

Driving Medical Device Innovation in a Large Corporation

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Growth is Imperative

- Ongoing Commercial Success
Translates into Greater and Greater
Capital Market Expectations
- Growth targets Can be Met in Two
Ways
 - Making the Most of Existing Business
 - Finding and Growing New Business

Innovation is Imperative

“There are no strategies for creating wealth in the long term that are not driven by innovation”

Gary Hamel, 2004

Innovation is Hard

- Uncertainty
- Risk
- Ambiguity
- Competing with Sustaining the Existing Business
- Lack of Process or Consistency in Approach

When Capabilities Become Disabilities

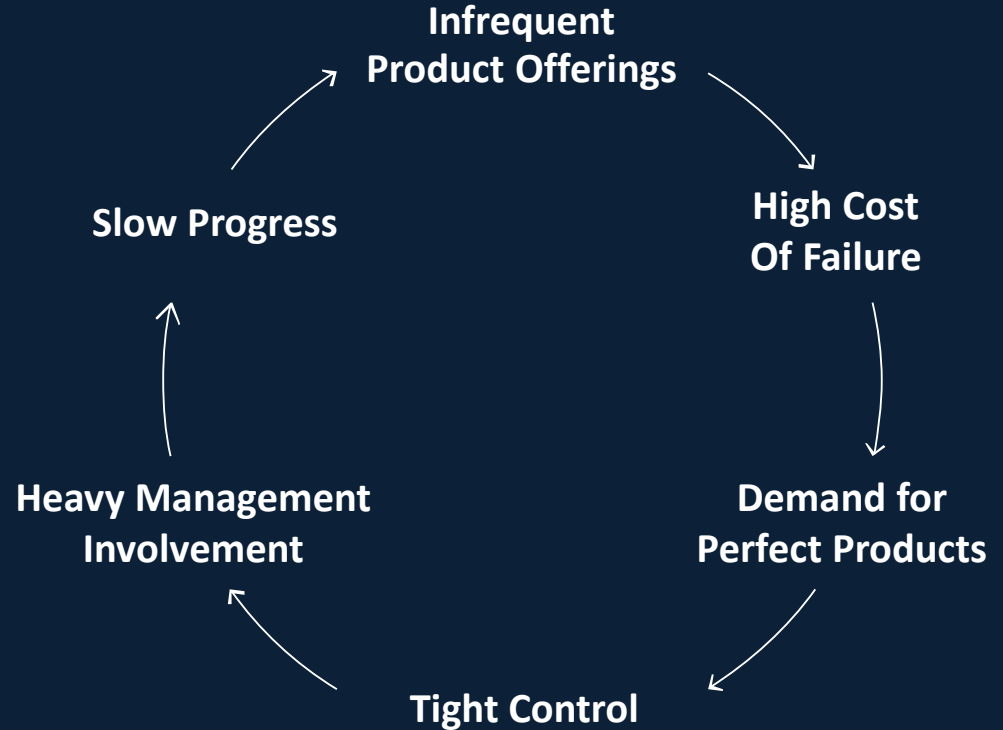
Big Company

- Regulate
- Highly Structured
- Capture Existing Markets
- Manage People
- Uni-functional Responsibilities
- Group Responsibility
- Employee Attitude
- Risk is Opportunity to Fail
- Process Observers / Followers
- Evolution

Small Company

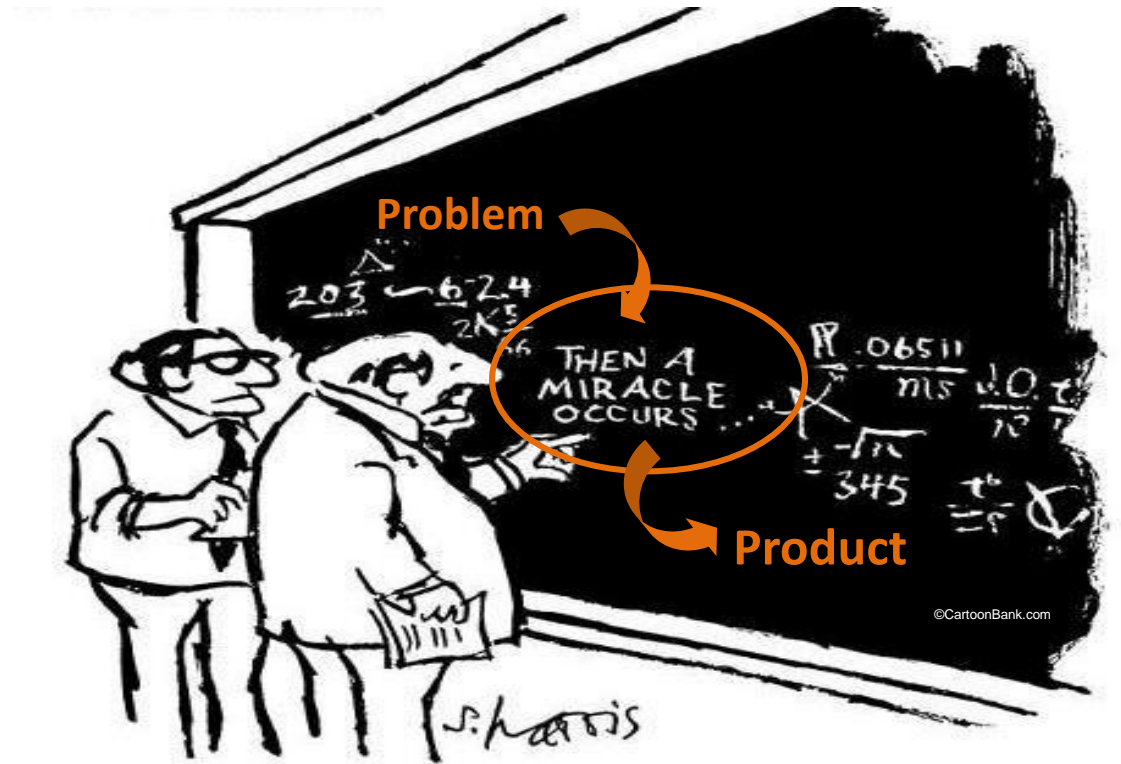
- Innovate
- Little/No Structure
- Create Markets
- Manage Products
- Multi-Functional Responsibility
- Individual Responsibility
- Owner Attitude
- Risk is Opportunity
- Process Involved / Developers
- Revolution

Break the Mega Project Cycle

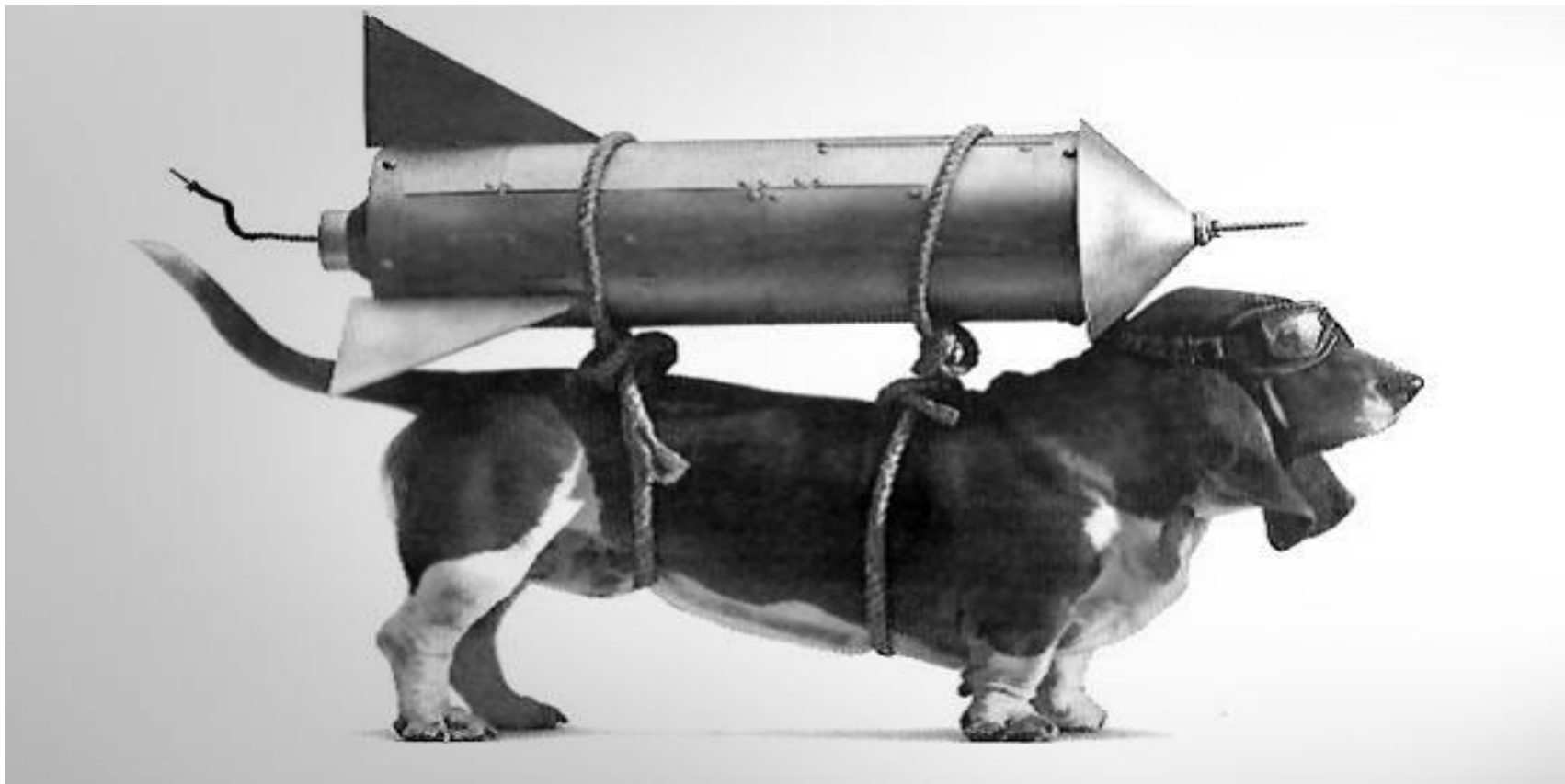


Innovation Process

“I think you should be more explicit here in step two.”



Go Faster



Fortification versus Exploration

Defending the Existing Business versus Creating New Opportunities Through Innovation

Fortification

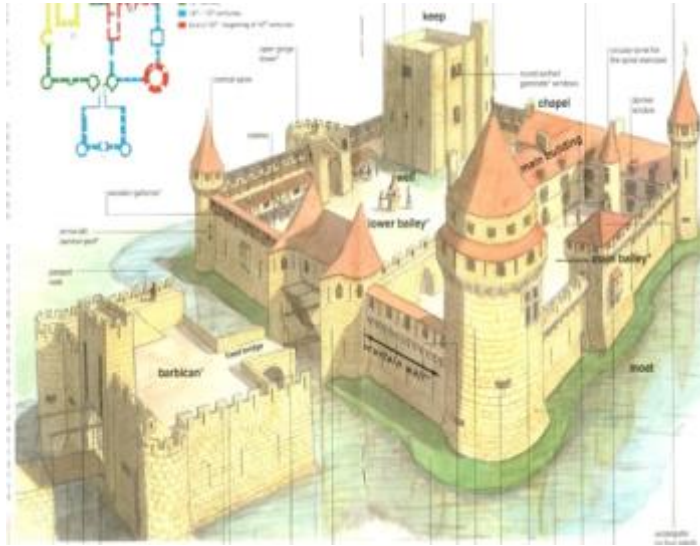
- The Future of the Current Business
- Extending the Current Set of Products and Technologies
- Designed to Preserve Market Share and Sustain Profits

Exploration

- The Future Business
- Technology Innovation and New Services, Beyond Sustaining
- Designed to Create New Markets and Generate Growth and Profits

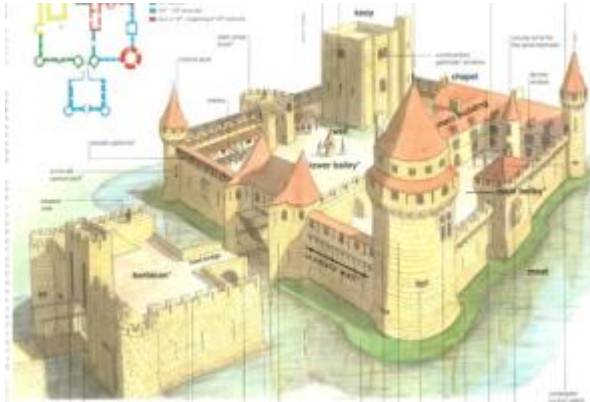
Fortification versus Exploration

Defending the Existing Business versus
Creating New Opportunities Through Innovation



Castles and Ships

- A Useful Analogy
- Different Skills and Processes for Front End and Formal Development
- Applicable to People, Process, Portfolio, Metrics ...



People

Selecting Your Crew

- Seek out crew members who are successful graduates of the right “School of Experience”
- Mix of technical skills, cross functional experiences, and market understanding
- Resourceful problem solvers
- Comfortable with ambiguity
- Able to navigate corporate processes

Setting Direction

- Before setting sail, first have a sense for where you are headed
 - Historical perspectives
 - Customer input
 - Observational research
 - Competitive assessment
- Admirals, their ships, and their crews must be given some measure of autonomy

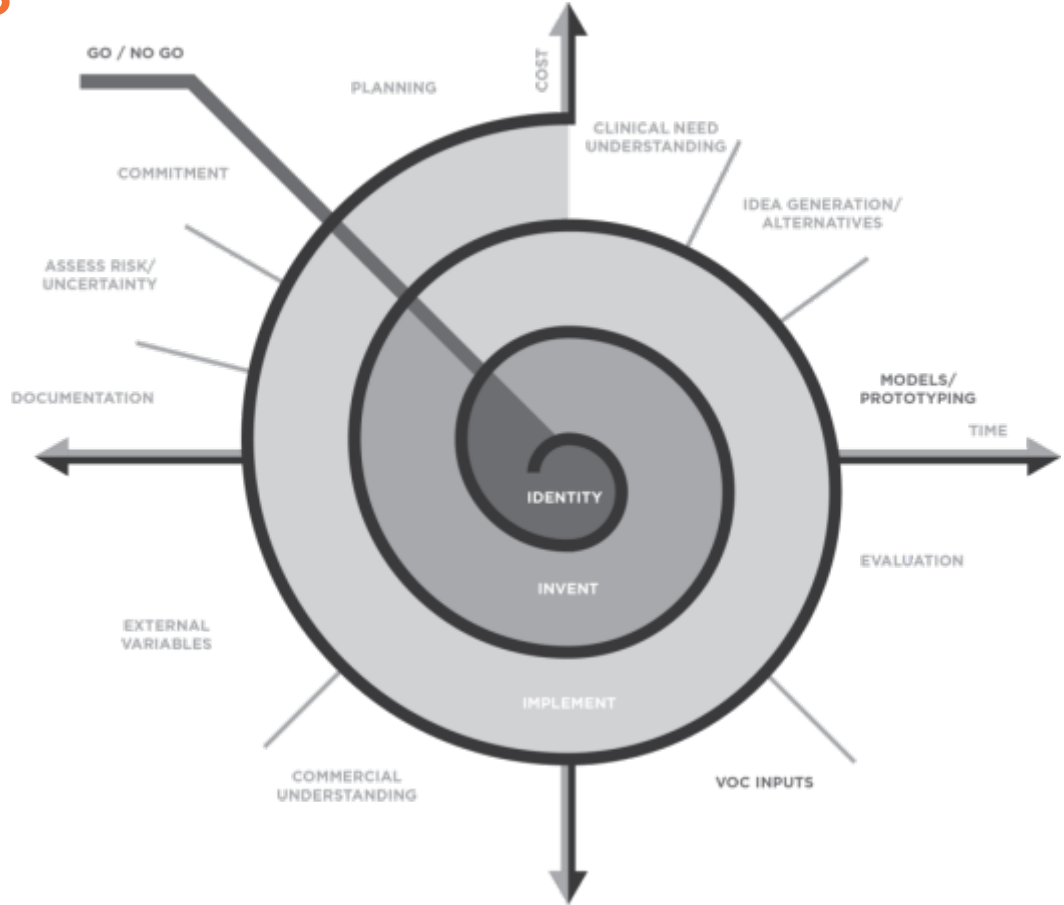
“A ship that stays within site and control of land is unlikely to make surprising discoveries”

Process

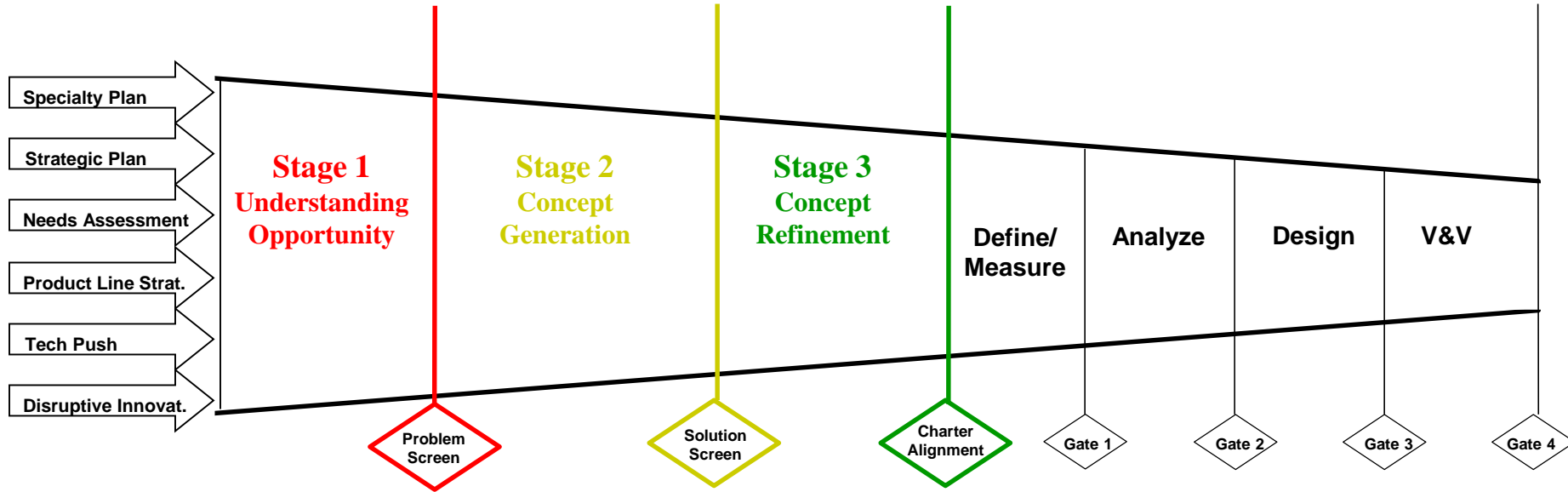
- Traditional waterfall or stage-gate development models are often inadequate for early stage innovation
- Early stage innovation is hypothesis driven and requires a process that accommodates incremental learning

Front End Process

- 3 Phases
- Incremental Development
- Risk Reduction
- Iterative Modeling and Customer Evaluation
- Milestone Driven

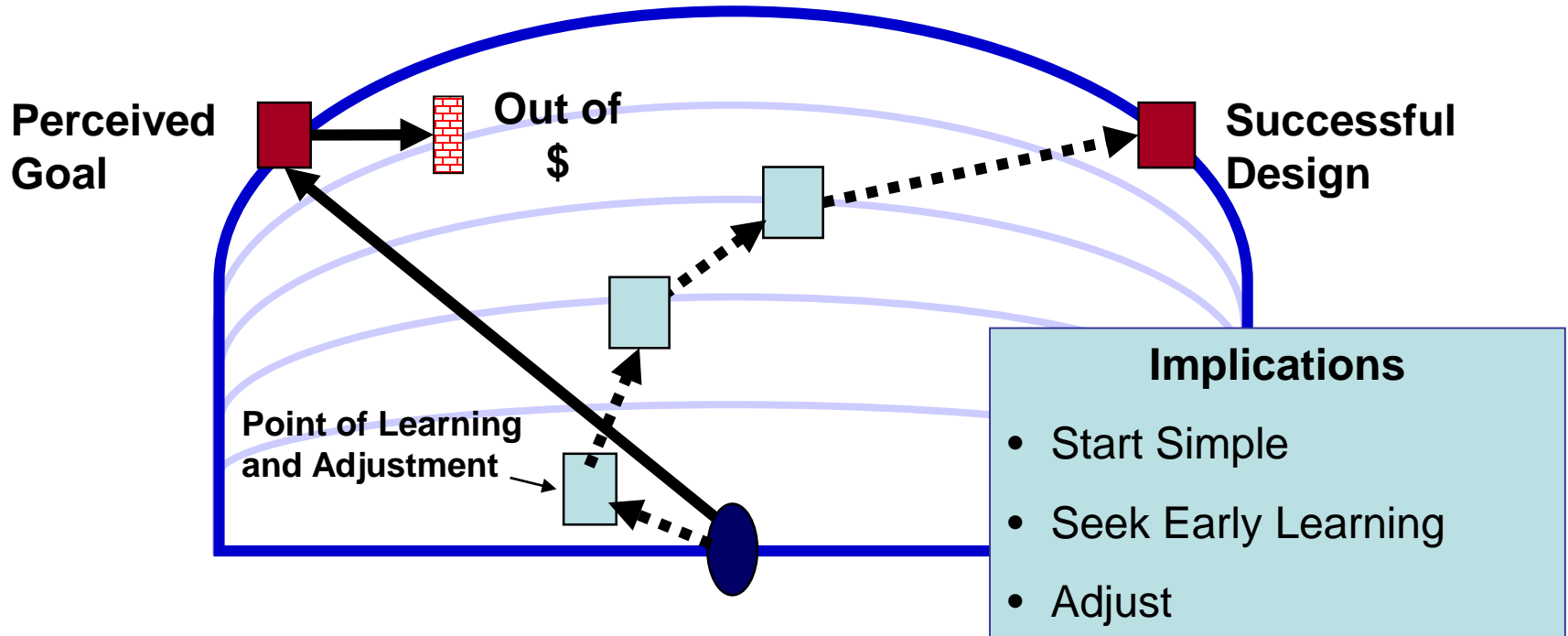


Stages and Milestones Track Progress



- Clinical, Technical, Commercial, and Organizational Milestones for Early Development
- Increasing Levels of Review As Project Progresses

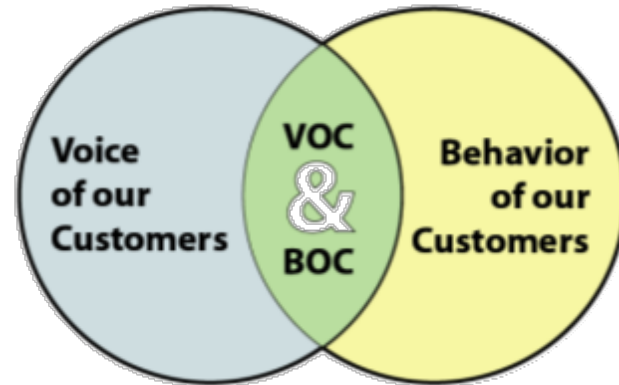
Avoid Too Big, Too Early



Understand What Others Don't

Blending traditional and non-traditional research techniques

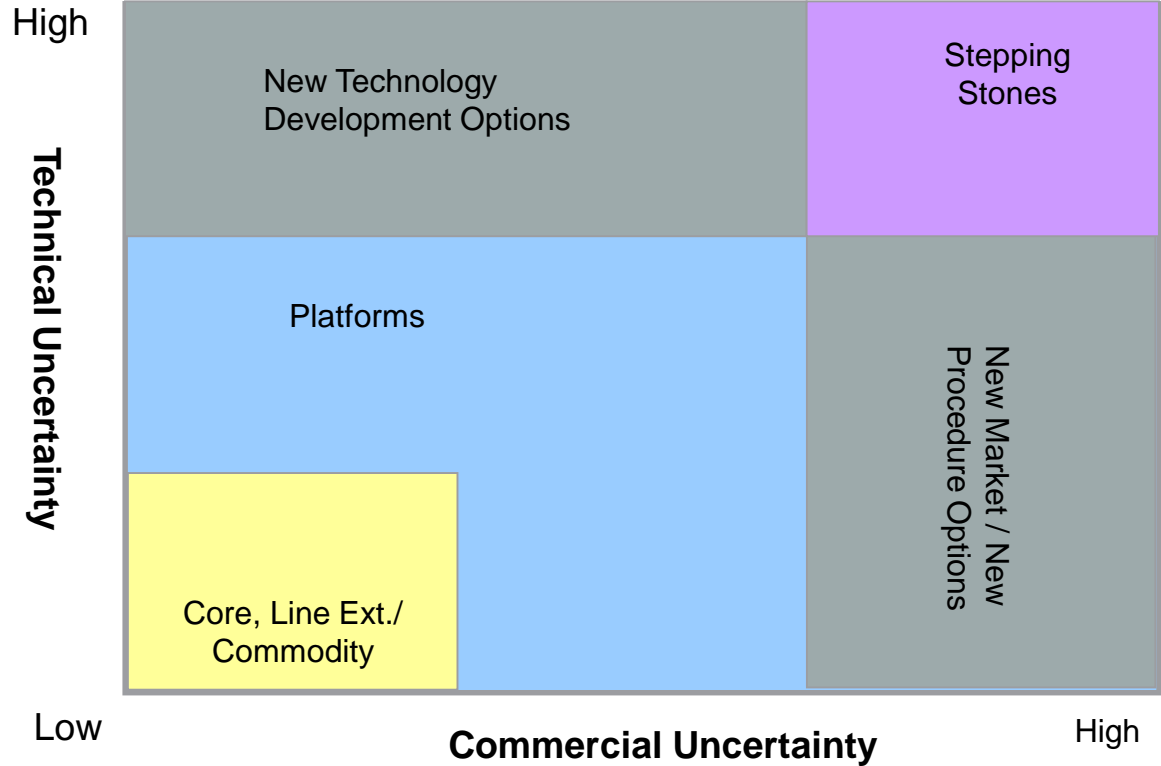
- Market Research
- Ethnographic Research



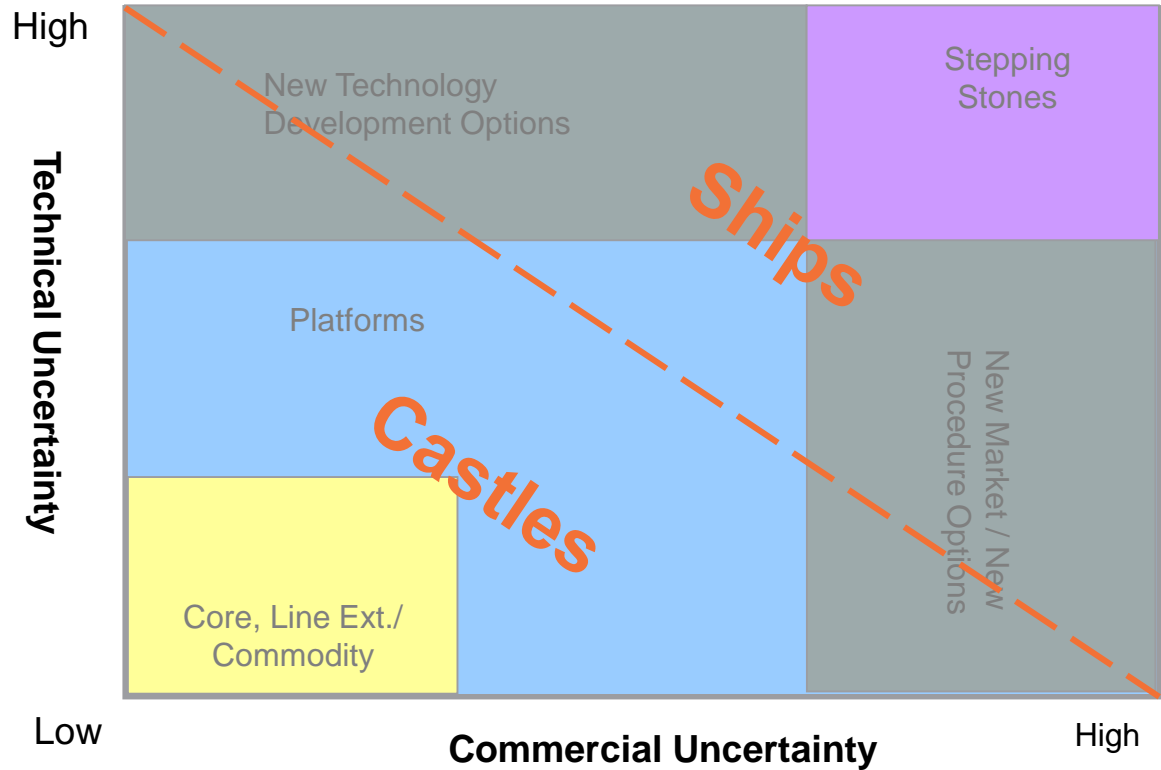


*"If I'd asked my customers what they wanted, they'd have said a faster horse."
Henry Ford (regarding the first car he ever built)*

Portfolio



Portfolio



Metrics

Traditional

- Growth Rate
- Percentage Revenue from New Products
- Time to Market

New Market Innovation

- Growth Rate Above Market
- Percentage Revenue from First-to-Market Products
- Time to Breakeven

Caveat

- Castles will almost always appear more financially attractive
 - Perception of lower risk in established markets and technologies
- The goal of early stage concept exploration and development is to reduce risk in innovation

Innovation is
Messy

and it Takes
Work

“Opportunity is missed by most people,
because it shows up dressed in overalls
and looks like work”

Thomas A. Edison

Approaches to Developing Capability

Skunk Works

Innovation Centers

Dedicated Cross Functional Teams

Start-Ups within the Larger Organization



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- Requires Balance
 - Autonomy is Critical, But Re-Integration Provides Growth
- Relationships Must Be Maintained

Thank You

