

# Are You Ready to Rock and Roll?

## Scenario Planning for Possible Future Outcomes

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NASA - former Special Advisor Talent Solutions





# Why Use Scenarios?

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**Reduce  
Uncertainty  
Discomfort**

**Become Better  
Informed**

**Challenge  
Mental Maps**

**Anticipate the  
*Unknowable***



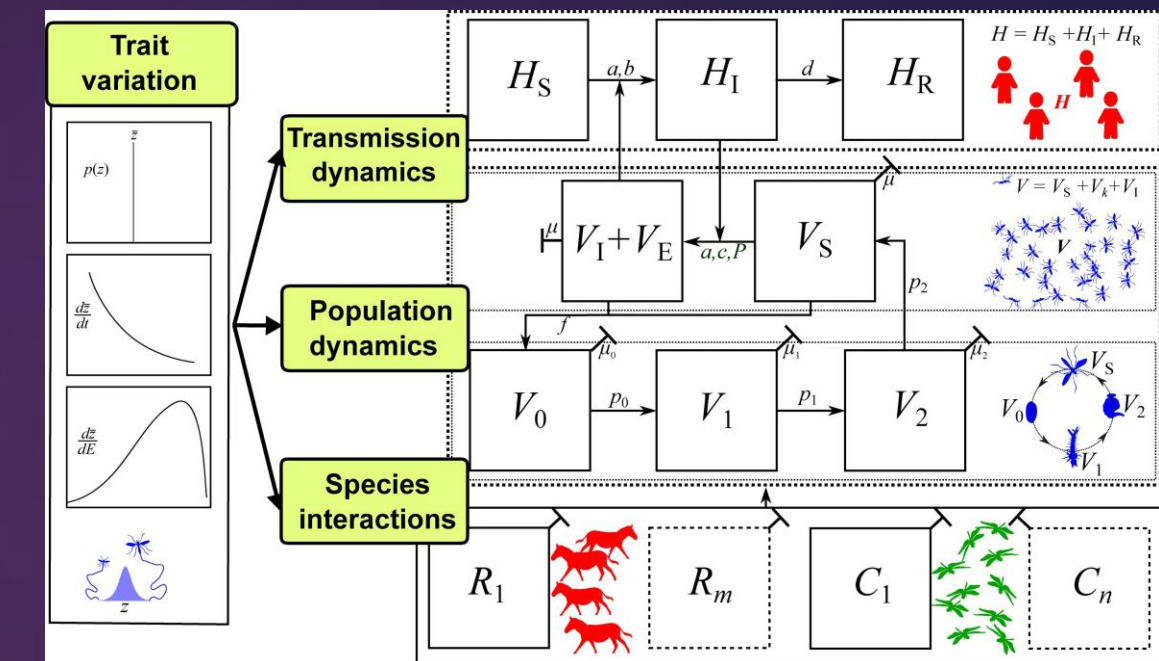
*Plans are useless, but planning is indispensable – Dwight Eisenhower*



# Why Scenarios vs Predictive Analytics

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- ▶ Numbers are representation of the world
- ▶ They are not the real world
- ▶ Exploratory Data Analysis comes first
- ▶ Confirmatory Data Analysis comes later



Using Monte Carlo to tweak assumptions to create 20,000 variations of a core model can be useful. It is not the same as scenario planning.

*If you torture data long enough, it will tell you anything.*

- John W. Tukey

# Peter Schwartz's Guidance

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Identify Focus & Key Internal Forces

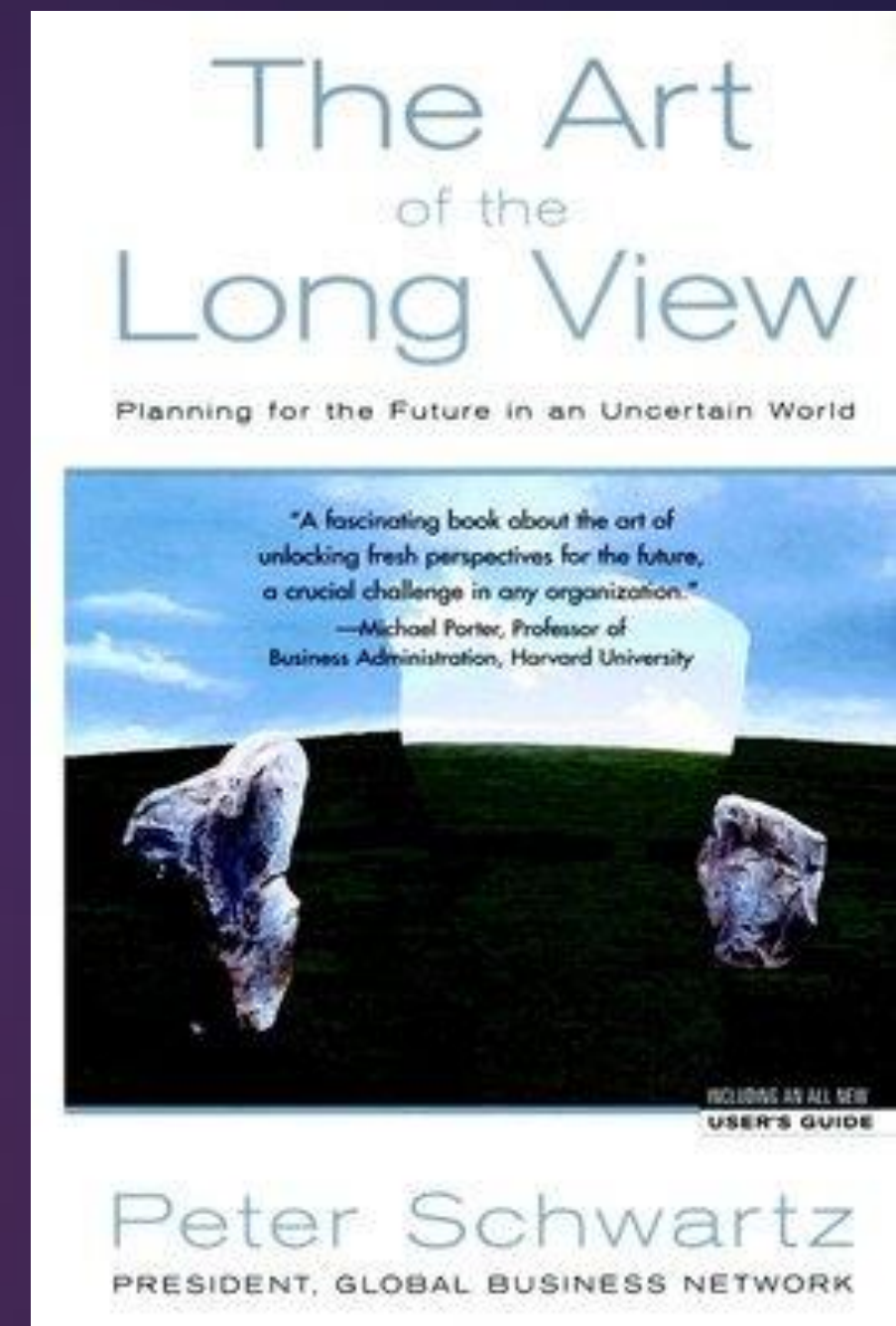
Determine Compelling Influences

Weigh & Rank Factors / Trends

Select & Amplify Scenarios

Determine Implications

Choose Critical Indicators



# Common Approaches

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## List drivers / compelling influences

- (Social, Technical, Economic, Environmental, Political - STEEP)

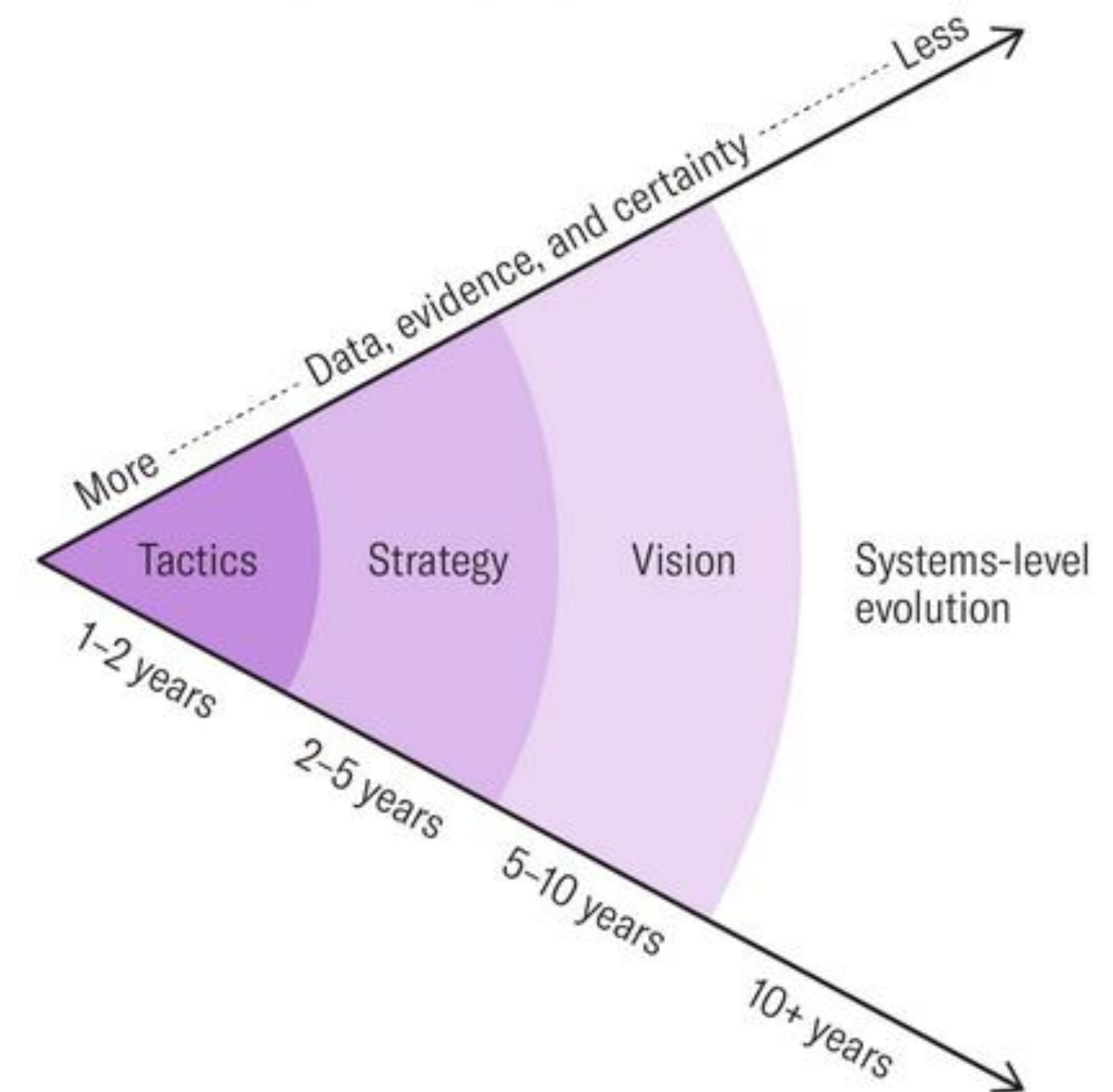
## Identify relative certainties

## Flag key uncertainties

## Maintain a long-term view

## Start broad and end narrow

## Incorporate multiple perspectives



Source: Amy Webb, Future Today Institute

HBR



# Compelling Influences: STEEP

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***Social***

Demographics,  
lifestyles, faith,  
patterns of  
behavior, etc.

***Technologic***

Innovation,  
rates of  
change,  
product life-  
cycles, etc.

***Economic***

Trade, inflation,  
employment,  
tax policy, etc.

***Environment***

Ecosystem,  
pollution,  
regulations,  
etc.

***Political***

Shifts in power,  
regulations,  
policies, etc.

**Define it in the context of your organization**



# Other Approaches

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Use vignettes instead of “scenarios”

Leverage other’s scenarios

Use and mine “Futures” events

Innovation forums, brown bags, mashups, thinking expeditions, etc.

Tailor your approach to your culture





# Example: Innovation Forum

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## Internal Speakers

- CEO re Future Business Imperatives
- CTO/CIO re Impactful technologies
- CHRO re workforce/workplace changes

## Invited Speakers

- Margaret J. Wheatly – *Leadership & the New Science*
- Peter Schwartz – *The Art of the Long Wave*

## Discussion Groups

- Questions
- Implications

Output: Action Plans folded into Business Plans





# Four Worlds of Work - PWC

**Yellow World**  
-  
**Humans Come First**

**Red World**  
-  
**Innovation Rules**

**Green World**  
-  
**Companies Care**

**Blue World**  
-  
**Corporate is King**

## The Four Worlds of Work in 2030

Fragmentation



**The Yellow World**  
*Humans come first*

Social-first and community businesses prosper. Crowdfunded capital flows towards ethical and blameless brands. There is a search for meaning and relevance with a social heart. Artisans, makers and 'new Worker Guilds' thrive. Humanness is highly valued.



**The Red World**  
*Innovation rules*

Organisations and individuals race to give consumers what they want. Innovation outpaces regulation. Digital platforms give outsized reach and influence to those with a winning idea. Specialists and niche profit-makers flourish.

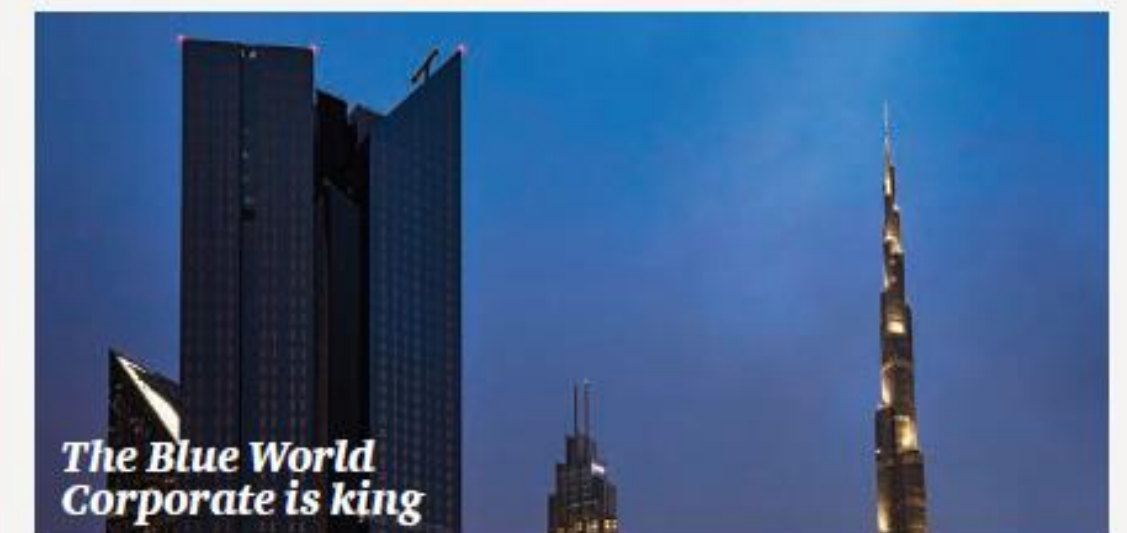
Collectivism

Individualism



**The Green World**  
*Companies care*

Social responsibility and trust dominate the corporate agenda with concerns about demographic changes, climate and sustainability becoming key drivers of business.



**The Blue World**  
*Corporate is king*

Big company capitalism rules as organisations continue to grow bigger and individual preferences trump beliefs about social responsibility.

Integration



# United Kingdom Ministry of Defence

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## Global Strategic Trends Program

- ▶ Sixth Edition published October 2018
- ▶ “Future context for defence and security out to 2050”
- ▶ Global Strategic Trends – The Future Starts Today
  - ▶ Improve foresight
  - ▶ Encourage better strategic choices
  - ▶ Build preparedness for alternative futures
  - ▶ Create adaptive organizations



# U.K. Global Strategic Trends Approach

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- ▶ Review prior editions
- ▶ Literature search / survey diverse international thought leaders
- ▶ Workshop review identified 39 topics / 3 major themes
- ▶ 70 Academic research studies commissioned
- ▶ Successively fused into 5 themes
  - ▶ Environment & resources
  - ▶ Human development
  - ▶ Economy, industry & information
  - ▶ Governance & law
  - ▶ Conflict & security
- ▶ 16 Focus areas
- ▶ 40 Strategic implications

## Scenario Analysis for Each Presidential Administration Delivered Between Election Day and Inauguration Day

- ▶ [NIC Global Trends 2035](#) (2017) Global Trends: Paradox of Progress
- ▶ [NIC Global Trends 2030](#) (2012) Alternative Worlds
- ▶ [NIC Global Trends 2025](#) (2008) A Transformed World
- ▶ [NIC Global Trends 2020](#) (2004) Mapping the Global Future



# NIC Lessons Learned

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**Do not let recent/current events overwhelm long-term thinking**

**Use very different scenarios to challenge group think**

**Reality is not necessarily mutually exclusive**

**Use scenarios to challenge current planning assumptions**

**Have strategic conversations about future positioning**

**Update thinking periodically**

# NASA's Human Research Program

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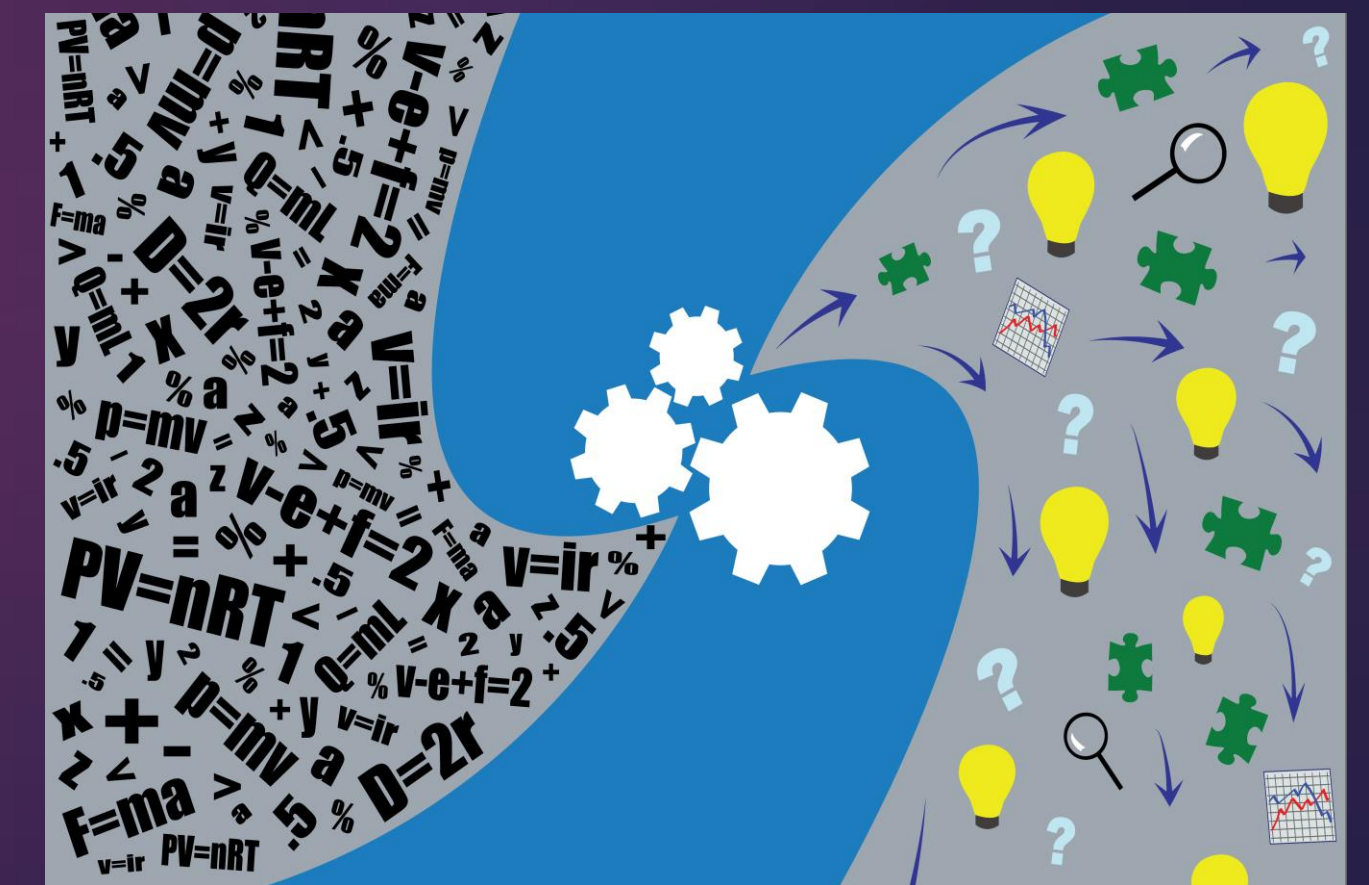
**MEDPRAT covers 100+ medical situations**

**Models thousands of what-if “scenarios”**

**Identifies adverse event likelihoods**

**Results defined space mission medical kit contents**

<https://www.nasa.gov/feature/nasa-develops-what-if-scenarios-to-protect-astronauts-predict-mission-events>





# The World Remade by COVID-19

(Deloitte April 2020)

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**The  
Passing  
Storm**

**Lone  
Wolves**

**Good  
Company**

**Sunrise in  
the East**

## Storm

- Relatively constrained disease
- Effective responses

## Wolves

- Severe, successive waves
- Weak policy & coordination

## Companies

- Prolonged pandemic
- Large Companies lead the response

## Sunrise

- Severe successive waves
- East Asia takes the lead

# Options for DoD Total Workforce Supply / Demand Analysis

Rand Study - [www.rand.org/t/rr543](http://www.rand.org/t/rr543)

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<u>Quantitative Techniques</u>	<u>Qualitative Techniques</u>
Ratio Analysis	Direct Managerial Survey
Time Series Analysis	Delphi Method / <i>ExpertLens</i>
Regression Analysis	Nominal Group Technique
Benchmarking Analysis	<b>Scenario Analysis</b>
Input-Output Modeling	
Generating Force Operator	
<u>Combined Techniques</u>	
Top-Down	
Acquisition/Sustainment Unit Model (ASU)	
Bottom-Up	
Censeo Procurement Workload Analysis Model (PWAM)	
Causal Cross Impact Analysis	



# Additional Resources

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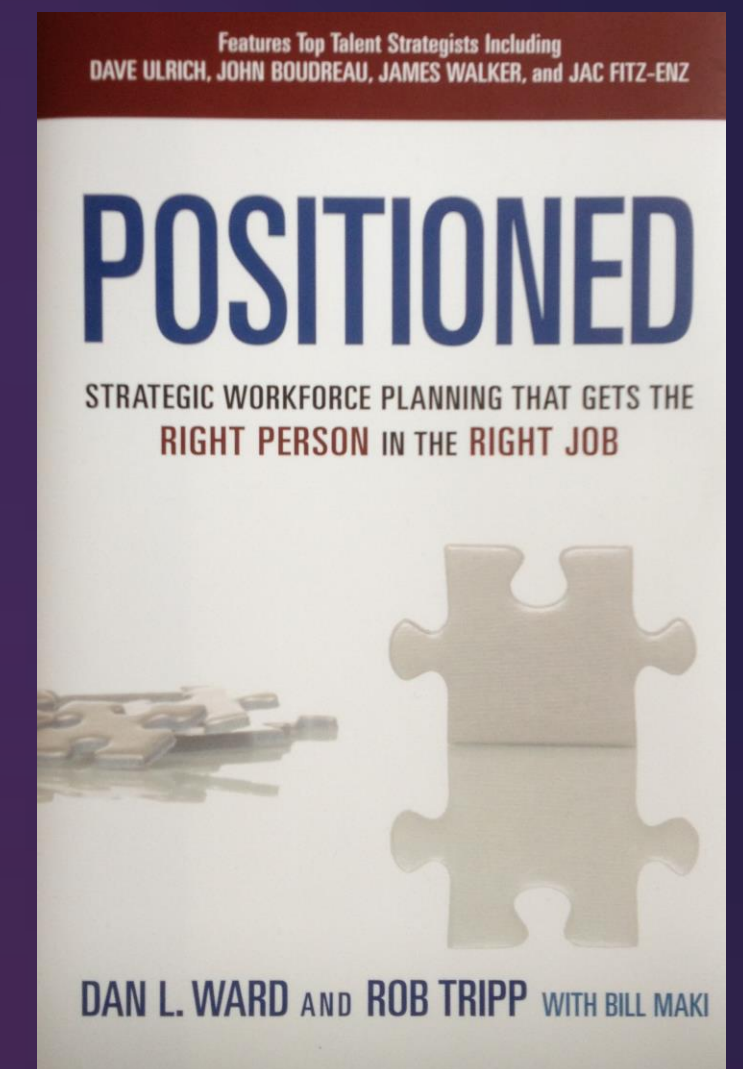
- **Peter Schwartz's Scenarios / COVID-19** [https://www.youtube.com/watch?v=Cbnc1fVz\\_FU](https://www.youtube.com/watch?v=Cbnc1fVz_FU)
- **Scenarios at MyoKardia** <https://www.hrps.org/resources/people-strategy-journal/Fall2019/Pages/goldberg-boyes-feature.aspx>
- **European Foresight Program** <http://www.foresight-platform.eu/>
- **Conference Board's Scenario Planning for Human Resources and SWP**  
<https://www.conferenceboard.ca/e-Library/abstract.aspx?did=6265&AspxAutoDetectCookieSupport=1>
- **Lynda Gratton - Future of Work** <https://www.youtube.com/watch?v=Jllu1Wq1nA>
- **NASA Scenario Planning workshop** <https://www.youtube.com/watch?v=Hfi9OaYtygU>
- **Oliver Baxter - TED Talk - Future of Work** <https://www.youtube.com/watch?v=XAFGRGm2WxY>
- **US Fish & Wildlife Scenario Planning Guide** <https://www.adaptationscenarios.org/guides>
- **Mars Bound Scenario for Students** [https://mars.nasa.gov/files/mep/Marsbound\\_Lesson.pdf](https://mars.nasa.gov/files/mep/Marsbound_Lesson.pdf)
- **U.S. Intelligence Community Human Capital Vision 2020**  
[https://www.dni.gov/files/documents/CHCO/US\\_IC\\_Human\\_Capital\\_Vision\\_2020\\_Strategy%202020\\_5\\_March\\_2014\\_U.pdf](https://www.dni.gov/files/documents/CHCO/US_IC_Human_Capital_Vision_2020_Strategy%202020_5_March_2014_U.pdf)
- **Rolf Smith 7 Levels of Change** <https://www.amazon.com/Levels-Change-Different-Thinking-Results/dp/1930819501>



# Any Questions?

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For fun: NASA Moon Kit

<https://www.nasa.gov/press-release/nasa-asks-what-would-you-pack-for-the-moon/>

**Plan for what is difficult while it is easy, do what is great while it is small** — *Sun Tzu*