

# **Systems Considerations For Product Development**

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# Question To Ponder



A genie gives you the state of art systems you have always wanted: software, hardware ... fully working, zero conversion time ...

Would it make a difference?

# What's *In* a Word 1



## Systems

- Which Systems?

## Product Development

- What and Who are included?
  - Immediate (launch) perspective
  - Enterprise perspective
    - “Risk management starts with product design”
    - ...

# What's *In* a Word 2



**STRATEGY**

**TACTICS**

**EXECUTION**

**PEOPLE**

# Competitive Strategies



- Product manufacturer, distributor
- Producer-focused, customer-focused
- Compete on features, price, compensation, service, combination
- Market leader, fast-follower, other

# Porter's Competitive Strategy



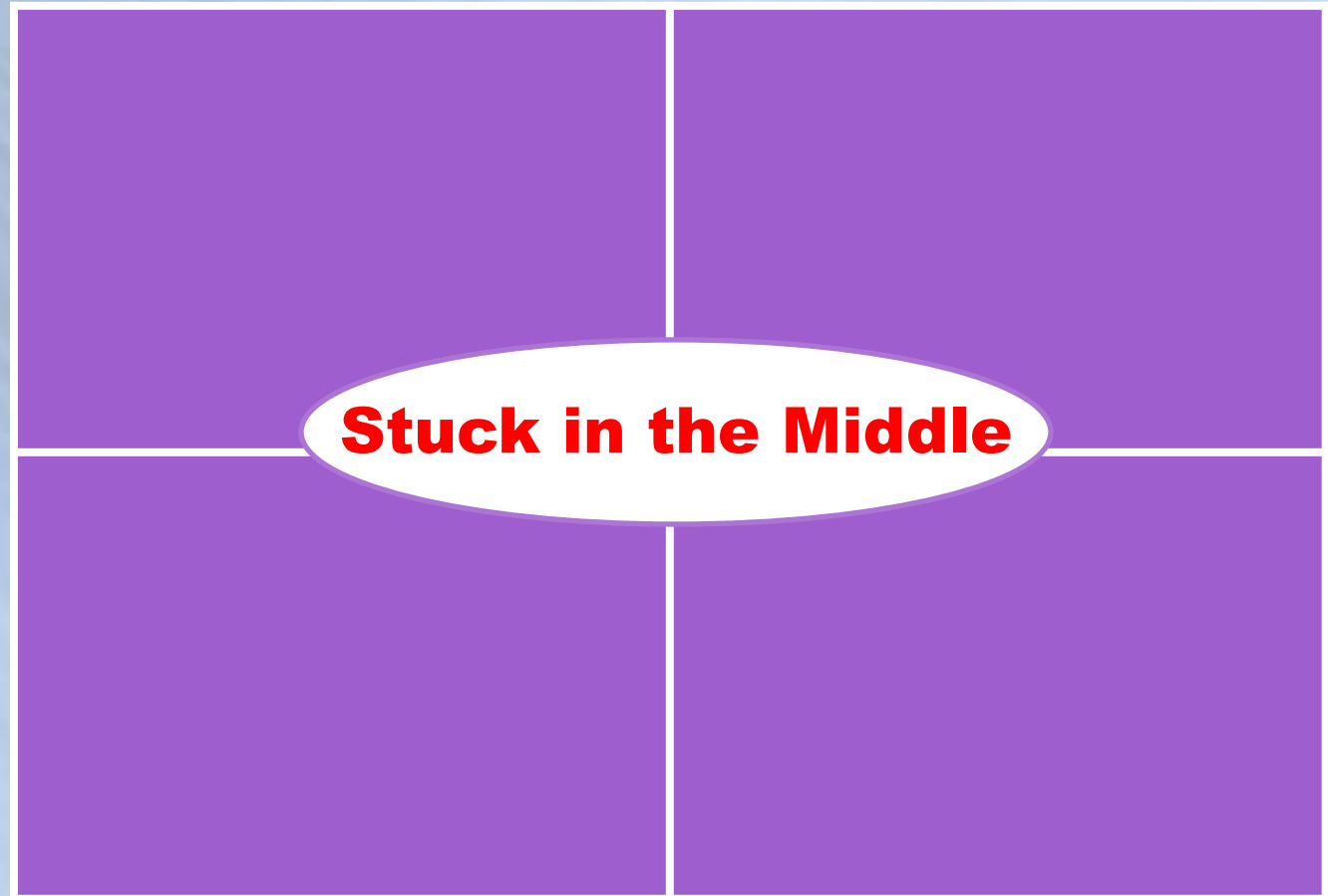
# Porter's Competitive Strategy



**Narrow**

**FOCUS**

**Broad**



**Low Cost**

**Differentiation**

# Competitive Advantages



Valuable?	Rare?	Difficult to Imitate?	Competitive implications
No	-	-	Disadvantage
Yes	No	-	Parity
Yes	Yes	No	Temporary Advantage
Yes	Yes	Yes	Sustained Advantage

Hard Sciences and Things

Soft Sciences, Processes, People

Disadvantage. Parity. Temporary

Sustained



# Product Development Process 1



Established roles, culture

A circular flow within a paradigm

- Well documented, predictable and repeatable product development process
- Cost-effectively manufacture and service
- Reusable adaptable components and templates
- Common calculation engines

Holds until a paradigm shift

- Technology, markets, products

# Product Development Process 2



## Project

Definition of success

Timeline: Start ... End

Activities

Committee and owners

Participants engaged

Communication, coordination or collaboration?

Done! Completed, Finished, Closed.

# Cost & Resource Planning 1a



Reprice? Slight Feature Changes? New?

HOURS	Term	UL CA	Def Ann	UL SG
Systems	700	1,750	750	2,250
Pricing	700	1,500	500	1,500
Compliance	750	1,000	1,000	1,000
Prod Dev Systems	200	400	250	500
Admin	150	250	150	200
Marketing	350	500	350	600
Legal	50	50	50	50
<b>Total Hours</b>	<b>2,900</b>	<b>5,450</b>	<b>3,050</b>	<b>6,100</b>
Mods	0	0	0	\$20,000
Consulting	0	0	0	\$25,000
<b>Total Cost</b>	<b>\$290,000</b>	<b>\$545,000</b>	<b>\$305,000</b>	<b>\$655,000</b>

# Product Development Process 1b



0 Idea generation begins, 1 Selection and translation  
2 Design and pricing begins, 3 Department sign-offs  
4 Approval, 5 Launch, 6 Follow-up & End

# Cost & Resource Planning 2a



HOURS	Term	UL CA	Def Ann	UL SG
Systems	700	1,750	750	2,250
Pricing	700	1,500	500	1,500
Compliance	750	1,000	1,000	1,000
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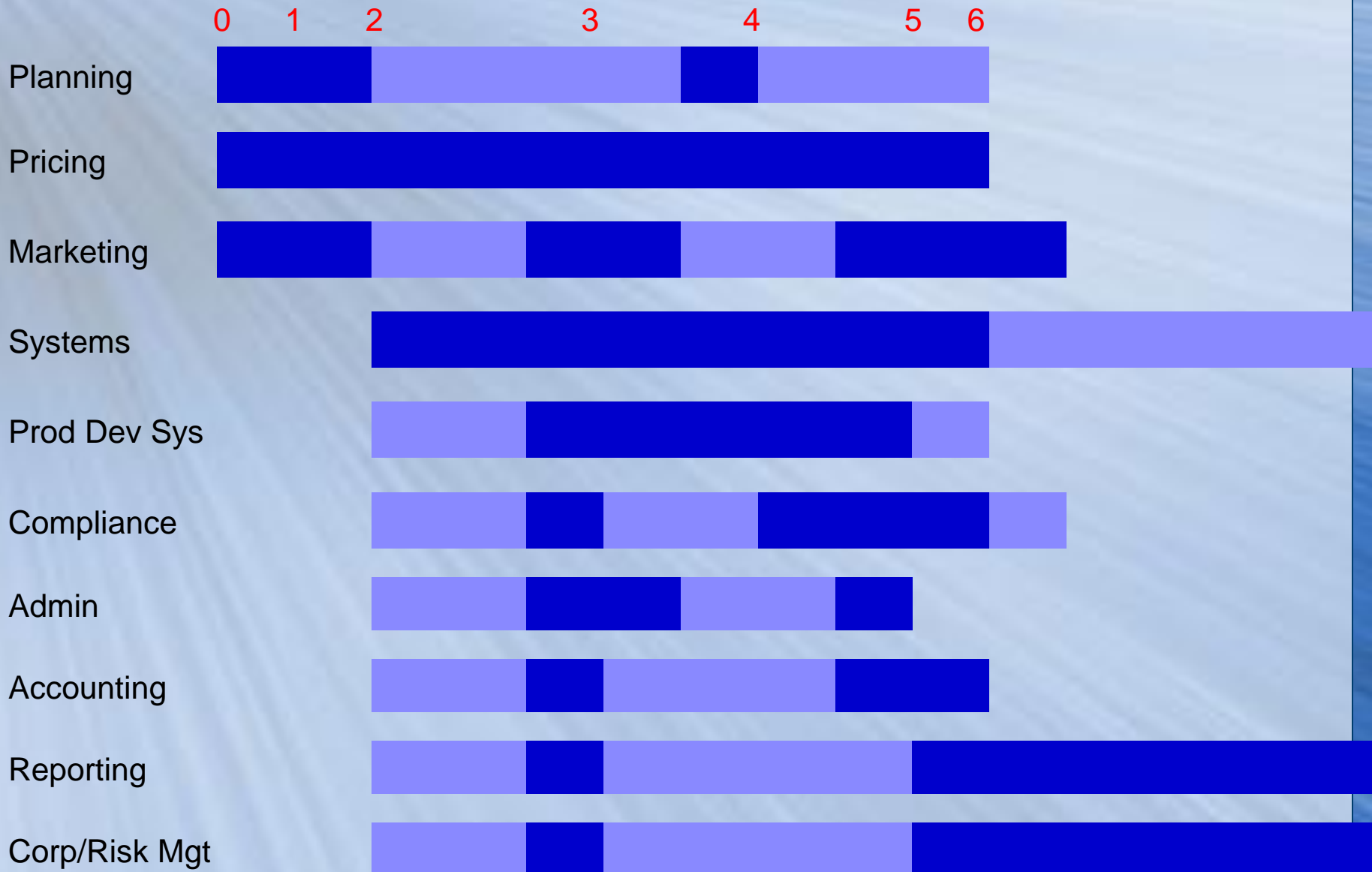
???

Reporting, Forecasting, Risk Management, Investments,  
Accounting, Audit, Controls, etc:

???

Time, Mods, Consulting, Mitigation Solutions

# Product Development Process 2b





# Fast Followers



Ability to clone the market leaders' products

Can you clone their advantages, infrastructures, and processes?

- Competencies
- Systems
- Risk profile
- Business Intelligence
- Underwriting
- Distribution
- ...

# Too Fast vs. Not So Fast



- Variable Annuities
  - GMxx
  - Transfer algorithms
- Universal Life with Secondary Guarantees
  - Shadows
  - Term
- Index Annuities
- Combo Products



# Systems



- IT largest department? budget?  
non-percent of premium expenses?

- Strategic alignment

- Where should IT use its resources?
- Where does IT use its resources?

New products	10-20%	20-35%	10-20%
Infrastructure	15-25%	20-30%	15-20%
Distribution	10-20%	15-25%	10-20%
Maintenance	5-10%	5-10%	5-15%
Compliance/Business	25-40%	15-25%	25-40%
Acquisition	5-10%	0-5%	15-20%

- Hardware
- Engaged throughout process or given marching orders

# Low Cost



Simplicity

Distribution

Efficiency

Scale

Focus

Discipline

- Underwriting

Execution

Business intelligence

# Systems: Ignore At Own Peril



Direct administration

Underwriting

Illustration

Communication

Accounting

Investments

Financial / Reporting

Claims

Corporate / Risk Management

Reinsurance. Hedging

Experience

Hardware

# Know Thy True Costs 1



- Tracking costs
  - Product, Day 2 and maintenance costs
  - Allocations
  - New vs. maintenance
  - When is a project closed out?
- Day 2
- Manual work-arounds
- Exceptions
- Underwriting mortality
- Never ending not quite working projects

# Know Thy True Costs 2



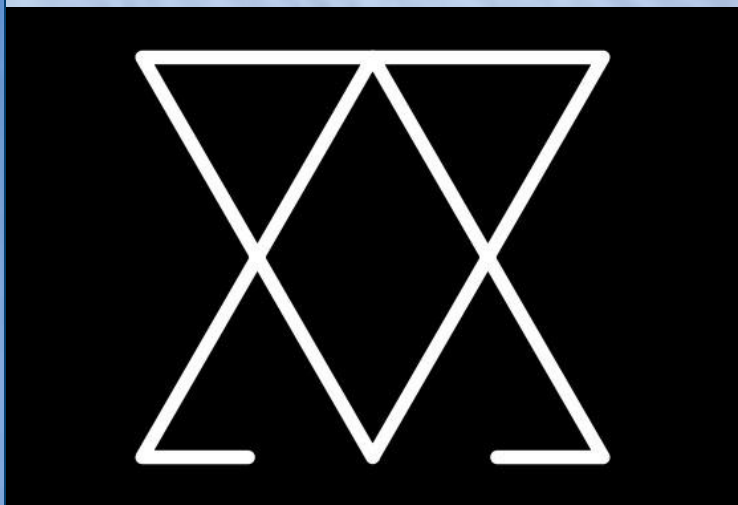
- Decisions & Business Intelligence
  - Experience and assumptions
  - Data – integrity, capture, monitor
  - Data errors and missing data
    - Inputs, calculations, outputs
  - Management
  - Reporting
  - Risk mitigation solutions
  - Yesterday's solutions are today's problems
  - Opportunity costs



# Anecdotes



Mountains  
Wreckage  
Convolutud  
Toxic Waste  
Acquisitions



# Go The Distance



- Commission system
  - Cut a check vs. financials
- Operations
  - Ability to change rates
    - COIs
    - Credited Interest
    - Asset based fees
  - Interfaces
    - Sales/wires
    - Applications

# Considerations 1



## Project

- Define what's, capabilities, functionalities
- Define how's

## Robust\*

- capable of performing without failure under a wide range of conditions
  - e.g. robust software

## Flexible\*

- characterized by a ready capability to adapt to new, different, or changing requirements

\* Merriam-Webster



# Considerations 2



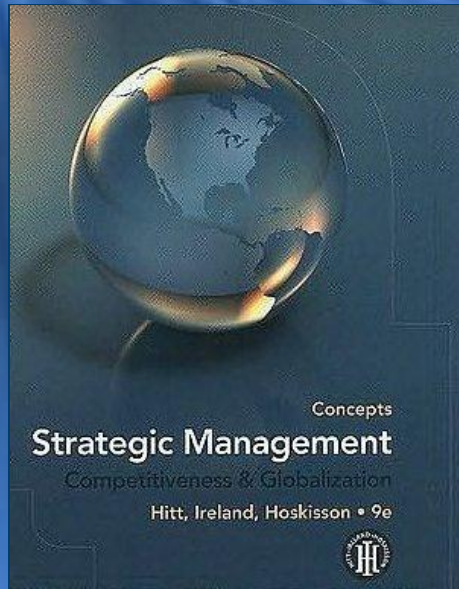
- Input, business rules, calculations, output
- How are these the same?
  - GMIB ... GMWB
  - ULSG, with 1 shadow, 2 shadows, 3 shadows
- Time, effort and manpower
  - Compliance exercises
  - Cash values
  - Illustrations
  - Interpolating price points
  - Uploading values to admin systems, reporting and corporate models
  - Validation

# Considerations 3



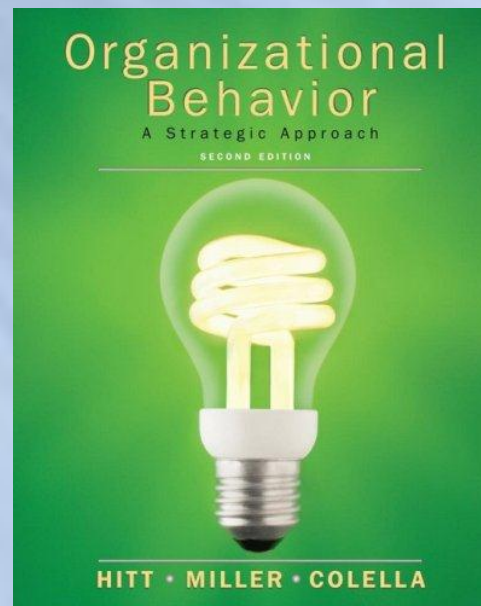
- Investments vs. expenses
- Short-cuts vs. operational efficiencies
- Best practices - study, borrow, steal
  - What's **and** how's
- Design and implementation change orders
- Process silos: coordination vs. collaboration
- Questions
- Conflicts

# FSA and MBA and CERA



Describe and explain the concepts, frameworks, and Basic methods of **strategic management**. Evaluate and assess the numerous factors that comprise and affect the development and implementation of strategies.

Explain and evaluate how the **behavior** of individuals in organizations drives **organizational decisions** and performance.



Leadership  
Communication  
Transparency  
Decision making  
Styles  
Pitfalls/biases  
Groups and Teams  
Conflict, Power  
Organizational Culture

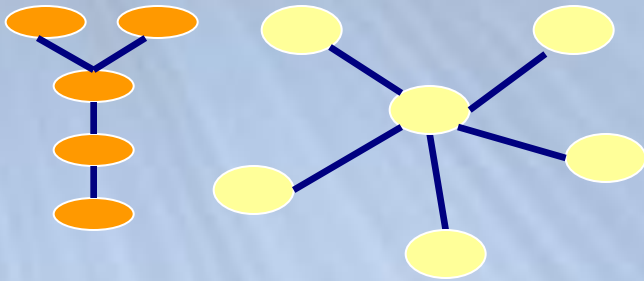
# Culture



- Structure
- Networks/Patterns of work

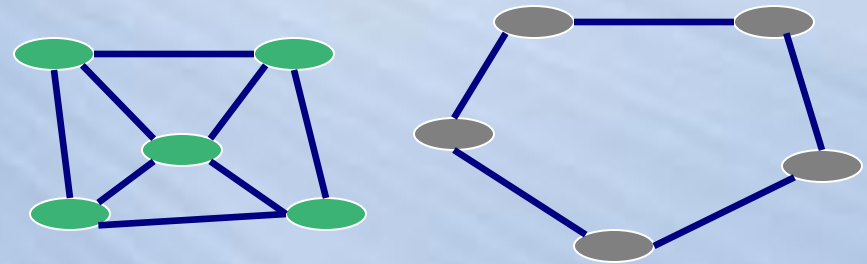
## Centralized Networks

- Command-and-control hierarchy
- Simple tasks
- Efficiency, speed, accuracy



## Decentralized Networks

- Complex tasks
- Solving complex problems



- Development and Reinforcement Processes
- Team Life Cycles. Organization Life-cycles and Changes
- Competing Values Model
- High Involvement Management



# Organizational Structure

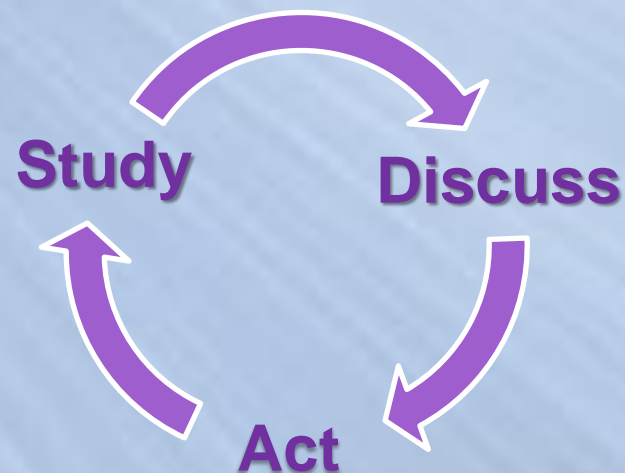


- Structural characteristics
  - Height; Span Of Control; Departmentation
- Structuring characteristics (policies/approaches)
  - Centralization; Standardization
  - Formalization; Specialization
- Labels
  - Organic vs. mechanistic
  - Learning vs. non-learning
  - Boundary-less vs. traditional
- Role of size

# Takeaways



- Align with strategy
- Behavior drives decisions and performance
- Speed and adeptness can be developed
- Know the whole cost picture
- Not easy
- Today's solutions are tomorrow's problems
- Competitive advantages
- What you can do



# Suggested Readings



- Cardinal, Tim and Li, Jin, “ERM and Business Intelligence—Lessons from World War II Codebreakers,” *Contingencies*, March/April 2011.
- Cardinal, Tim and Li, Jin, “Follow The Leader,” *Contingencies*, March/April 2012.
- Cardinal, Tim and Li, Jin, “Strategic Organizational Behavior: Finding the Right ERM Fit” *The Actuary*, February/March 2011.
- Hitt, M., Miller, C. and Colella A. *Organizational Behavior: A Strategic Approach*, 2nd ed. Hoboken NJ: Wiley, 2008
- Hitt, M., Ireland, D., and Hoskisson, R. *Strategic Management: Competitiveness and Globalization, Concepts* South-Western College Pub, 2008.

# Questions



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