Winning at New Products

Stage-Gate® A Proven Roadmap for New Product Success
Workshop Agenda

8:30  Refreshments/Networking
9:00  Introduction, Opening Remarks
9:30  New Products – The Business Imperative, featuring Heritage Memorials (Steve)
10:15 Winning and Failing – The Critical Success Factors, featuring Acadia (Donna)
10:45  Networking Break
11:15 Principles of the Stage-Gate® Model, featuring Springboard Atlantic (Chris) & Nova Agri (Nancy)
12:15 Lunch
1:00  Generating Ideas in the Discovery Stage
1:30  Walk-thru of Stage-Gate, the Early Stages, featuring Université Sainte-Anne (Gustavo)
2:15  Rapid Development Stage, featuring Singolar (Suman) & Acadia (Danny) & Kenney & Ross (Richard)
2:45  Networking Break
3:15  Commercialization, featuring NSCC (Matt & Beth), Université Sainte-Anne (Val), Acadia (Matt) & GubGub (Sarah)
4:00  Wrap-up, Q&A and Next Steps- Available Resources
4:30  End of Event, Thank You!
Thank You
to our Workshop Hosts and Sponsors
Workshop Leader – Michelle Jones

- Michelle Jones is Executive Vice President and Chief R&D Officer of Stage-Gate International (SGI) and is a speaker, author and consultant on the topic of product innovation. She leads the commercialization of some of the world’s best practice research on innovation into products, services and learning programs for companies striving to achieve innovation excellence.

- Michelle has worked with an impressive portfolio of companies and has 25 years of innovation experience across several industries including Aerospace, Automotive, Chemical, Consumer Packaged Goods, Defense, Electronics, Energy, Financial, Manufacturing, Medical, Pharmaceutical and her specialty, Agriculture and Food. She coaches and consults business executives and their teams to new product success by designing and implementing innovative strategies; optimized portfolios; governance models; global-scale innovation management structures; ideation models; open innovation programs and purpose-built Stage-Gate® Models to accelerate ideas to profit.

- Michelle holds a Masters of International Business Administration degree from the University of Western Ontario, Food and Nutrition from Guelph University, a Specialist Certificate in Project Management from McGill University and is a certified New Product Development Professional (NPDP). Prior to joining SGI, Michelle was a senior manager in KPMG’s (now Bearing Point) Business Transformation Consulting Services where she specialized in leading the design and implementation of complex, organization-wide post-merger process integration and change projects.
The Quest for Top Line Growth – A Strategic Decision

**Where to Play?**

- **EXISTING Markets**
- **NEW Markets**

**How to Win?**

- **EXISTING Products, Production & Technology**
- **NEW Products, Production & Technology**

- **Market Development**
- **Business Development**
- **Breakthrough Innovation**
- **Product Development**

Source: SGI Adaptation of Ansoff Matrix
A Strong Interest in Breakthrough Innovation and New Products

- Many definitions. Why? The term has currency in the business community

- Creativity = new ideas.
  - ability to think and act in ways that are new and novel

- Inventions = new technical developments.
  - technical accomplishment not yet introduced or achieved

- Innovation = value creation.
  - translating an idea or invention into a product or service that creates value or for which customers will pay.
What is a **New** Product? Many degrees of **New**!

**New** presents opportunity for reward but also risk

Source: Winning at New Products, SGI

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The Bottom Line - Quest For Profitability

- Organizations are leaning out to improve profitability....
  - Cost-cutting improves profitability, but it does not achieve top line growth
  - You can only cut so much

- Organizations want PROFITABLE GROWTH
New Product Performance Benchmarks and Comparison

- % of developments successful (success rate)
  - Worst Performers: 14%
  - Middle Business: 26%
  - Best Performers: 45%
- % of developments that fail (failure rate %)
  - Worst Performers: 27%
  - Middle Business: 36%
  - Best Performers: 45%
- % of projects on budget
  - Worst Performers: 14%
  - Middle Business: 26%
  - Best Performers: 45%
- % of projects on schedule
  - Worst Performers: 26%
  - Middle Business: 45%
  - Best Performers: 60%
- % of projects that met profit objectives
  - Worst Performers: 37%
  - Middle Business: 50%
  - Best Performers: 72%
- % of projects that met sales objectives
  - Worst Performers: 40%
  - Middle Business: 52%
  - Best Performers: 75%
- % of projects that met mkt share targets
  - Worst Performers: 43%
  - Middle Business: 48%
  - Best Performers: 66%
- % of revenue coming from NPs
  - Worst Performers: 17%
  - Middle Business: 28%
  - Best Performers: 47%
- % of profits coming from NPs
  - Worst Performers: 11%
  - Middle Business: 25%
  - Best Performers: 44%

Source: SGI-APQC Research Study 2014

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US Food Industry Benchmarks

Percent of Business’s Sales, Incremental Sales & Profits Coming from New Products Launched in Last 3 Years

- **% of sales from NPs**
  - Bottom 25% of Businesses: 5.8%
  - Average Business: 16.3%
  - Top 25% of Businesses: 20.0%

- **% net incremental sales from NPs**
  - Bottom 25% of Businesses: 5.3%
  - Average Business: 21.6%
  - Top 25% of Businesses: 30.0%

- **% of profits from NPs**
  - Bottom 25% of Businesses: 5.2%
  - Average Business: 16.7%
  - Top 25% of Businesses: 20.0%

Source: SGI-IFMA Research Study 2014

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US Food Industry Benchmarks

Percentage of New Product Projects that are Commercial Successes, Moderate Successes or Failures within the past 3 years

- **Commerciy successful**: Bottom 25% of Businesses (10.6%) vs. Top 25% of Businesses (74.0%)
- **Moderate commercial success**: 45.7%
- **Commercial failures**: 6.4%
New Product Development Performance

Best performers enjoy significantly higher NPD performance and project success rates...

- Overall project success rate: +1.4 X
  - Top 20% performers: 62%
  - Bottom 20% performers: 45%
- % projects that meet sales objectives: +1.9 X
  - Top 20% performers: 75%
  - Bottom 20% performers: 40%
- % projects that meet profit objectives: +1.9 X
  - Top 20% performers: 72%
  - Bottom 20% performers: 37%
- % projects on budget: +1.9 X
  - Top 20% performers: 67%
  - Bottom 20% performers: 36%
- % projects on time: +2.3 X
  - Top 20% performers: 60%
  - Bottom 20% performers: 26%

... best performers use the Stage-Gate® model to win at new products

- 90% use formal Stage-Gate process
- 3/4 adapt and scale their process to project risk
- 3 X times more likely to view process as an enabler
- 85% use clear Go/No-Go Gate criteria

Source: SGI-APQC Research Study 2014

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“There are two ways to win at new products. Pick the right projects and do projects the right way.”

- Dr. Robert G. Cooper and Dr. Scott Edgett, globally recognized experts in innovation management and co-founders of Stage-Gate® International
Right Projects Right
## Pick the Right Projects

### Benchmark Comparison: Typical Mix of NPD Projects

<table>
<thead>
<tr>
<th>% Allocation of NPD Investment by Class</th>
<th>Worst Performers</th>
<th>Average Business</th>
<th>Best Performers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotional Developments, Price Changes &amp; and Packaging Changes</td>
<td>17.1%</td>
<td>13.0%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Incremental Product Improvements and Changes</td>
<td>40.0%</td>
<td>34.5%</td>
<td>29.5%</td>
</tr>
<tr>
<td>Major Product Revisions</td>
<td>21.4%</td>
<td>23.1%</td>
<td>20.5%</td>
</tr>
<tr>
<td>New-to-Firm Products</td>
<td>14.0%</td>
<td>20.3%</td>
<td>26.7%</td>
</tr>
<tr>
<td>New-to-World Products</td>
<td>4.1%</td>
<td>6.4%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

### % of Allocation to High Risk-Reward Classes

- ~40%
- ~50%
- ~60%

### 10 Point Steps

Note: does not add up to 100% down the column due to a small percentage of “other” projects.

Source: SGI-APQC Research Study 2014
STEVE NELSON, HERITAGE MEMORIALS LTD
Mastering ‘Truly New’ Product Development is Tough to Do
Top Reasons for New Product Failures

1. Insufficient market input, a failure to build in the voice-of-the-customer and a lack of understanding of the marketplace

2. Poor front-end homework, a lack of due diligence

3. Ill-conceived, inadequately resourced launches

4. Lack of a true cross-functional team organization, silos

5. Failure to stabilize a product definition early in the project – the product specs keep changing

6. Failure to kill projects when they should be killed – ‘pet project’ or they get ‘a life of their own’

7. Inadequate resources on a project, poor project prioritization and resource allocation methods

8. A lack of management commitment and leadership (guidance)

Source: Winning at New Products, Cooper 2017
The Critical Success Drivers
Top Reasons Truly New Products Succeed

Based on numerous industry agnostic benchmarking studies conducted over a 25 year period throughout North America and Europe, with 3,000+ participating firms and 5,000+ new product launches (successes and failures)

Studies conducted by Dr. Scott J. Edgett and Dr. Robert G. Cooper of Stage-Gate International

These factors separate the winners from the losers
Use them as guardrails to guide NPD
Critical Success Driver #1

A unique, superior product – a differentiated product that delivers unique benefits and a compelling value proposition to the customer

Too many ‘little’ ideas dominate new product portfolios
  ▪ ‘me-too’ copy cats
  ▪ ‘tweaks’ barely noticeable by customers

Technically driven ideas with no market inputs

The goal must be for real product advantage – find a big customer problem and develop a solution that is unequalled

Source: SGI Benchmarking Research
Impact of differentiated products with unrivaled customer value on market success

Source: Winning at New Products, Cooper & Edgett
Critical Success Driver #2

Emphasis on the **voice of the customer** – a market-driven and customer-oriented process – is critical to developing differentiated products

- **Know the Market**
  Make your head smart by understanding the market

- **Empathize with the Customer**
  Make your heart smart by understanding your customer(s), their goals and unarticulated needs

- **Emphasize Voice of the Customer**
  Make your process smart with VOC from idea to launch

Source: SGI Benchmarking Research
Many businesses are not customer focused when developing products

Hi-Productivity Businesses are 4.5 times more likely to be customer focused

Source: SGI Benchmarking Research
Source: Stanford Extreme Design Assignment, Embrace paraffin based warmer

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Critical Success Driver #3

Holistic **Up-front Assessment** before Development begins – due diligence pays!

**Market**
- Who is the ideal target market? What is the need?

**Technical**
- What are the product, development & production options? Freedom to operate?

**Business**
- Can we make money? Order of magnitude?

Source: SGI Benchmarking Research

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Does Up-front Assessment Mean Longer Times to Market?

NO!

1. More time and money spent up-front greatly improves the odds of success – there is clear evidence here

2. More homework & learning results in better and sharper product and project definition – speeds up Development (less recycling & wasted time)

3. Front-end homework anticipates product problems and design changes – these product design changes are made early when it is less costly (fail fast and early)

Allow for discovery & learning before development
Critical Success Driver #4
Sharp, early **definition** (before Development) separates winners from losers

- Clarifying the customer problem or job to be done
- Revealing the true market opportunity (how many other customers have the same problem?)
- Narrowing in on the most desirable solution
- Discovering the real benefits and value of the solution
- Establishing positioning (price for perceived value)

- Zeroing in on the optimal mix:
  - Most **desirable solution** to create **customer value**
  - Most **viable solution** to create **business value**
  - Best **technical solution** to execute value creation

Having enough holistic clarity to focus your cross-functional development effort

Source: Adaptation of Design Thinking Method
Critical Success Driver #5
Rapid Feedback Iterations – Design, Feedback & Revise

- How you handle fluid information in your approach to development
- ‘Heads Up’ versus ‘Heads Down’

- Several ‘small’ engagements between the market and the developer
  - Design – iterative mock ups to get something in front of a sampling of ‘the market’
  - Feedback – rich reaction to your product definition via the mock up
  - Revise – adjust your product definition to accommodate fluid feedback

- How many iterations? Example: IDEO iterates on average 15x

General Rule of Thumb – Iterate until ‘fluid’ information becomes ‘stable’
Top Reasons Truly New Products Succeed
Product Level
✓ Develop a unique, superior product
✓ Seek and use ‘voice of the customer’
✓ Up-front assessment
✓ Sharp definition - early
✓ Rapid feedback iterations
✓ The world product (global or glocal)
✓ Well-conceived launch
✓ First to market - speed
Top Reasons Truly New Products Succeed Company Level

✓ A Product Innovation Strategy: Why Innovate?
✓ Focus: Fewer, Better, and the Right Mix of Project Types
✓ Leverage Core Competencies
✓ Target Attractive Markets
✓ Right Resources
✓ High Performance Teams
✓ Culture Conducive to Innovation
✓ Leadership Engagement in Innovation
✓ + Stage-Gate®
DONNA SEARS, ACADIA SCHOOL OF BUSINESS
Donna Sears, PhD
F.C. Manning School of Business

New product performance
Product advantage
Market potential
Meeting customer needs
Predevelopment task proficiencies

Winning at New Products
NETWORKING BREAK
Right Projects Right
Six Principles of the Stage-Gate® Methodology
Converting ideas from inception to value as quickly and profitably as possible

The World’s Most Popular Innovation Management Process
It's the Process, NOT the Money

- Superior result is a function of the quality of an organization's new product innovation process
  - The bets it makes
  - How it pursues them

- Rather than the magnitude of its R&D spending

- Example:
  - Apple's R&D-to-Sales spend ratio of 5% trails its competitors and the computer industry on average (approx. 15%)

Install an effective idea-to-launch Innovation Process Stage-Gate® to ensure productive R&D spending

1 Source: Global Innovation Study, Booz-Allen & Hamilton, New York
How Stage-Gate® Was Born

- Canadian business professors, Dr. Robert G. Cooper (McGill University) and Dr. Scott Edgett (McMaster University) performed ‘breakthrough voice of customer’ studies on samplings of NA companies
- Longitudinal study of NPD winners and losers
  - How they drove their new products to market, play-by-play
- Patterns emerged
  - Designed the patterns into a ‘playbook’ for winning at new products – called it Stage-Gate®
- The ‘playbook’ evolved since its debut in 1984
  - New success drivers uncovered (via expanded research & lead user application*)
  - Now 14 in total (project level and company level), all built-in by design
- Although the base principles of the Stage-Gate® model have not changed, 5th Generation Stage-Gate applications are quite different from 1st Generation (new technologies/techniques)

*Lead Stage-Gate Users are among the world’s best innovators and afford us the opportunity to study real-time evolutions of new innovation practices.
Stage-Gate® — Driving Performance for 30+ Years

1985
- Thought Leadership: The Stage-Gate Process is discovered and published by Dr. R. G. Cooper

1990
- 15 critical success factors identified for new product success

1995
- Designed Stage-Gate Process for Technology Development

2000
- Introduced Portfolio Management for New Product Development (NPD)
- Introduced Accelerated Stage-Gate Methodology
- Introduced Product Innovation and Technology Strategy Framework
- 10 critical success factors identified for implementing Stage-Gate

2005
- Identified Best Practices in Portfolio Management
- Innovation Diamond® is discovered and published by Dr. R. G. Cooper and Dr. S. J. Edgett

2010
- Applied lean and productivity principles to innovation
- Introduced structured Idea Management

2015
- Introduced Product Innovation Management System

Best-Selling Books

1985
- Winning New Products

1990
- Product Management for New Products

1995
- Product Leadership

2000
- Portfolio Management for New Products

2005
- Portfolio Management for Technology Development

2010
- Successful Product Innovation

Milestones

1985
- 1st Generation Stage-Gate Process pioneered by Dr. R. G. Cooper

1990
- 3rd generation Stage-Gate System introduced

1995
- 1st commercially available Stage-Gate System launched — "5G E-Guide"

2000
- Complete Product Innovation Solution launched

2005
- Corporate Training and Development Program launched

2010
- Annual Stage-Gate Leadership Summit launched

2015
- 4th commercially available Stage-Gate System launched — "5G Navigator"

Key Research Themes

- Dr. R. G. Cooper's Case Study Experiment on Innovation Success
- New Product Research: Series 1 & 2
- NPD Critical Success Factors Research
- Industry "Deep Dive": Chemical
- Technology Development Case Studies Research
- Industry "Deep Dive": Services
- Portfolio Management Concept for NPD Research
- Portfolio Management Case Studies Research: Series 1
- Portfolio Management Case Studies Research: Series 2
- Implementing Stage-Gate Research Series 1
- Portfolio Management Research Study with APQC: 1
- Portfolio Management Research Study with APQC: 2
- Portfolio Management Research Study with APQC: 3
- Idea Generation & Discovery Study Research
- Technology Development Case Studies Research Study 2
- Portfolio Management Research Study with APQC: 2
- Innovation Productivity Studies

Adoption Rate

- 44% of North American companies adopt Stage-Gate
- 68% of North American companies adopt Stage-Gate
- 73% of North American companies adopt Stage-Gate
- ~80% of Global 1000 companies adopt Stage-Gate
Principle 1: Optimize the entire innovation process

– Start with the END in mind to see the big picture

– View the complete journey from idea inception to post launch, not just development

– Bring visibility to this often chaotic journey as a process

– Any process can be designed to be more effective (i.e. roadmap) and can be learned
New product innovation is inherently risky, therefore risk must be identified and managed from idea inception through to post launch.

- Organize the entire process into smaller, more manageable stages.
- Each stage represents an increasing commitment (dollars and/or resources).
- Each stage is purpose-built and goal-driven (not time driven).
- **Process rigor is ‘right-sized’** to the risk and context of each project.
  - Stages to proceed through, work to perform in the stage & performed by what level.
While innovation projects share similarities, we cannot lose sight of their uniqueness.
Principle 3: Accelerate the Creative Process (Stages)

STAGE 1: Scope
STAGE 2: Business
STAGE 3: Develop
STAGE 4: Validate
STAGE 5: Launch

Partially Defined
Fully Defined

$ $$ $$$ $$$ $$$$

2 Source: Winning at New Products Benchmarking Research, SGI
Principle 3: 
Accelerate the Creative Process (Stages)

- Aim to move from partial to full definition through learning iterations
- Common language to facilitate cross-functional, high performance team
- Strategically place proven practices in the right stages to guide the winning solution
- The 1st two stages determine your success/failure² (do not omit or skip over)

Source: Winning at New Products Benchmarking Research, SGI
New product ideas/concepts present partially defined, initially

Each stage of effort and learning adds more definition until you have moved from a partial to a full definition (i.e. buying more pixels until you have clarity)
An Additional Significant Challenge

We are trying to ‘**reveal**’ the true opportunity

We are trying to ‘**develop**’ the winning solution
Principle 4: Options Based Decisions

- Conditions (internal & external) can deteriorate during a project’s life, therefore, some ideas/projects will not remain worthy of your investment
  - Allowing for one GO decision at the beginning of a project is fundamentally flawed
  - We want the **right** to continue but **not the obligation** (options-based decision process)

- Gates (business investment decisions) precede each stage
  - Evaluate the **business merit**, especially the potential to make money
  - Kill weak projects, re-direct scarce assets/resources to more meritorious projects
  - Afford the organization agility and responsiveness
Options Based Investment Decisions

Horse Race

- All participants will finish the race, regardless of how far they fall behind
- The full bet amount is placed before the race begins – you cannot change the bet once the race starts

Poker Game

- Some participants will “fold” if their cards are weak
- Bet amount can be increased as new information is revealed through the game (via new cards in each hand), similar to an “options purchase” model
Principle 5: Visibility to Performance

- Bring visibility to your progress ‘a picture is worth a thousand words’
- Bring visibility to your portfolio, **funnel** (NOT tunnel), as Gates surface meritorious projects
- Bring visibility to priorities and to the longer term view (beyond annual list of projects)
- Choose few but meaningful metrics to monitor, especially the **Post Launch Review**
Principle 6:
Culture of Accountability and Discipline

- Stage-Gate serves as an organization’s memory of what works/what doesn’t – a great roadmap that should evolve with the organization’s learning curve & capability
  - Those that are accountable acknowledge their performance (wins and losses via the PLR)
  - The organization has the discipline to learn and adjust (customize and evolve)

- Common language and framework to effectively coordinate, collaborate and manage expectations of the many stakeholders involved, within the company and with trade partners and suppliers

- Empower people to use Stage-Gate to win at new products in the marketplace
  - Cross-functional high performance teams work in the stages and interface, at critical points, with...
  - Cross-functional business leaders governing the gates (a.k.a. the investment GO/KILL decisions)
Benefits of the Stage-Gate® Model

- A roadmap for all leaders and teams to guide expectations and performance
- A visible process - known and understood by all
- Makes for a complete process - no critical errors of omission; no missing steps
- Puts disciplined learning into a somewhat ad-hoc, chaotic process
- Forces more attention to quality of execution
- Cross-functional - inputs from all key roles and functions & facilitates team performance
- A faster process - new product rugby
- A flexible process
  - Right-sized process rigor to match risk and context

- Results
  - Better in-market performance (sales and profits)
  - Better return on investment
  - Continuous improvement facilitates innovation capability maturity
Avoid 5 common pitfalls when you use Stage-Gate®

1. Bureaucratize the process
   ▪ Building in non-value-added procedures vs focusing on the activities for ‘winning in the market’
   ▪ Deliverables overkill ‘read what we have’ vs synthesizing key information needed for a decision
   ▪ Failure to build in the necessary flexibility for a diverse portfolio (e.g. for smaller, low risk projects)

2. Gatekeepers fail to fulfill their role
   ▪ Advancing pet projects and circumventing the process
   ▪ Missing Gate meetings and/or poor contribution while at the meeting

3. Unrealistic expectations with resources
   ▪ Too few resources to properly execute projects per Stage-Gate® best practices
   ▪ Resources not clearly committed to projects (e.g. team members not given release time)
   ▪ Resources incapable of stretching to meet new performance expectations

4. Underestimate implementation challenges
   ▪ Expecting immediate impact - It takes time to change behaviors of numerous people (1-2 years)
   ▪ Skipping over preparing the senior leaders because they should probably ‘get’ this
   ▪ Skipping over informing/training externals – customers and suppliers because it doesn’t impact them
Most Common Pitfall

5. Failure to tailor the Stage-Gate® Model to Your Organization
   ▪ Work from the generic model in the Winning at New Products book
   ▪ Use the model that was used at your former employer
   ▪ Fail to advance the design as your organization’s capability matures and improves

Helpful Tips

✓ Purpose (customer-driven/bids, market-driven, co-development, etc.)
✓ Name of process
✓ Visual illustration of process
✓ Language (i.e. charter or business case or business brief)
✓ Spirit of stages and gates
✓ Best practice activities within stages (i.e. design thinking)
✓ Gates: structure, criteria and meetings
✓ Deliverables
✓ Project management methods to execute stages (i.e. scrum)
✓ Role of software tools to enable Stage-Gate
✓ Metrics
Application of Stage-Gate® for Market-driven Innovation in a Flexible, Entrepreneurial Culture
Application of Stage-Gate® for Customer-driven Bid/No Bid NPD Initiatives to Improve Win Ratio

- ✓ Incoming RFPs and Customer Requests requiring technical design effort
- ✓ Incoming RFPs and Customer Requests that would benefit from technical design
- ✓ Proactive discovery work resulting in concepts to propose to strategic clients
CHRIS MATHIS, SPRINGBOARD ATLANTIC
NANCY TREGUNNO, NOVA AGRI
alignment
- careful selection process
- detailed technical investigation
- solid market / cost analysis
- objectively sticking to go/no-go points
alignment
careful selection process
detailed technical investigation
solid market / cost analysis
objectively sticking to go/no-go points
Generating Ideas
The Discovery Stage
Ideas

Present Opportunity:
✓ Introduce new ways to create value
✓ Generate options and choices
✓ Help add definition to new strategies

Create Anxiety:
✓ Force us to react, to shape the idea
✓ Results in a decision, saying NO
✓ Results in a change, reallocating other resources
✓ Indecision, frustration, misalignment
We Believe it’s Better to Nurture Idea Generation and Learn to Say NO to the Bad Ideas

**QUALITY**

- ✓ Communicate Strategy
  - Investment
  - Performance goal

- ✓ Clarity of ideas you desire:
  - Problems to solve
  - Markets to satisfy
  - Products to create
  - Technologies to leverage
  - Processes to improve

**QUANTITY**

- ✓ Internal Idea Generation
  - Be Proactive
  - Give Permission

- ✓ External Idea Generation:
  - Identify Network
  - Communicate Strategy
  - Proactive Networking

- ✓ Investment scope & goal
Use Methods that Generate Quantity and Quality Ideas

Source: Cooper & Edgett, Generating Breakthrough New Product Ideas, and Voice-of-Customer Methods: What is the Best Source of New Product Ideas?

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Top Down Strategic Idea Generation
Idea Generation Techniques Applied to Strategic Planning

Where to play

Opportunity assessment

How to win strategy

Portfolio strategy

Brand positioning

Brand & channel strategy

How to win in market

Execution

Activation planning & development

‘We need to enter a new category’

‘We need a new brand in our Portfolio’

‘We need a new line extension’

‘We need to renovate to build brand equity’

Opportunities/Ideas → Projects

Discover

Design Concept

Develop

Implement & Test

Launch

Evaluate

Where to play

Opportunity assessment

How to win strategy

Portfolio strategy

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Brand & channel strategy

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Opportunities/Ideas → Projects

Discover

Design Concept

Develop

Implement & Test

Launch

Evaluate
Bottom Up Discovery Stage Idea Generation

Stage-Gate® Product Innovation System

Business Strategy
Product Innovation and Technology Strategy
Strategic Portfolio Management

Technology Intelligence
Market Intelligence

Discovery

Scope → Experiment → Develop

Idea Screen & Process Routing

Stage-Gate Idea to Launch Process

LEADERSHIP & CULTURE

Tactical Portfolio Management
Idea Generation Techniques Applied to the Discovery Stage

“Focused” Front End Discovery Stage

1. Understand
   - Make your head smart

2. Empathize
   - Make your heart smart

3. Map
   - Create opportunity map & briefs

4. Ideate
   - Prioritize Opportunity Areas & Ideate
Where do you get your best ideas?

How many good ideas are ‘on hold’ because you lack the resources to pursue them?

Do you know how to leverage your community network?
Are All Ideas Worthy of Your Investment? NO

Some Ideas Start Bright....

..But Lose Their Shine

Time, $$, Capability

Some Ideas Show A Tiny Glimmer....

...And Develop Brilliance

Time, $$, Capability
The Stage-Gate® Model for New Products
An Overview of the Stages - Accelerate the Creative Process

**DISCOVERY**
- Generate ideas with potential to solve a big customer problem

**SCOPE**
- Quick & inexpensive assessment to size-up opportunity and options

**BUSINESS**
- Feasibility of options to recommend the winning definition: customer desirability & business viability

**DEVELOP**
- Rapid iterations of design prototypes to confirm customer desirability & business viability

**VALIDATE**
- Pilot scale-up of the winning prototype for field trials and early customer adoption to confirm value

**LAUNCH**
- Ramp-up to full production and scale-up sales and distribution capability
Relevant tasks that will accelerate team learning, focus problem solving and advance winning product development

Cross-functional synthesis of key learnings enabling: creating choices & making choices

Relevant information synthesized into a succinct business summary enabling an investment decision

Stages have a common format: prescribed set of activities to accelerate cross-functional learning to advance the development of a winning product
An Overview of the Gates - Accelerate Time to Profit

1. DISCOVERY
   - Gentle Screen
     - to assess for merit & to purchase next stage, a time-boxed sprint

2. SCOPE
   - Modest screen
     - to assess risk & business potential, & to purchase the next stage

3. BUSINESS
   - Money Gate
     - Robust evaluation:
       - Is it Real?
       - Can we Win?
       - Is it Worth it?

4. DEVELOP
   - Detailed review of the business case
     - for scale-up investment readiness

5. VALIDATE
   - Launch Gate
     - Detailed review of launch plan readiness & full support

$ $ $ $ $ $
Gate: Business investment decision point

Deliverable: Relevant information synthesized into a compelling business summary

Criteria: Proven discriminators of success to guide objective evaluation

Output: Prompt decision: Go, Kill, Hold, Recycle. Commit the resources and support for the next stage

Gates have a common format: cross functional business leaders evaluate the business opportunity and make a prompt Go/Kill decision to accelerate time to profit
Gate Deliverable – Brief Document Summarizing Information Relevant to the Decision

1. **Product Definition**
   - Customer/market desirability, business viability and technical feasibility (example: Basic Eight Framework)
   - Gate appropriate prototype: concept, protocept, prototype (alpha), prototype (beta), production model

2. **Business Summary**
   - Strategic Fit
   - Product and Competitive Advantage
   - Market Attractiveness
   - Core Competencies Leveraged (sales, markets, brand, product, technology, manufacturing, distribution)
   - Technical Feasibility
   - Financial Reward for Risk (key assumptions and order of magnitude only in early stages)

3. **Plan for Next Stage**
   - High-level approach to execute the activities in the next stage (partners? resources? key customers?, etc.)
   - Estimate timeline, resources and money necessary to execute
Gate Scorecard with 6 Criteria

**Strategic Fit and Importance**
- Fit with business and innovation strategy
- Impact on business
- Importance to the business

**Product and Competitive Advantage**
- Unique benefits to customer/consumer
- Value for money from customer perspective
- Competitive advantage

**Market Attractiveness**
- Market size and growth
- Gross margins
- Competitive intensity

**Synergies or Core Competencies**
- Distribution and sales force
- Customer base
- Technological, Production know-how and experience
- Supplier production capabilities, expertise & facilities

**Technical Feasibility**
- Technical gap to reach the solution
- Program complexity

**Financial Reward vs. Financial Risk**
- Degree of financial return
- Level of financial risk

**Total Score (0 to 60):**
Gate Decisions: Facilitate Time to Profit

- **Go**: Project is approved and resources committed
- **Kill**: Project is stopped; no more work or money is spent
- **Hold**: Project scores high but no resources are available until another project finishes or is killed
- **Targeted Recycle**: Project is missing a key piece of information, team is asked to obtain the information before advancing
Stage-Gate®
A Walk-through
DISCOVERY STAGE - Ideation

**Purpose:** Initiate the process with the capture of an idea.

**Players:** Unstructured - anyone in the company with a new product idea. Structured – people (internal & external) invited to ideate.

**Activities:** Complete Idea Resume (1-pager) without investing resources.  
- describe the concept  
- describe how the concept was created  
- describe the potential value (as you see it)

**Deliverables:** Idea Resume

More ….
- out-of-the-box  
- networking/connecting  
- concept-building

Less ….
- detailed design  
- developing  
- spreadsheets
Description of the Idea/Concept:
Functional pyjamas for high performance athletes: add bio-ceramic properties to sleepwear fabric fibres so athletes can accelerate muscle tissue regeneration while they are sleeping.

How the Idea Came to You:
The idea occurred to me during a conversation with one of our sponsored athletes. The athlete was wearing one of compression sleeves on his calf during practice – with a homemade medical grade bio-ceramic material sewn into the sleeve. He explained, the deep heat (FIR – Far Infrared Radiation) helped to accelerate injury recovery by increasing circulation. I spoke to the hack (sports trainer in kinesiology) and learned that the technology was legit. Turns out bio-ceramics naturally emit FIR (far infrared radiation) which can penetrate deep tissue to improve circulation, reduce inflammation and accelerate healing. It’s most effective when applied while resting after practice however athletes rarely want to stay long enough after practice). So, my idea is to design a pyjama that can perform in the same way.

Value Creation Potential:
Value to our customers: save time (regenerate while sleeping) and improve athletic performance.
Value to the company:
- new-to-company product sales (would 20% of our customers buy a pair of these pyjamas)
- new-to-company profits (could we double our margins given the novelty of the innovation)
GATE 1 – Gentle Screen

Purpose: Assess business merit & decide whether to purchase the next stage.

Players: Cross-functional Gatekeepers who are the resource (people & $) owners.

Gate Challenge: Assessing the degree of innovativeness (newness) of the new product idea
Prematurely killing a high potential idea for lack of information/data

Enabler: Scorecard with proven criteria

Decisions: Go/Kill/Hold/Recycle
Sprint effort (i.e. # of days of effort) and people assignments
Guidance regarding degree of innovativeness and where to place emphasis
Assessing the Degree of Innovativeness (Potential)

**STEP 1**

Degree of Innovativeness

<table>
<thead>
<tr>
<th>Newness to Company</th>
<th>Newness to Market</th>
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</thead>
<tbody>
<tr>
<td>New-to-Firm Products</td>
<td>Familiar (Product, Technology, Application, Business Model)</td>
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<tr>
<td>New-to-World Products</td>
<td>New</td>
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<tr>
<td>Minor Improvements &amp; Cost Reductions</td>
<td>New Applications</td>
</tr>
</tbody>
</table>

**STEP 2**

One Stage-Gate Model, Flexibly Applied

Gatekeepers guide teams to be more (or less) innovative
Gate 1 - Scorecard with 6 Criteria

Strategic Fit and Importance
- Fit with business and innovation strategy
- Impact on business
- Importance to the business

Product and Competitive Advantage
- Unique benefits to customer/consumer
- Value for money from customer perspective
- Competitive advantage

Market Attractiveness
- Market size and growth
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Synergies or Core Competencies
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- Supplier production capabilities, expertise & facilities

Technical Feasibility
- Technical gap to reach the solution
- Program complexity

Financial Reward vs. Financial Risk
- Degree of financial return
- Level of financial risk

Total Score (0 to 60): 

© 2017 Stage-Gate International
# Gate 1 – Scoring Feedback

## Project:

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Project Attractiveness Score (out of 60) = 34.4

Decision: 57%

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Gates produce a summary of cross-functional, independent scores doubling as feedback to the team (project strengths & weaknesses)
New Ideas are Fuzzy...

GO Decision = buy the next stage of work, Stage 1
Think of it as ‘buying’ as few pixels as you need to help you see the opportunity with more clarity
STAGE 1 - Scope

**Purpose:** Quick & inexpensive assessment to size-up the opportunity.

**Activities:** Conducted within a time-boxed sprint (a few days)
- Preliminary market assessment & lead-user check-in
- Preliminary technical assessment & freedom to operate
- Preliminary business model assessment
- Financial opportunity (order of magnitude)
- Product definition (Basic 8 Framework™)

**Deliverables:**
- Product Definition with Protocept(s)
- Business Summary
- Recommendation (Go/Kill)
- Outline of Next Stage (effort to complete it & $)

More of....
- exploring
- fact-finding
- concept-building

Less of....
- detailed design
- developing
- spreadsheets
The Basic 8 Framework™ Helps You Add Definition to NEW Ideas
The Benefit – A Sharp, Early Product Definition

Integrated Product Definition

- Step 1: Problems
  - The problems the customer is trying to solve.

- Step 2: Needs
  - Performance goals that are important to the customer.

- Step 3: Solution Concept
  - High-level statement of what the product is.

- Step 4: Uses
  - What the product will do from the customer perspective.

- Step 5: Benefits/Value
  - Why the customer will buy it. What is the winning value proposition? How is it superior?

- Step 6: Target Market
  - At whom the product is aimed.

- Step 7: Positioning
  - How the product will be perceived & at what price.

- Step 8: Technical Solution
  - What the product will be: features, attributes, performance requirements & specifications.

- What value will it not deliver?
- What will it not solve?
- What will it not be?
- Who will it not serve and why?

Stage 1 Deliverable Example – Product Definition with Protocept

Sample Protocept
GATE 2 – Modest Screen

Purpose: Assess risk & business potential & decide whether to purchase the next stage.

Players: Cross-functional Gatekeepers who are the resource (people & $) owners.

Gate Challenge: Assessing the degree of innovativeness (newness) of the new product idea. Holding business to a high standard in search for the winning definition.

Enabler: Scorecard with proven criteria.

Decisions: Go/Kill/Hold/Recycle
Approve Plan for Next Stage (i.e. # of days of effort) and people assignments
Guidance regarding degree of innovativeness and where to place emphasis
Gate 2 - Scorecard with 6 Criteria

Strategic Fit and Importance
- Fit with business and innovation strategy
- Impact on business
- Importance to the business

Product and Competitive Advantage
- Unique benefits to customer/consumer
- Value for money from customer perspective
- Competitive advantage

Market Attractiveness
- Market size and growth
- Gross margins
- Competitive intensity

Synergies or Core Competencies
- Distribution and sales force
- Customer base
- Technological, Production know-how and experience
- Supplier production capabilities, expertise & facilities

Technical Feasibility
- Technical gap to reach the solution
- Program complexity

Financial Reward vs. Financial Risk
- Degree of financial return
- Level of financial risk

Total Score (0 to 60):
Project:

Project Attractiveness Score (out of 60) = 34.4

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Comments - Standard deviation > 2

Gates produce a summary of cross-functional, independent scores which double as feedback to the team (project strengths & weaknesses)
STAGE 2 – Business Viability

**Purpose:** Feasibility of options & recommended product definition: customer desirability & business viability.

**Activities:**
- Execute the Stage 2 Plan approved at the previous Gate
  - Detailed market assessment & VOC
  - Detailed technical assessment & IP plan
  - Detailed business model assessment
  - Financial opportunity (return on investment)
  - Product definition (Basic 8 Framework™)

**Deliverables:**
- Product Definition with Winning Protocept
- Business Summary
- Recommendation (Go/Kill)
- Outline of Next Stage (effort to complete it & $)

---

More….
- business acumen
- creative design
- options

Less….
- developing
- planning
- selling
Stage 2 Deliverable Example – The Business Case (text OK, but visual is preferred)

Business Summary

▪ **Strategic Fit**
  ▪ How exactly will this advance the company’s vision, mission and strategy?

▪ **Product and Competitive Advantage**
  ▪ What is the differentiator? Is it easily copied? Can we charge a premium? How to price? How to sell?
  ▪ Confirmation of customer and market acceptance?

▪ **Market Attractiveness**
  ▪ How big is the target market? Growing or shrinking? How competitive? How will competitors react?

▪ **Core Competencies Leverage**
  ▪ Can we leverage what we do better than anyone else?
  ▪ Selling (transactional or consultative), marketing (can we reach this target?), brand, product, technology, manufacturing, supply, distribution?

▪ **Technical Feasibility**
  ▪ How difficult is the technical solution to solve? How can we solve it? How long will it take?

▪ **Financial Reward for Risk**
  ▪ What are the key assumptions for sales volumes? costs? timeline? lifecycle?
The Basic 8 Framework™ Helps You Add Definition to NEW Ideas

The Benefit – A Sharp, Early Product Definition

Integrated Product Definition

Step 1
Problems
The problems the customer is trying to solve.

Step 2
Needs
Performance goals that are important to the customer.

Step 3
Solution Concept
High-level statement of what the product is.

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At whom the product is aimed.

Step 7
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How the product will be perceived & at what price.

Step 8
Technical Solution
What the product will be: features, attributes, performance requirements & specifications.

What value will it not deliver?

What will it not solve?

What will it not be?

Who will it not serve and why?

Sample Winning Protocept
GATE 3 – Money Gate

Purpose: A robust evaluation: Real, Win, Worth.

Players: Cross-functional Gatekeepers who are the resource (people & $) owners.

Gate Challenge: How much information do you need before you can make the investment? Holding business to a high standard for a realistic return on investment.

Enabler: Scorecard with proven criteria.

Decisions: Go/Kill/Hold/Recycle
Approve Plan for Next Stage (i.e. # of days of effort) and people assignments
Guidance regarding product definition validation – when is enough, enough?
How Much Analysis is Enough?

Use Stable and Reliable Information Only for Key Decisions

<table>
<thead>
<tr>
<th>Information Reliability</th>
<th>Stability</th>
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<tbody>
<tr>
<td>Fixed</td>
<td>Fluid</td>
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</table>

- **Stable, relevant and reliable information:** Base key decisions on information. (e.g., Develop, Go/Kill)
  - Information is of good quality but is unstable or subject to change.
  - Do not use for key decisions.
  - Monitor situation or move to single customer launch.

- **Opinion-Based Information**
  - Can base early decisions (Go/Kill; Preliminary Product Definition) on this information. Undertake studies to get facts.
  - Poor and unstable information: Risky to base key decisions on this. Largely anecdotal info.

Source: Adapted from Robert G. Cooper and Scott J. Edgett, *Lean, Rapid and Profitable New Product Development*
## Gate 3 - Scorecard with 6 Criteria

### Strategic Fit and Importance
- Fit with business and innovation strategy
- Impact on business
- Importance to the business

### Product and Competitive Advantage
- Unique benefits to customer/consumer
- Value for money from customer perspective
- Competitive advantage

### Market Attractiveness
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### Technical Feasibility
- Technical gap to reach the solution
- Program complexity

### Financial Reward vs. Financial Risk
- Degree of financial return
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Total Score (0 to 60): [ ]
Gate 3 – Scoring Feedback

Project:

Project Attractiveness Score (out of 60) = 34.4  57%

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Std Dev: 3.42  1.89  1.39  1.55  1.39  3.54

Comments - Standard deviation > 2

Gates produce a summary of cross-functional, independent scores which double as feedback to the team (project strengths & weaknesses)
GUSTAVO LEITE, UNIVERSITÉ SAINT-ANNE
• **Dr. Gustavo Leite, Assistant Professor**

• **Fundamental and Applied Research**
  - Microbial physiology
  - Fermentation
  - Molecular biology
  - Bioremediation

• **Expertise Related to Early and Development Stages/Gates**
  - Wild yeast isolation for beverage production process
  - Characterization of yeasts
  - Analysis of co-fermentation process for product improvement
  - Metabolic engineering yeast for bioproduction of commercial relevant molecules
Examples of projects with companies and organizations

• Characterization of wild yeast strains for improvement of ice cider and beer production
  – Isolation and molecular identification of beneficial strains
  – Optimization of fermentation process to exploit the beneficial strains
  – Identification of contaminant strains associated with spoilage

• Metabolic engineering yeast strains for biosynthesis of high demand molecules
  – Development of a biological platform for nylon 6,6 production
  – Physiological characterization
  – Fermentation optimization
Rapid Development Stage
VoC User Needs-and-Wants Study
- F2F interviews
- Storytelling
- Shadowing
- Understand users & customers needs, gaps, problems
- Behavior mapping
- Customer journey
- Visual diaries

Full Proposition Concept Test
- A simulated 'sell'
- Pre-Development
  - With 'virtual prototypes' or 'protocepts'
- Story boarding
- PPT presentation selling
- Gauge: interest, liking, preference & purchase intent

Rapid-Prototype & Test
- Test winning prototype
- Early in Development Stage
  - Using a rapid prototype, crude prototype, or model
- 3D printing & physical samples
- Use selling materials
- Gauge customer purchase intent
- Minimum Viable Product for testing

Working Model
- Much the same...
- But versions of product much closer to the 'final product'
- Always gauging customer reaction & purchase intent

Next Version
- Again much the same as above
- Closer yet to “final product”

Customer Tests
- True prototype tests in actual in-use conditions
- Customer trials
- Beta tests
- In-home tests
Minimum and Viable Product (MVP)

The product you want to build and would build if you were better financed

MVP Good for Start-ups & Tests

Source: MOZ
Beware of the MVP: Pros & Cons

Source: MOZ
**STAGE 3 – Develop**

**Purpose:** Rapid iterations of design prototypes to confirm customer desirability & business viability.

**Activities:**
- Execute the Stage 3 Plan approved at the previous Gate
- Translate the VOC & protocept feedback into a prototype
- Rapid iterations: design, test, feedback with sample market
- Source materials & test design for manufacturability
- Preliminary process design or sourcing plan
- Design business model & value chain (with VOC feedback)
- Update product definition (Basic 8 Framework™)
- Update cost inputs to business case & validate market

**Deliverables:**
- Product Definition with Alpha Prototype(s)
- Business Summary
- Recommendation (Go/Kill)
- Outline of Next Stage (effort to complete it & $)

More ....
- iterations with VOC
- problem solving
- trade-off decisions

Less ....
- divergent thinking
- options generation
- new starts
The Basic 8 Framework™ Helps You Add Definition to NEW Ideas
The Benefit – A Sharp, Early Product Definition

Integrated Product Definition

- **Step 1: Problems**
  - The problems the customer is trying to solve.

- **Step 2: Needs**
  - Performance goals that are important to the customer.

- **Step 3: Solution Concept**
  - High-level statement of what the product is.

- **Step 4: Uses**
  - What the product will do from the customer perspective.

- **Step 5: Benefits/Value**
  - Why the customer will buy it. What is the winning value proposition? How is it superior?

- **Step 6: Target Market**
  - At whom the product is aimed.

- **Step 7: Positioning**
  - How the product will be perceived & at what price.

- **Step 8: Technical Solution**
  - What the product will be: features, attributes, performance requirements & specifications.

- **What will it not solve?**
- **What will it not be?**
- **Who will it not serve and why?**
- **What value will it not deliver?**

**Stage 3 Deliverable Example – Product Definition with Winning Prototype (Alpha)**

Sample Winning Prototype
GATE 4 – Scale Up Gate

Purpose: A detailed review of the business case for scale-up investment readiness.

Players: Cross-functional Gatekeepers who are the resource (people & $) owners.

Gate Challenge: Transitioning from critical evaluation to full launch support. Gauging new product readiness for scale-up investment.

Enabler: Scorecard with proven criteria.

Decisions: Go/Kill/Hold/Recycle
Approve Plan for Next Stage (i.e. # of days of effort) and people assignments
Guidance gauging product sales validation – field tests or early adopter purchase?
# Gate 4 - Scorecard with 6 Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scores</th>
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<tbody>
<tr>
<td><strong>Strategic Fit and Importance</strong></td>
<td>0 4 7 10</td>
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<td>• Fit with business and innovation strategy</td>
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<tr>
<td>• Impact on business</td>
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<td>• Importance to the business</td>
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<td>• Competitive advantage</td>
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<td><strong>Market Attractiveness</strong></td>
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<td>• Degree of financial return</td>
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Total Score (0 to 60): [ ]
## Gate 4 – Scoring Feedback

### Project:

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### Comments
- Standard deviation > 2

Gates produce a summary of cross-functional, independent scores which double as feedback to the team (project strengths & weaknesses)
Conversational UI for Business Analytics

“Any customer insight is just 1 conversation away”

2014/15
- Product Development (MVP) in collaboration with AIDA
- Launch Accelerator

2016
- Paid Pilots with 3 universities - Marketing dept
- Business accelerator
- Enhance IP

2017
- Converted 2 universities to customers
- Customer growth in Higher Ed marketing
- Add a new vertical
Conversational UI for Business Analytics

“Working with Singolar has been rewarding and productive”

2014/15
- Work with MSc student Shameer Iqbal
- Developed an Automated Machine Learning Engine
- Data preparation, feature selection, model development and testing + Prediction Engine
- Shameer hired as full-time employee

2016
- Work with BSCH student Luke Webster
- Developed a recurrent deep learning prototype
- Predict a customer’s next decision/action based on prior interactions with company (80+% accuracy)
- Predict best next action for company to retain/convert customer

2017
- Provided general technical advice and counsel
- Deployment of recurrent deep learning approach
Hydrolyzed Fish Collagen
Networking break
What is Commercialization?

The launch is not the end of development, it’s the beginning of selling!

We used to describe it as ‘launch and leave’. Now, we launch an ‘aggressive, integrated, team attack on the market to accelerate sales - all hands on deck!’
The Launch Challenge

• Learning loops with each new market segment reached
• Wide range of results & information arriving in a somewhat chaotic fashion:
  – Mixed performance results: wrong channels? wrong partners?
  – Not enough product: bad supply? manufacturing? distribution?
  – Mixed product availability: wrong forecasting inputs?
  – Product quality: bad design? manufacturing? supply? positioning?
  – Product application: wrong positioning? training? support?

A Rapid Response Team to evaluate incoming feedback and to determine to PERSEVERE or PIVOT
Preparing to Launch
Powerful Push to Gain Momentum with Sales

• Make timing and sequence adjustments to original strategies, plans and/or roadmap with new information at hand (field tests, early adopter sales, soft launches, full launch)
  – **Product** adjustments and lifecycle plans
  – **Market** entry into segments and/or regions
  – **Messaging** content, collateral
  – **Supply** materials and partners
  – **Manufacturing** process adjustments and/or expansions
  – **Distribution** and logistics
  – **Channel** partners
  – **Sales** strategy
  – **Business** model

• Formal post launch review results (typically 9-12 months)
STAGE 4 – Validate

Purpose: Pilot scale-up of the winning prototype for field trials and early customer adoption to confirm value.

Activities:
- Execute the Stage 4 Plan approved at the previous Gate
  - Translate the winning (alpha) prototype into a beta prototype
  - Rapid iterations: design, test, feedback with sample market
  - Test materials & process design for manufacturability
  - Finalize sourcing plan
  - Finalize business model & value chain (with VOC feedback)
  - Develop market launch strategy and plan
  - Secure early adopt customers for field tests (or sales)
  - Update cost inputs to business case & validate market

Deliverables:
- Product Definition with Beta Prototype(s)
- Business Summary
- Recommendation (Go/Kill)
- Outline of Next Stage (effort to complete it & $)

More ….
- validating VOC
- problem solving
- launch planning

Less ….
- exploratory VOC
- options generation
- new starts
GATE 5 – Launch Gate

**Purpose:** A detailed review of the launch plan for readiness and to authorize full support.

**Players:** Cross-functional Gatekeepers who are the resource (people & $) owners.

**Gate Challenge:** Prematurely launching a product.
Gauging holistic launch readiness for in-market sales support & feedback.

**Enabler:** Scorecard with proven criteria.

**Decisions:** Go/Kill/Hold/Recycle
Approve Plan for Next Stage (i.e. # of days of effort) and people assignments
Post launch check-ins to evaluate market reaction – persevere or pivot?
Gate 5 - Scorecard with 6 Criteria

- **Strategic Fit and Importance**
  - Fit with business and innovation strategy
  - Impact on business
  - Importance to the business

- **Product and Competitive Advantage**
  - Unique benefits to customer/consumer
  - Value for money from customer perspective
  - Competitive advantage

- **Market Attractiveness**
  - Market size and growth
  - Gross margins
  - Competitive intensity

- **Synergies or Core Competencies**
  - Distribution and sales force
  - Customer base
  - Technological, Production know-how and experience
  - Supplier production capabilities, expertise & facilities

- **Technical Feasibility**
  - Technical gap to reach the solution
  - Program complexity

- **Financial Reward vs. Financial Risk**
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**Total Score (0 to 60):**
**Gate 5 – Scoring Feedback**

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Comments - Standard deviation > 2

Gates produce a summary of cross-functional, independent scores which double as feedback to the team (project strengths & weaknesses).
**STAGE 5 – Launch**

**Purpose:** Ramp-up to full production and scale-up sales and distribution capability.

**Activities:**
- **Execute the Stage 5 Launch Plan approved at the previous Gate**
  - Translate the production prototype into a commercial product
  - Rapid iterations: manufacturing/production process/product
  - Initiate plan for materials, suppliers & manufacturing
  - Launch marketing plans into channels/segments
  - Launch internal product management support
  - Launch value chain training & support
  - Leverage early adopt customers for case studies
  - Finalize cost inputs to business case & validate market

**Deliverables:**
- Product Definition with Commercial Product
- Business Summary
- Recommendation (Go/Kill)
- Outline of Next Stage (effort to complete it & $)

---

**More ….
- selling & marketing
- training
- persevere or pivot**

**Less ….
- design
- analysis
- Go/Kill assessment**
Launch
The Ultimate Test of All Assumptions

Decision: Persevere or Pivot?

- Product positioning & price right?
- Messaging & value clear?

Market Development & Sales

- Volumes sound?
- Timing sound?

Forecasting

- Partners ready?
- Costs sound?

Supply Chain

- Product & package design robust?
- Process & costs sound?

Manufacturing

- Partner network ready?
- Logistics & shipping sound?

Distribution

- Sales Team ready
- Partner network ready?
- Customer interest?

Channels

- Customer service sound?
- Installation support & repair?

Customer Purchase & Use

- Product & package design robust?
- Process & costs sound?
MATHEW VANKOUGHNETT, NSCC

WITH BETH MCCORMACK, NSCC
NSCC APPLIED RESEARCH: WHAT WE DO AND WHO WE ARE

• Started in 2000
• Team of 60+ employees
• Our researchers, faculty, and students provide innovative and problem solving solutions for our community and industry partners using the power of technology, creativity, imagination and innovation
• Five Major Research Areas:
  • Energy
  • Ocean Technology
  • Geographic Sciences
  • Environmental Technologies
  • Engineered Technologies
**Partner:** Northwood

**Details:** Design an anti-slouch device that is more effective and easier to use vs. what currently exists.

**Result:** Designed, prototyped, tested and made improvements to device.
**Partner:** MacKenize Healthcare Technologies

**Details:** MacKenzie made improvements to original device (manual to automated) and required assistance with prototype testing and modification.

**Result:** Design improvements made to device – now at product launch stage.
VALÉRIE LALANDE, UNIVERSITÉ SAINT-ANNE
Valérie Lalande, Director

• **R&D Laboratory and Greenhouses**
  – Microbiology
  – Biochemistry
  – Genomics

• **Expertise Related to Early and Development Stages/Gates**
  – Experimental design
  – Process optimization
  – Efficacy trials
  – Product quality assessment
  – Method validation
Examples of projects with companies and organizations

• Optimization of an aquaculture production system
  – Controlling bacterial proliferation
  – Improving Omega-3 content (GC-MS)

• Efficacy trials of plant biostimulants
  – Plants grown in the greenhouse
  – Gene expression analyses (qPCR)

• Microbial genomics QC
  – Food-borne pathogens
  – Animal diseases
SARAH RILEY, GUB GUB FOODS
WITH MATT MCSWEENEY, ACADIA SCHOOL NUTRITION & DIETETICS
Vision/Goals
Brand Strategy
Success Measures
Market Analysis

Product Requirements
Consumer Surveys
Key ingredient research
Product Engineering

Fine tuning
Sensory Testing
A/B Testing
Analysis

Procurement
Supply Chain management
Manufacture Set-up
Product Launch
Overview of the Stages - Accelerate the Creative Process

**DISCOVERY**
- Generate ideas with potential to solve a big customer problem

**SCOPE**
- Quick & inexpensive assessment to size-up opportunity and options

**BUSINESS**
- Feasibility of options to recommend the winning definition: customer desirability & business viability

**DEVELOP**
- Rapid iterations of design prototypes to confirm customer desirability & business viability

**VALIDATE**
- Pilot scale-up of the winning prototype for field trials and early customer adoption to confirm value

**LAUNCH**
- Ramp-up to full production and scale-up sales and distribution capability
Overview of the Gates - Accelerate Time to Profit

1. DISCOVERY
   - Gentle Screen
     to assess for merit & to purchase next stage, a time-boxed sprint
   - $1

2. SCOPE
   - Modest screen
     to assess risk & business potential, & to purchase the next stage
   - $$

3. BUSINESS
   - Money Gate
     Robust evaluation: Is it Real? Can we Win? Is it Worth it?
   - $$$

4. DEVELOP
   - Detailed review of the business case for scale-up investment readiness
   - $$$$%

5. VALIDATE
   - Launch Gate
     Detailed review of launch plan readiness & full support
   - $$$$$

6. LAUNCH

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Q&A
Fast Moving Goods
Thank You!

www.stage-gate.com

michelle.jones@stage-gate.com