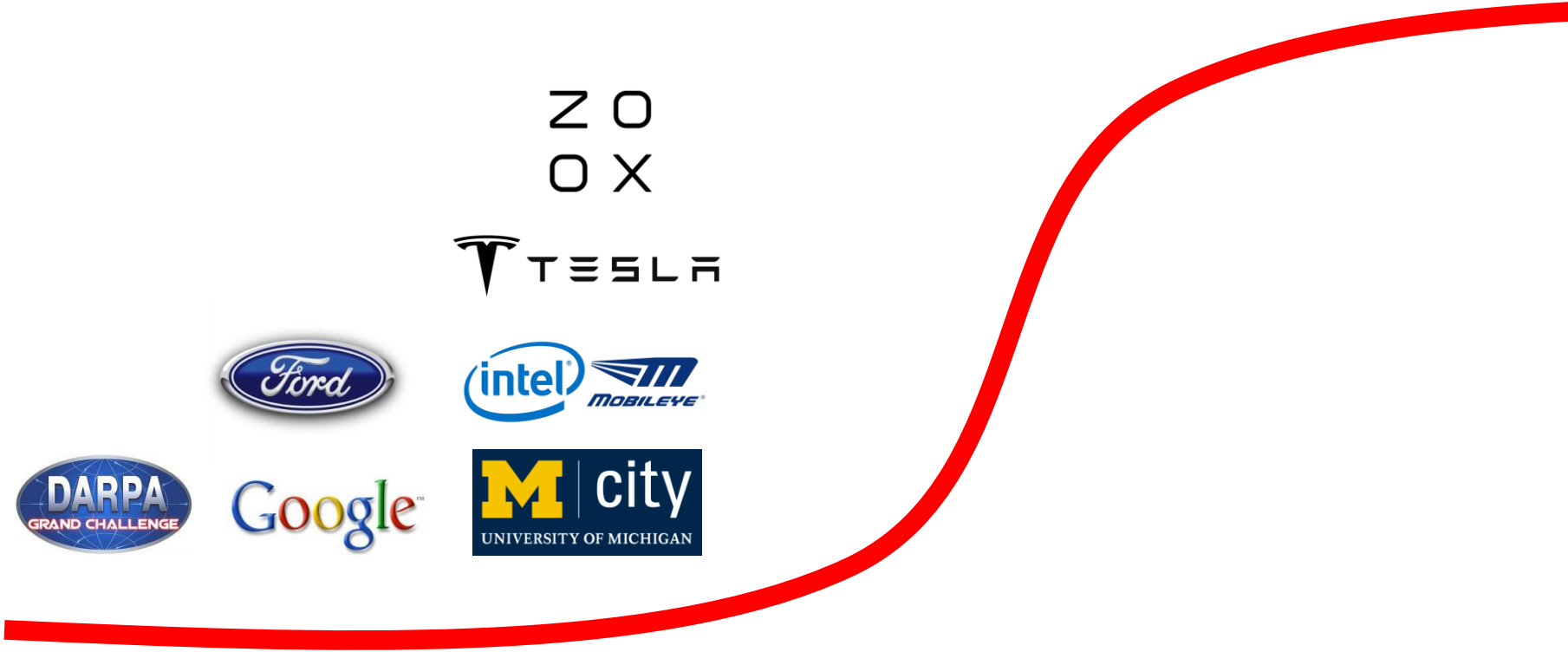
Eras of Mobility



- ❑ Era Innovation is Additive, Not Subtractive
- ❑ Era Innovation Underperforms in Short Term

Futurists: Scanning for Signals of Change

ZO
OX



Implications: Era of Autonomous

- ❑ Infrastructure & Supply Chains
‘Electric’ = Motor
(Hydrogen FCs = EVs)
- ❑ Portable Places
- ❑ Empowered Cities & *Campuses*
- ❑ *Societies Leap-frogging*
- ❑ Sensing Functionality of Fleets
(Primary Situational Awareness)



SURUS Platform

Silent Utility Rover Universal Superstructure

UAVs: Military & Civilian Applications

STARS AND STRIPES.

Persistent State of Micro UAVs

Paratroopers from the 3rd Brigade Combat Team, 82nd Airborne Division, are now using the tiny, helicopter-like Black Hornet Personal Reconnaissance System (PRS), giving them near-real-time footage



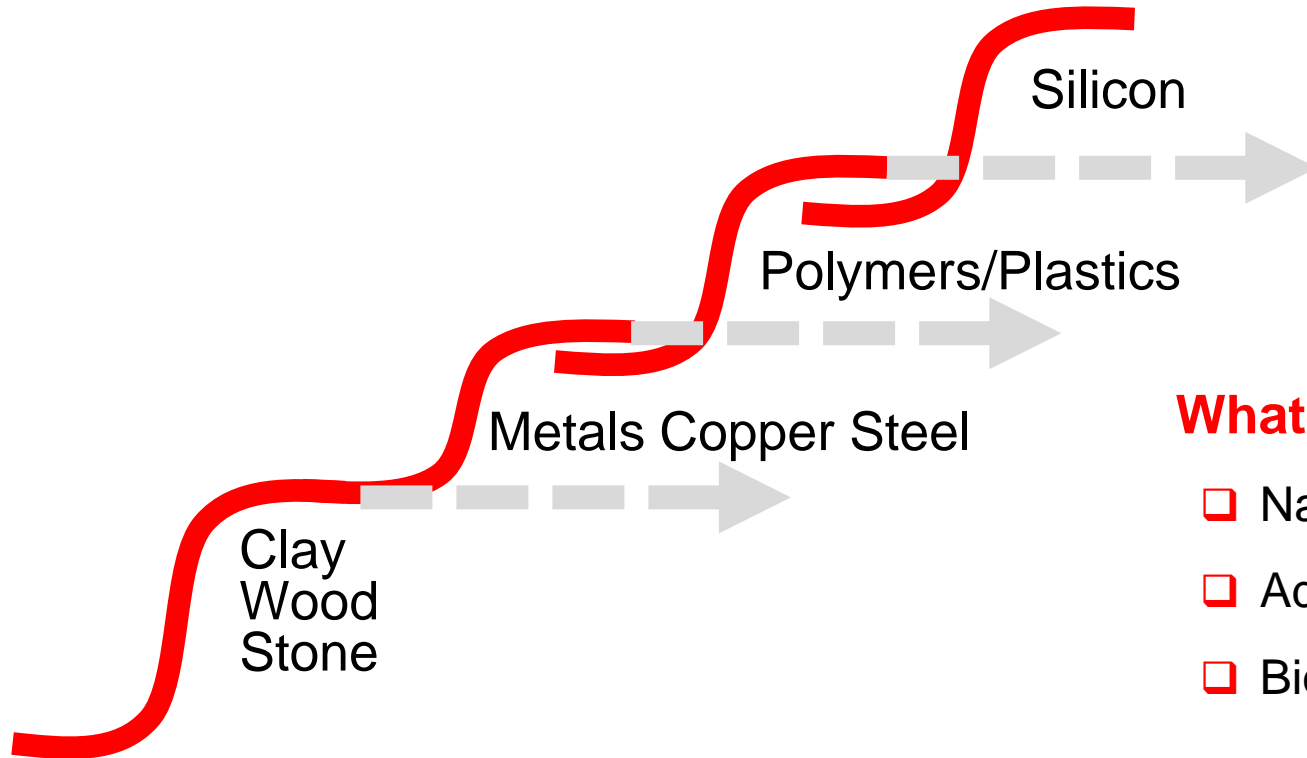
Radical Societal Scenario: Ubiquitous Computer Vision
Micro UAV (PRS) for every person, equipment and environment

The World's Sixth Sense®

Pvt. Kesley Darnell, 3rd Brigade Combat Team, 82nd Airborne Division, lets go of the air vehicle as it takes off during the systems fielding at Fort Bragg, N.C., May 2, 2019.

PATRICK FERRARIS/COURTESY U.S. ARMY

Eras of Materials Engineering



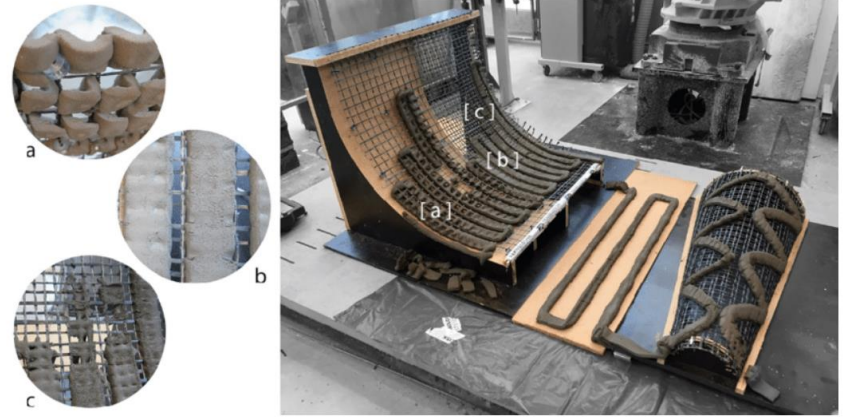
What is next?

- Nanoscale (Carbon)
- Additive
- Bio-manufacturing

Era of Additive Manufacturing

Implications for:

- ❑ Compression of Supply Chains
- ❑ Talent & Equipment
- ❑ Uptime & Service Contracts
- ❑ Structure Design & Longevity
- ❑ Raw Materials & Waste
- ❑ IP / Design Files

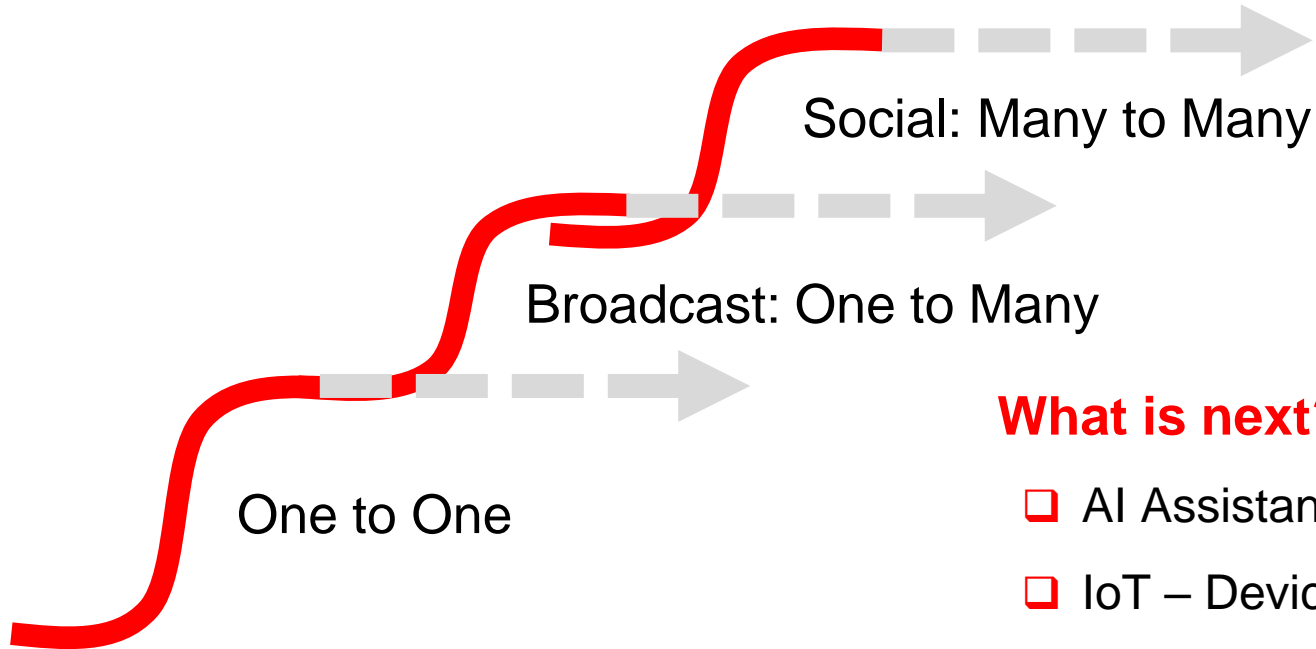


Sparse Concrete Reinforcement In Meshworks (SCRIM)



Two different 3D-printed meshes conforming to a knee, and sewn onto a glove.

Eras of Media & Communication



What is next?

- AI Assistants
- IoT – Device to Device

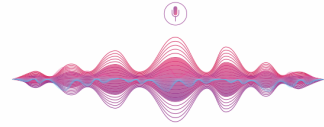
Big Tech: Evolving experience platforms



PC - Websites
Clicking



Mobile Apps
Touch – Swiping



Voice Assistants
[Conversation & Personality]



Video



VR / Mixed Reality

Early Days of Chatbots & Voice-based Therapy



Hi, I'm Woebot

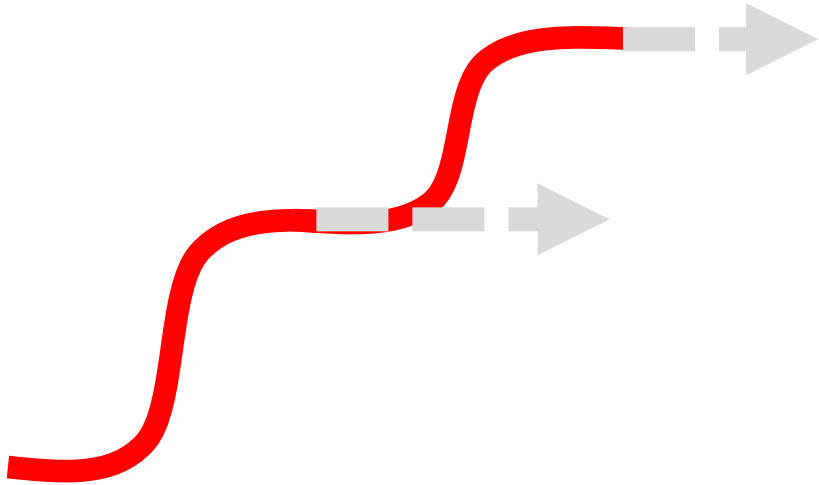
Everybody could use someone like me

An illustration of a smartphone interface. The screen shows a chat conversation with three grey bubbles and one yellow bubble. The Woebot character is visible in a circular inset on the right side of the screen. The phone is shown in a light blue color with a white cloud-like shape above it.

Daily lessons and check-ins

Quick conversations to feel better

Eras of Healthcare?

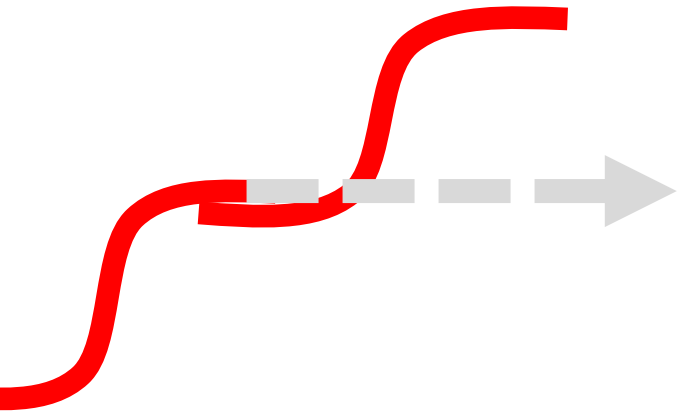


Dynamics of Era-based Change

- ❑ Value-based Care (Outcomes)
- ❑ SDOH / Population Health
- ❑ Telehealth (Teletherapy)
- ❑ Retail Healthcare
- ❑ Biologics; Precision Medicine (et al)
- ❑ Universal Coverage

SOCIETY NAVIGATING ERA TRANSITIONS

Role of Foresight



Healthcare / Wellness

Population Health; Outcomes-based Care; Genomics

Agriculture / Farming / Food

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

Retail

Online; Hybrid Brick+Mortar; Localization

Education / Learning

Life stage to Lifelong; AI / Augmented

Media / Communication

Authentication/Verification; AI; IoT; Agents/Assistants

Entertainment

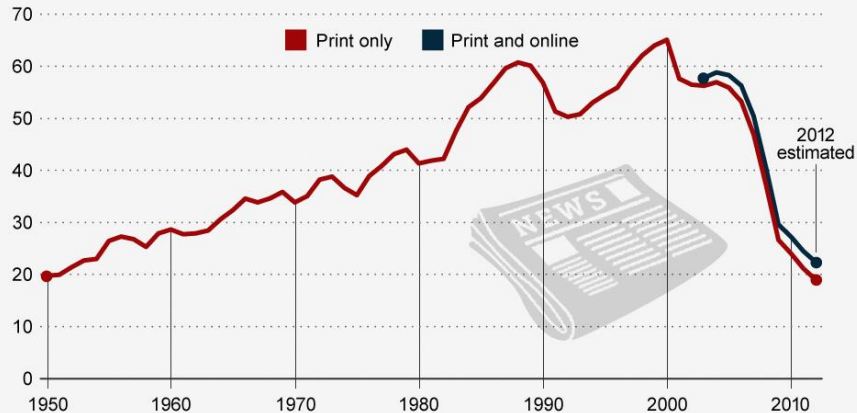
Avatar Celebrities & Identities; Mixed Reality; Wellness

'Gradual, then sudden' moment?

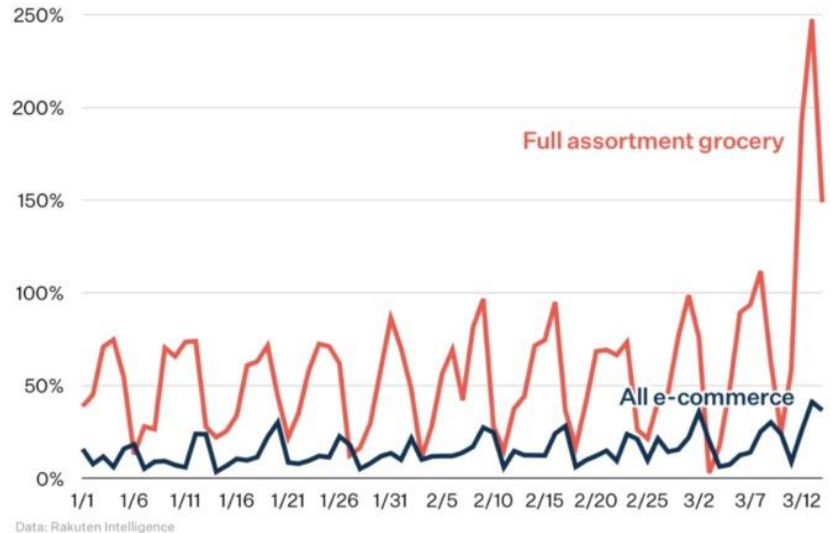
Ernest Hemingway's novel *The Sun Also Rises* in which a character named Mike is asked how he went bankrupt. "Two ways," he answers. "**Gradually, then suddenly.**"

50 Years of Growth Wiped Out in a Decade

Newspaper advertising revenue in the United States (in billion U.S. dollars; adjusted for inflation)



Year-over-year change in daily e-commerce spending



Era-based Change

25 minutes

Breakout Rooms

Each person:

- Describe **legacy/current era** for your organization (sector)
- Speculate on **emerging era** dynamics for your organization (sector)

Output

- Two assumptions that need to be preserved (current era)
- Two assumptions that might be embraced (emerging era)

Take Notes – Be prepared to share

RESOURCE GUIDE: ERA-BASED ANALYSIS

Worksheet: Era-based Analysis of Change

	Current Era: _____	Emerging Era: _____
<p>Vision & Mission - Who you are; Who you serve & how.</p>		
<p>Problems (JTBD) & Solutions - Customer <i>jobs to be done</i>.</p>		
<p>Market Dynamics - Describe types of competitors. - Describe types of partners. - Describe types of acquisitions. - Regulatory landscape: Constraints or protective policies?</p>		
<p>Product & Service Cycle - What do you sell (provide)? - How do you <i>go to market</i>? - How fast or slow do client demands change? - What is considered innovative?</p>		
<p>Minor Eras - Were there small but significant platform transitions within the company or industry?</p> <p>Disruptive Elements - What elements challenge this era, and lead to changes in the company? - Are there constraints or 'limits to growth' within this era?</p>		

Worksheet: Era-bases Analysis of Change

Current Era: _____

Emerging Era: _____

Vision & Mission

- Who you are; Who you serve & how.

Problems (JTBD) & Solutions

- Customer *jobs to be done*.

Market Dynamics

- Describe types of competitors.
- Describe types of partners.
- Describe types of acquisitions.
- Regulatory landscape:
Constraints or protective policies?

Product & Service Cycle

- What do you sell (provide)?
- How do you *go to market*?
- How fast or slow do client demands change?
- What is considered innovative?

Minor Eras

- Were there small but significant platform transitions within the company or industry?

Disruptive Elements

- What elements challenge this era, and lead to changes in the company?
- Are there constraints or 'limits to growth' within this era?

Era-based Change

25 minutes

Breakout Rooms

Each person:

- Describe legacy/current era
- Speculate on emerging era dynamics

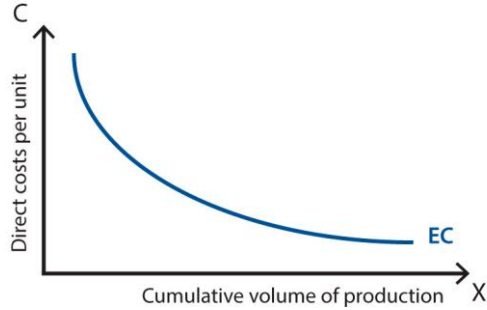
Output

- Two assumptions that need to be preserved (current era)
- Two assumptions that might be embraced (emerging era)

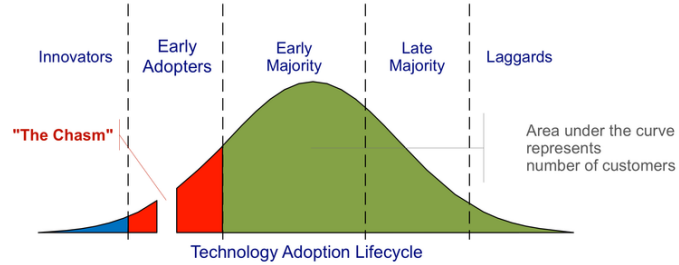
Take Notes – Be prepared to share

RELATED FRAMEWORKS

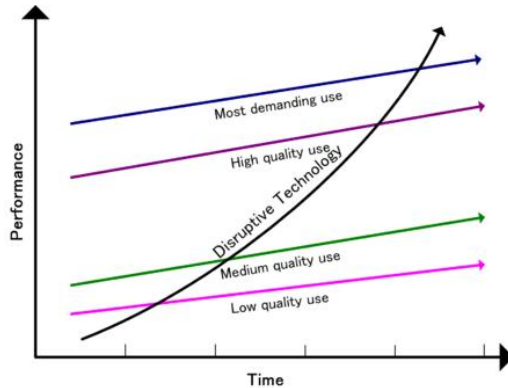
Experience Curve



Crossing the Chasm



Low-end Disruption



Hype Cycle

