BUSINESS CONCEPTS FOR LIFE SCIENTISTS
A FREE ONLINE COURSE IN BUSINESS STRATEGY, FINANCE AND BUSINESS DEVELOPMENT

Business Strategy as a Scientific Skill:
Environmental Assessment Toolkit

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By the end of class you will be able to:

1. Describe commonly used tools for environmental assessments
2. Explain the benefits of doing the analyses
3. Identify which tool applies best in a given setting
4. Use one or more tools to describe the operating environment of a scientific enterprise
Strategy is how a scientific enterprise plans to conduct activities in order to achieve a set of overarching goals.
Strategy

• Objectives
• Priorities
• Get SMART

Current State
• Mission, values
• Internal assessment
• Environmental assessment

Desired State
• Vision
• Long-term objectives

The Structure of Strategy

Strategy is how a scientific enterprise plans to conduct activities in order to achieve a set of overarching goals.
Environmental assessments are complex
Assessment tools are a framework

- Facilitate conversations
- Organize knowledge
- Maintain focus
Assessment tools are a framework.

Four Corners

SWOT

Drivers

Assumptions

Strategy

Capabilities
The ubiquitous SWOT

POSITIVES
INTERNAL
Strengths
EXTERNAL
Opportunities

NEGATIVES
INTERNAL
Weaknesses
EXTERNAL
Threats
SWOT example: Product X

**STRENGTHS**
- Convenient: oral or subcutaneous
- First to market
- Broad approvals
- High awareness

**WEAKNESSES**
- Efficacy perceived to be weaker than competition
- Missing data in critical patient subset
- Requires fasting

**OPPORTUNITIES**
- New, more-convenient dosing
- Leverage relationships with distributors
- Capture new patients through DTC campaign

**THREATS**
- New competition has convenience + efficacy advantage
- Dissatisfaction with price increases
- Upcoming patent expiry
When to use a SWOT

**Benefits**
- Widely applicable
- Well understood

**Drawbacks**
- Less comprehensive in a dynamic market

**Ideal setting**
- Stable markets
- Competition is most important environmental driver
### PEST:
Evaluating environmental forces

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Political
- Regulatory environment / trends
- Congressional advocates & detractors

Economic
- Funder budgets
- Institutional finances

Social
- Public perceptions of your technology
- “Hot” research areas

Technological
- Available research tools, supporting science
- Competing technologies
When to use PEST

**Benefits**

- Nuanced consideration of influences from indirect stakeholders
- Can capture unknowns / changing landscape

**Drawbacks**

- Less familiarity
- Unhelpful when PEST forces are constant and the same for all competitors

**Ideal setting**

- New technology / pushing social norms
- Unknown / untested regulatory environment
Ideal setting for PEST

Gene-edited CRISPR mushroom escapes US regulation

First proposed human test of CRISPR passes initial safety review

New Prospects for Growing Human Replacement Organs in Animals
Four Corners: Get inside your competitors’ heads

Drivers
- Goals and values
- Culture and organization
- Philosophy

Strategy
- Self-described strategy
- Investments, relationships
- Degree of success

Assumptions
- Perceived strengths and weaknesses
- Perception of market

Capabilities
- Assets and competencies
- Ability to adapt to changes
When to use Four Corners

Benefits
- In-depth profile
- Helps anticipate other enterprises’ strategies

Drawbacks
- Captures one competitor (or stakeholder) at a time

Ideal setting
- Anticipating competitive strategy, particularly in absence of data
- Get in the mindset of other enterprises
- Evaluate a potential employer!
The Structure of Strategy

Strategy is how a scientific enterprise plans to conduct activities in order to achieve a set of overarching goals.
You should now be able to:

1. Describe commonly used tools for environmental assessments
2. Explain the benefits of doing the analyses
3. Identify which tool applies best in a given setting
4. Use one or more tools to describe the operating environment of a scientific enterprise