


MIT MASSACHUSETTS INSTITUTE OF TECHNOLOGY


MIT Center for Transportation & Logistics



## Course Review

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MIT  
Cambridge, MA

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MIT CTL



## SC Management: Driving Strategic Advantage

- Tuesday:
  - Halloran Metals Case: Dr. Jonathan Byrnes
  - Beer Game & Debrief: Dr. Roberto Perez-Franco & Jim Rice
  - Reception at Champions (Marriott)
- Wednesday:
  - Intro to SC Financial Accounting and Analysis: Jim Rice
  - Dakota Office Products Case: Jim Rice
  - Working Capital & Cash-to-Cash Cycle: Dr. Jarrod Goentzel
  - Interview with Yannis Skoufalos, P&G CSO
  - Working Capital Simulation: Jarrod Goentzel
  - ResearchExpo
- Thursday
  - Zara Fast Fashion Case: Jim Rice
  - Global Supply Chain Business Case Simulation: Jarrod Goentzel
  - Supply Chain Risk Management: Jim Rice
  - SCREAM Resilience Exercise: Dr. Chris Caplice
  - Reducing Risk and Sourcing Sustainability: Dr. Alexis Bateman
- Friday
  - The Power of Resilience: Prof. Yossi Sheffi
  - SC2020: Rethinking Your SC Strategy: Roberto Perez-Franco

## Halloran Metals Case

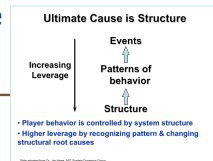
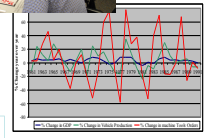
- Does Halloran have a strategy?
- Is it a good strategy?
- Allied & Halloran
  - Distinct strategies, competing in different ways – both can be successful
- Strategy
  - Deciding what you WON'T do!
- Alignment is critical
  - The supply chain must serve the business strategy

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## The Beer Game

- Playing the Game
  - Mayhem, limited data, uncertainty – similar to the real world
  - The winner(s) – The Keg.....OR Good Looking Team?
- Debrief
  - Tendency to respond to events
    - Events → manifestations of patterns
  - The possibilities: 10X improvement!
  - Key patterns found in SCs
    - Oscillation, Amplification, Phase Lag – the BULLWHIP EFFECT
  - Events → Patterns → Structure
    - Leverage at structure level

### The Beer Game



## SC Financial Analysis

- Income Statement cf. Balance Sheet
- Activity-Base Cost (ABC)
- Cash-to-cash Conversion Cycle

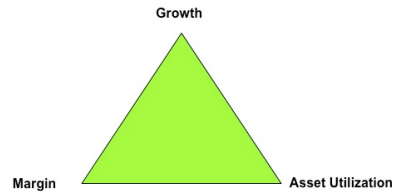
## Yannis Skoufalos Interview

- China market and dynamics
- Environmental Sustainability – not an NPV calculation, must be part of value offering
- From many DCs → few Mixing Centers
- Trending towards regional supply chains
- → E2E SC synchronization
- Relationships with government, customers
- 3 stakeholders: consumers, trade, employees
- Financial analysis of supply chains
  - Sales Growth
  - Margin Increase
  - Asset Efficiency
- Advice to students: pursue knowledge!



## SC Working Capital Simulation

- Sun Nutraceuticals:
- Distributor with high turnover, thin margins, breaking even, high receivables, flat growth....
- Considering investment options
- WACC vs Cost to borrow
- Cash constrained
- Balancing Margin – Revenue Growth – Asset Utilization



## Zara: Fast Fashion

- Zara business system
- Challenged the traditional, dominant SC design to disrupt the industry
  - From far-market, high labor content, low capital outsourced → near-market, low-labor, high capital vertically integrated SCs
- Integrated system, postponement, JIT, automation/selective labor use, daily demand sensing, short production runs, low risk testing new designs → Fast Fashion!
- Can a regional SC serve a global marketplace?

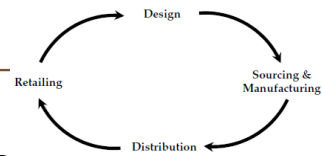
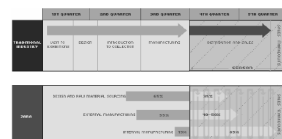


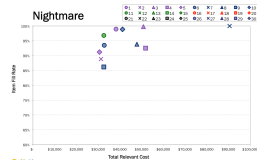
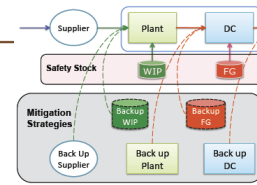
Exhibit 13 Product Postponement: Zara vs. Traditional Industry





# SCREAM

- Not all Sunny days ....choosing one policy for multiple scenarios
- Multiple ways to protect – at different costs
  - Different policies do well under different scenarios
  - Understanding the right scenario portfolio is key
- Downstream matters more than Upstream
  - Protecting the DC is more important than protecting the plant or the supplier
- Combination of Robustness & Flexibility
  - Typically most reasonable approach is mixed
  - Robustness to cover the Response Time for Back Ups
  - Flexibility (backups) relied on for longer term

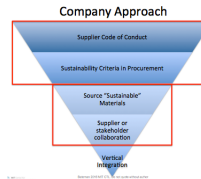
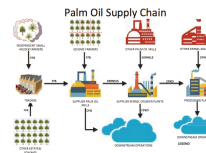
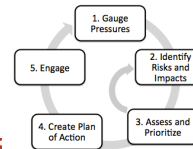


# Reducing Risk and Sourcing Sustainability: The Path to Supply Chain Transparency

- Social, Environment, Economy
- Supplier transparency & standards
- Palm Oil Supply Chain
- Transparency & Traceability
- External Partnerships and Industry Collaboration



Five steps to develop a sound Sustainable Sourcing Strategy



## The Power of Resilience

- Two ways to look at disruptions: sources and outcomes
- Detectability
- Alert applications
- Two cases: P&G and GM
- Resilience through redundancy and flexibility
- Flexibility DNA



## SC2020: Rethinking Your SC Strategy

- Lamynix and Zara cases
- We're biased toward gradual improvement, hard to imagine huge change
  - Revisit your latent assumptions about the future
  - Develop strategies for success for each future
  - Use scenario planning and risk management to prepare your supply chain for the future
- Four scenario possibilities
  - Millions of Markets, Naftastique!, One World Order, Global Marketplace
- Align SC strategy to support corporate strategy



## SCM: Driving Strategic Advantage

Today you leave MIT with:

- a tool set of frameworks and methods for thinking differently about designing and running your supply chain/supply network,
- many illustrations of these methods with examples of the great potential
- a new network of colleagues



**How will you apply these learnings?**

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## Thank you....

- ...For investing your time,
- ...For engaging so deeply,
- **...and for helping us with two final requests**

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## Two parting requests....

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- Give us your feedback
  - This helps us improve our program
  - 3-4 minute survey at
  - <https://www.surveymonkey.com/r/FVY2MWL>
- Tell others and.....
- Send a colleague to our next course
  - If you've had a good experience, tell a colleague and send him/her to a future CTL exec ed program

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