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

- Slow Change ‘Emerging’
- Rapid Change ‘Accelerating’
- Plateau of Change ‘Diminishing Returns’
- Next Era Disruptions
Eras of Mobility

What is next?
- Electric/H2 Vehicles
- Autonomous
- Low-Volume Production
- Sub-orbital Space

Era Innovation is Additive, Not Subtractive
Era Innovation Underperforms in Short Term
Futurists: Scanning for Signals of Change
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
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.
Eras of Materials Engineering

- Clay
- Wood
- Stone
- Metals Copper Steel
- Polymers/Plastics
- Silicon

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)
Eras of Media & Communication

One to One

Broadcast: One to Many

Social: Many to Many

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

Quick conversations to feel better

Daily lessons and check-ins
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
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.”
Era-based Change

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
## Worksheet: Era-based Analysis of Change

<table>
<thead>
<tr>
<th>Current Era:</th>
<th>Emerging Era:</th>
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<td>- Who you are; Who you serve &amp; how.</td>
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<td><strong>Problems (ITBD) &amp; Solutions</strong></td>
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# Worksheet: Era-bases Analysis of Change

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| **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?  
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  - What elements challenge this era, and lead to changes in the company?  
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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)
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RELATED FRAMEWORKS

Experience Curve

Cumulative volume of production

Direct costs per unit

EC

Crossing the Chasm

Innovators
Early Adopters
Early Majority
Late Majority
Laggards

"The Chasm"

Technology Adoption Lifecycle

Area under the curve represents number of customers

Low-end Disruption

Performance

Time

Most demanding use
High quality use
Disruptive Technology
Medium quality use
Low quality use

Hype Cycle

VISIBILITY

Peak of inflated Expectations
Plateau of Productivity
Slope of Enlightenment
Trough of Disillusionment
Technology Trigger

TIME