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МЕМЪКОДОСИ ДЕЛЕГОЪВЕИ АИД
ТИЖОАИТОИ

- 
- **Either** the development and introduction of a product **not previously manufactured** by a company into the marketplace, **or**
 - The presentation of an **old product** into a **new market** not previously explored by a company

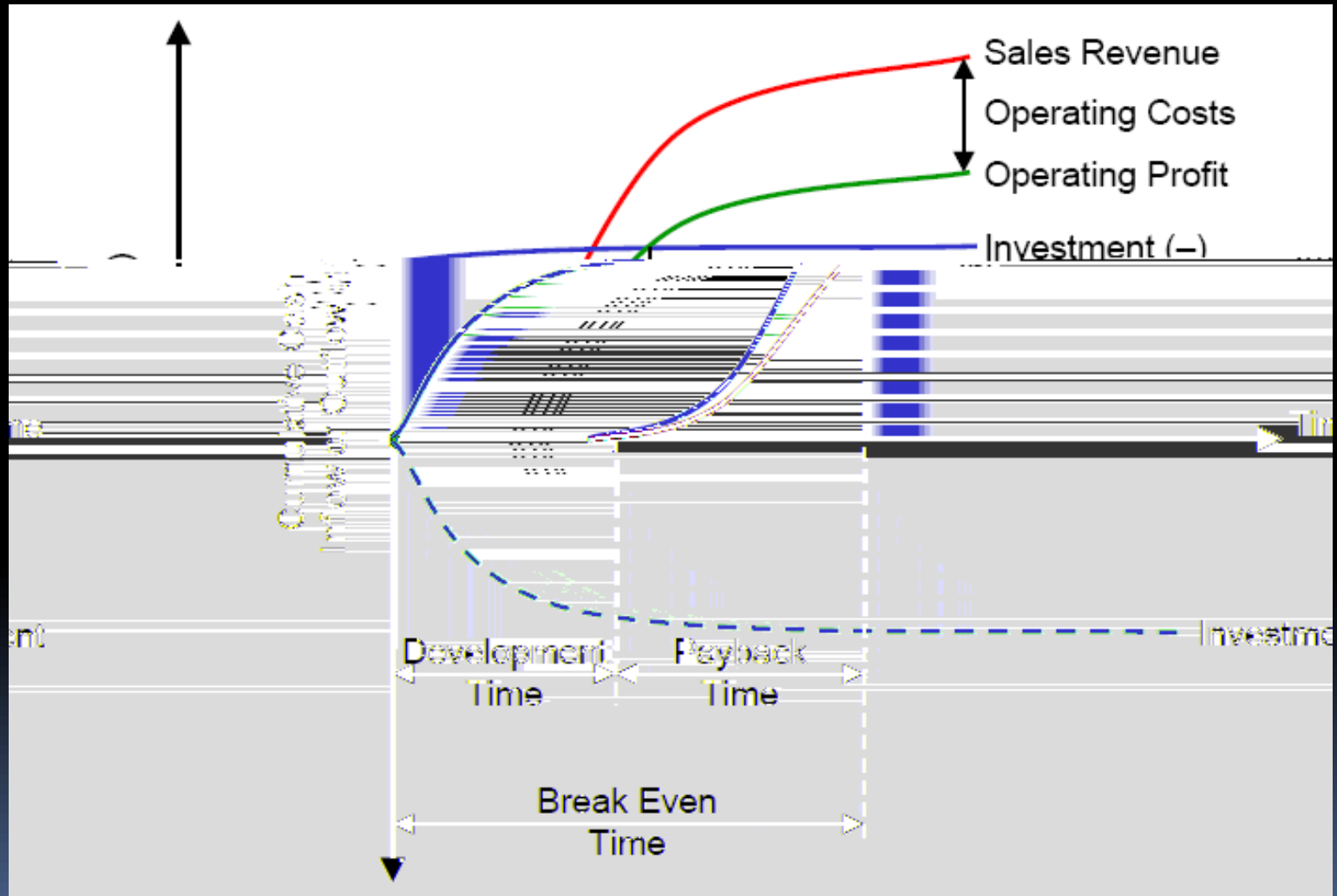
THE FAMILY CIRCUS Bil Keane



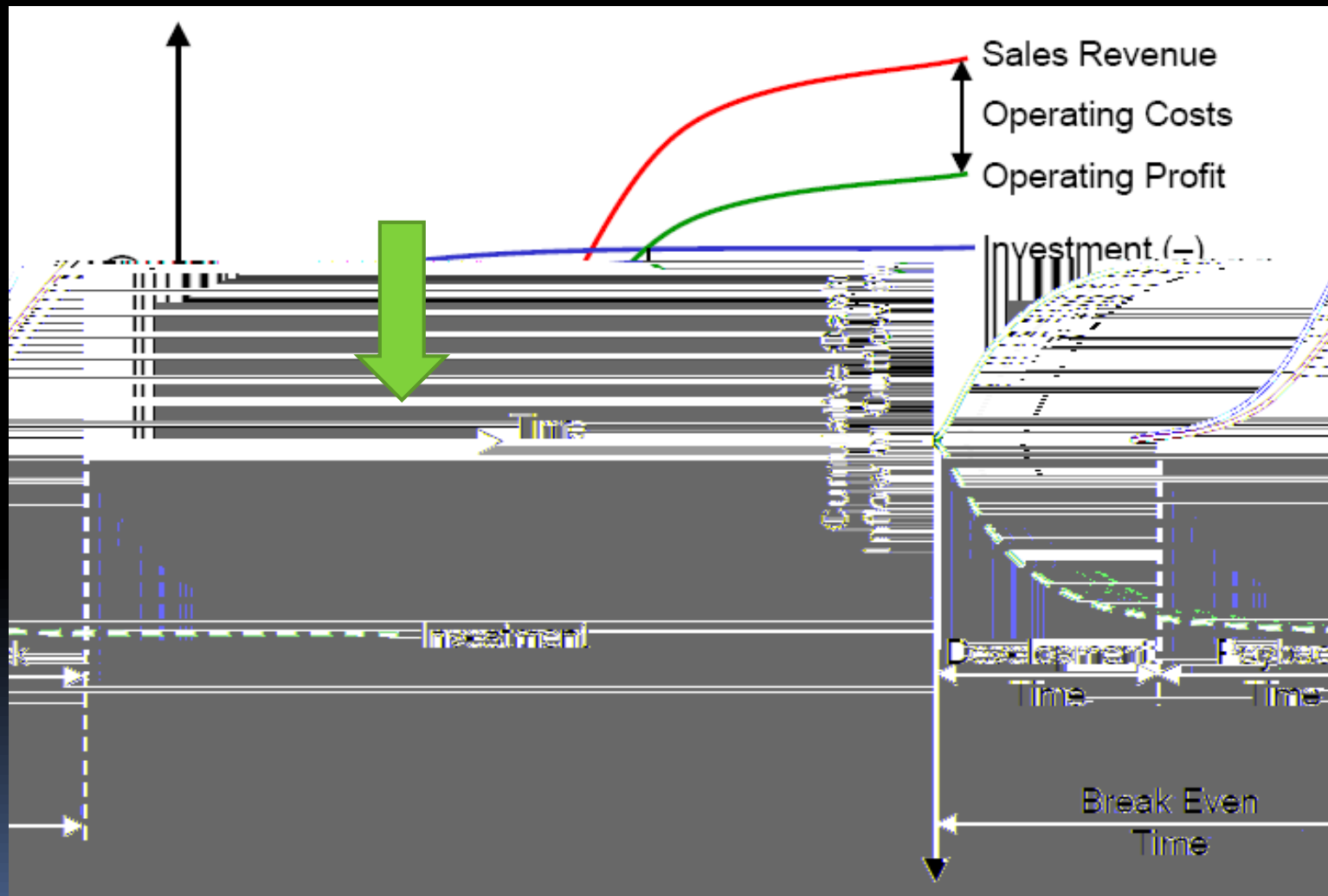
THE COUNTRY OF THE FUTURE
"How we have come!"



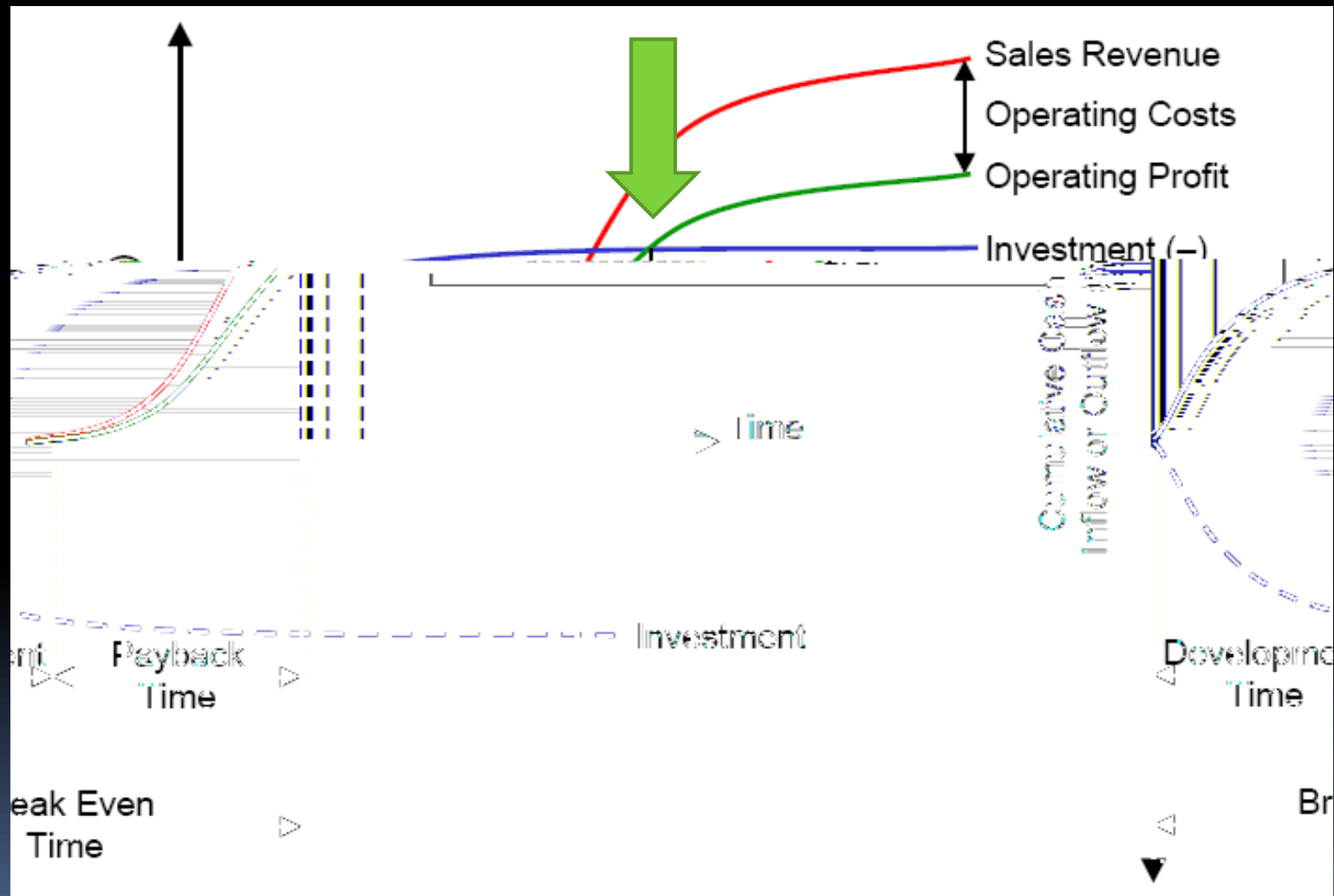
Product Development Cash Flow



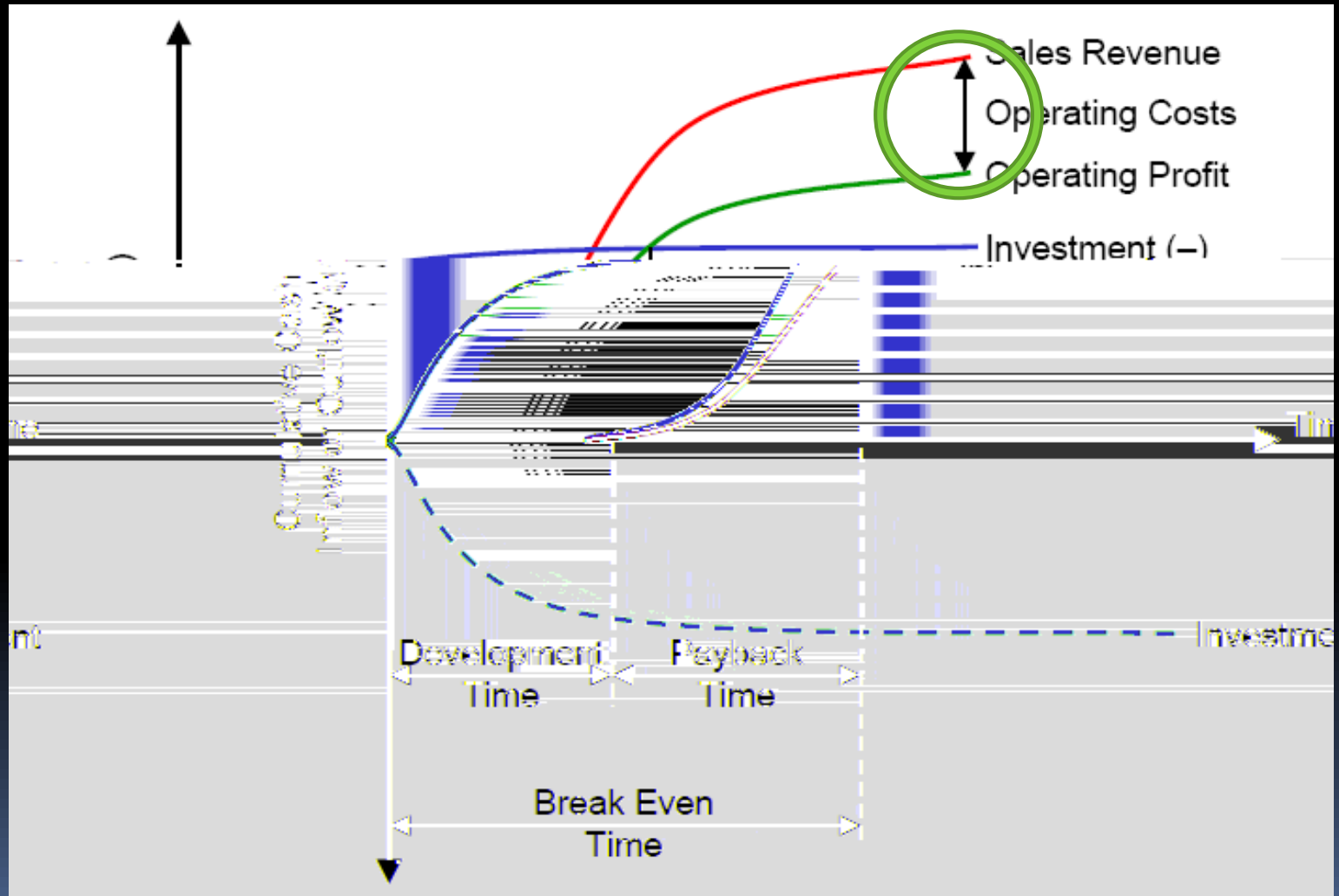
Product Development Cash Flow

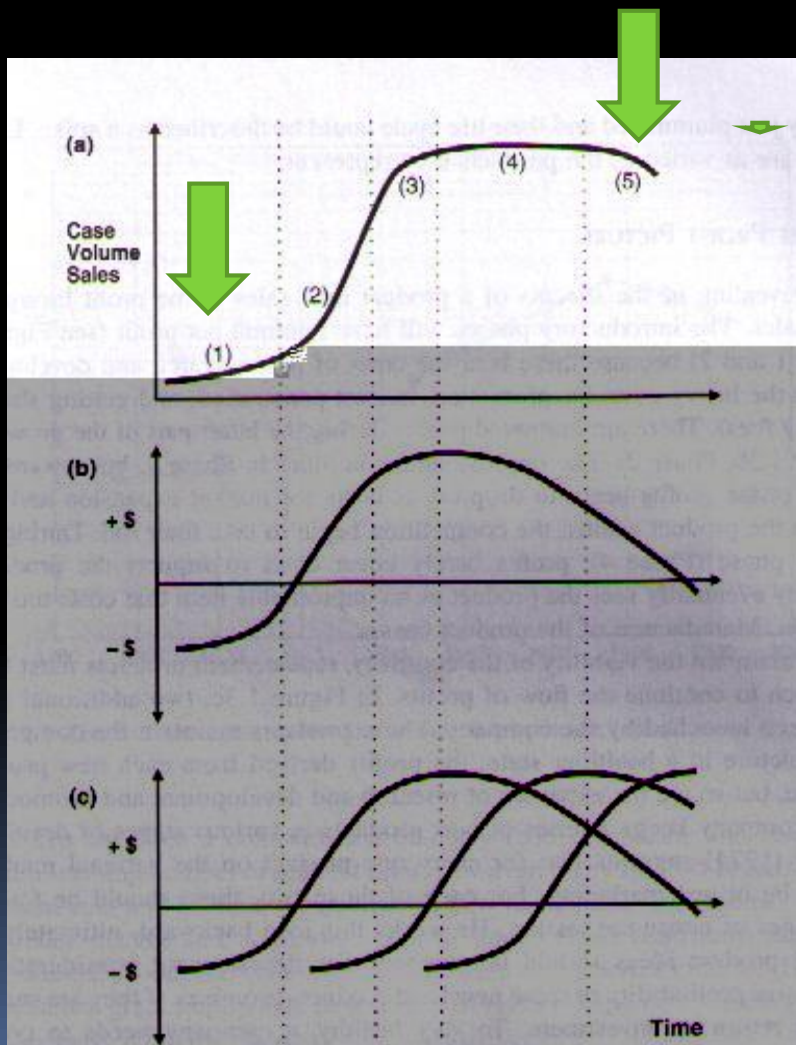


Product Development Cash Flow




Product Development Cash Flow

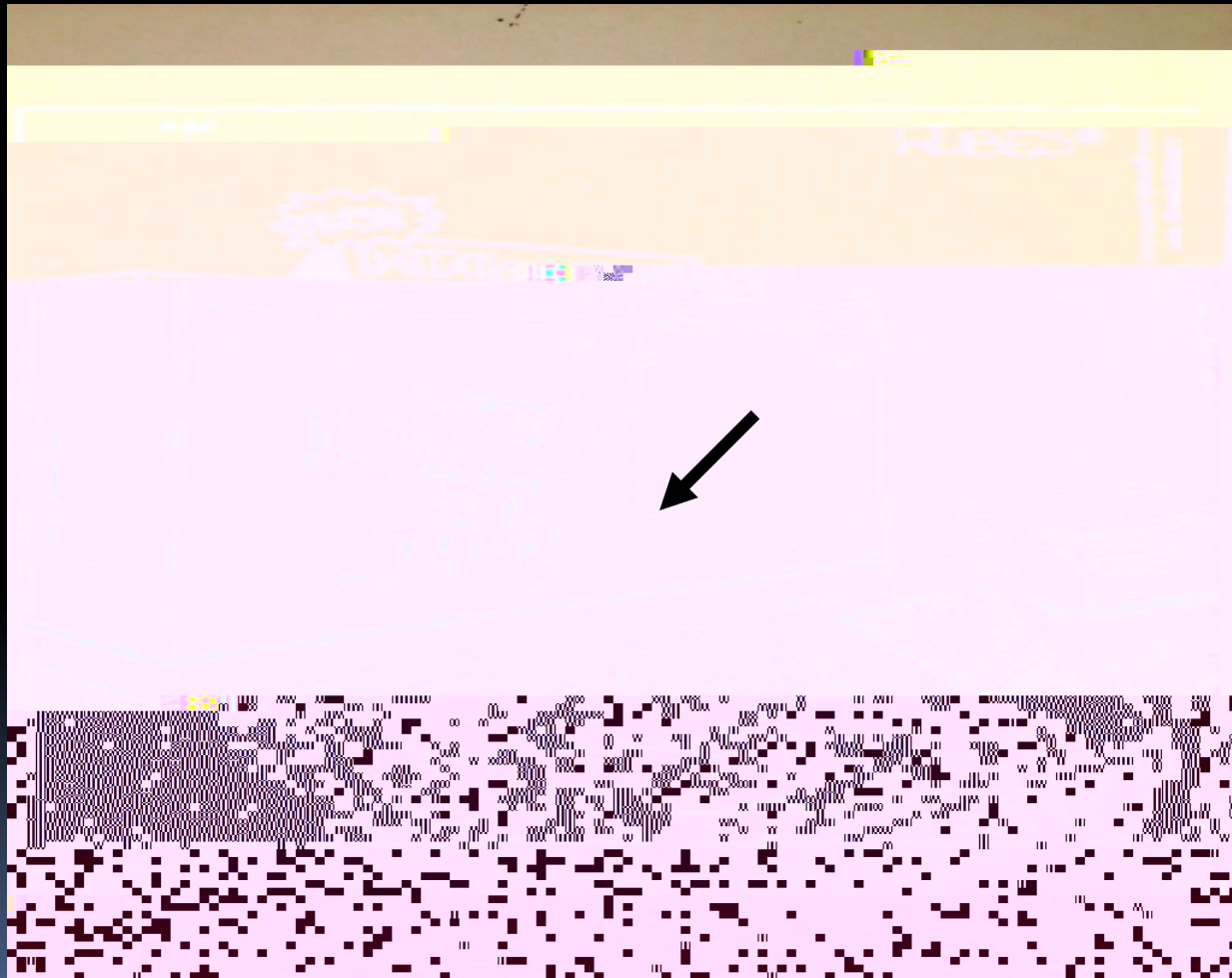




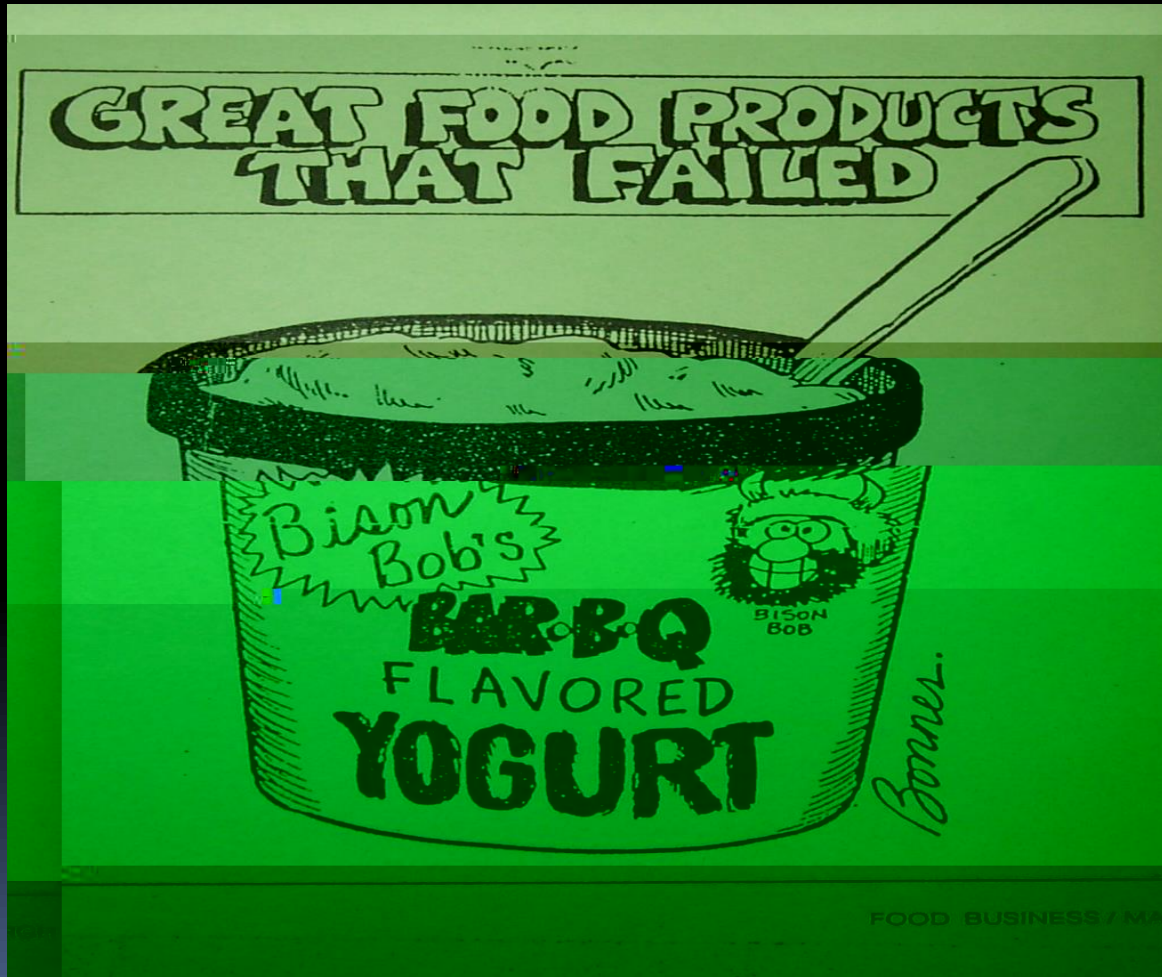
- (1) Introductory
- (2) Strong growth
- (3) Decline in growth
- (4) Maturity
- (5) Decline in volume

- 
- Understand that **profits** have a **predictable pattern**
 - **Early** stages: *focus is on product information*
 - **Later** stages: *focus is on brand promotion*
 - Use market segmentation in **maturity stage** to maintain strong core customer basis


New-to-World



Never before





- 
- *1. Line extension*
 - *2. Reposition*
 - *3. New form*
 - *4. Reformulation*
 - *5. New packaging*
 - *6. Innovative or value-added products*
 - *7. Creative products*

- 
- Intention
 - Ideation
 - Prototyping
 - Development
 - Test market
 - Production
 - Launch

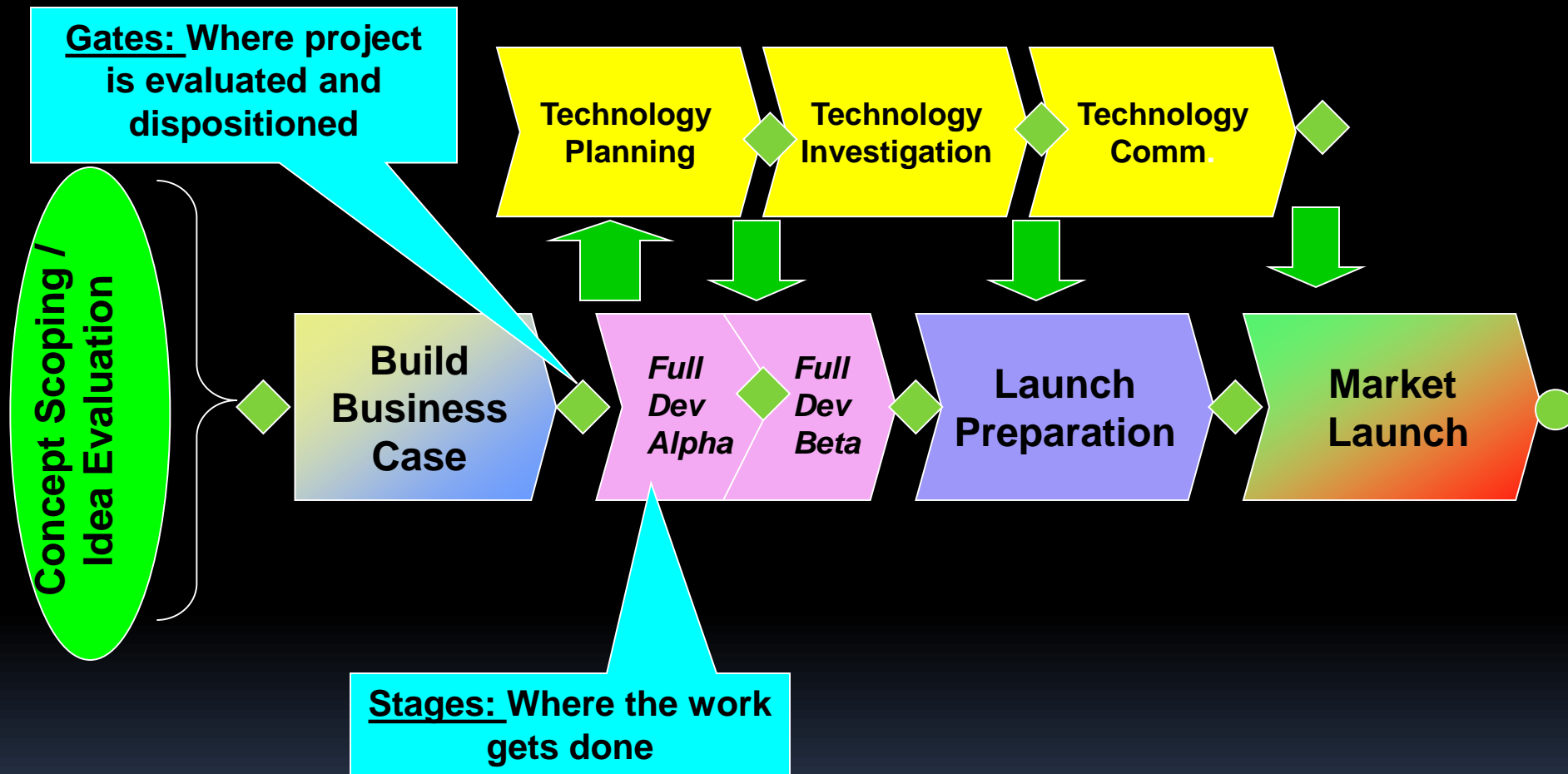
A disciplined and defined set of tasks and steps that describe the normal means by which a company repetitively converts embryonic ideas into salable products or services



Nabisco Co.

- - Ideation: brainstorming and screening
 - Market research + R&D
- - Transformation: from concept to prototype
 - Bench top to pilot plant
 - Consumer Focus group
 - *Multifunctional team: Marketing, R&D, production, etc*





One of the big benefits of the process is to get engineers to focus on what is most important not necessarily stuff that is urgent.

- **Technology Driven**

- *R&D Driven*

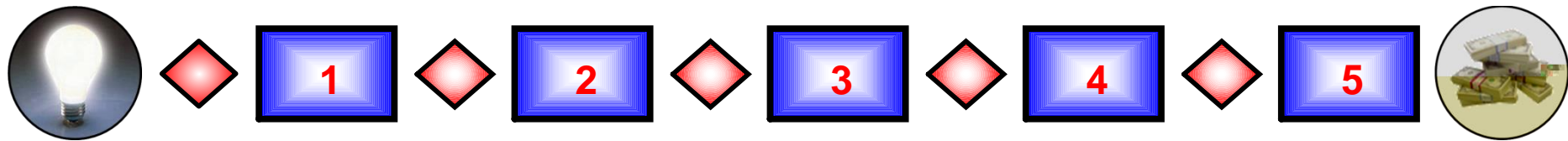
- *Build it they will come*

- **Marketing Driven**

- *I love the idea, let's do it*

- *The CEO asked me to do it*

- *I had this idea and other two persons are OK with it*



The Stage-Gate[®] Product Development Process

Stage

*Activities/Work take Place
During a Stage*



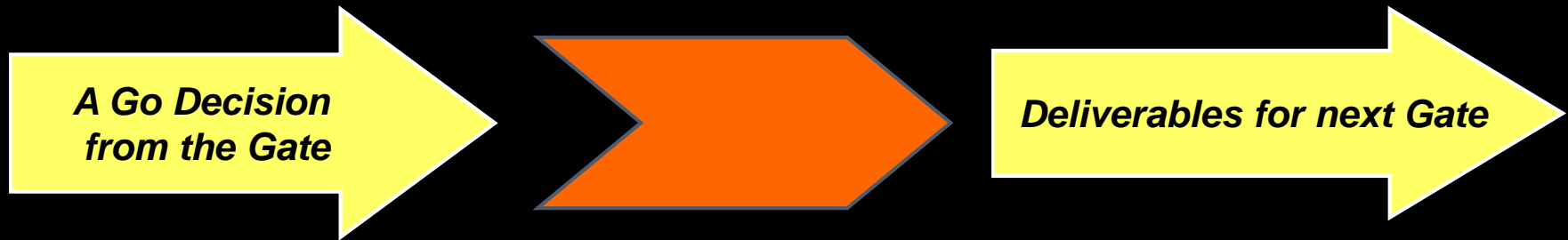
- Cross functional work in parallel
- Early definitions get fine tuned as project advances
- Must have a **plan** to follow
- Ensure communication/collaboration
- No one team owns the stage
- *Market research + Early product definition ensure reduced cycle time*

Gate

Individual Project Review and Decisions are made at Gate



- Individual projects reviewed
- **Decision Point:** Go/ No Go/ Hold/ Recycle
- Scoring based on criteria
- Gatekeeper meeting
- Project Decisions
- Resources Allocated
- **Quality evaluation of deliverables**



➤ *Action Plan*

➤ *Approved resources*

➤ *Date for next gate set*

➤ *List of Deliverables*

➤ Team decides how to “work the stage”

➤ Maps out the details of the Forward Plan

➤ Use the recommended list of best practice activities

➤ Apply sound PM methods

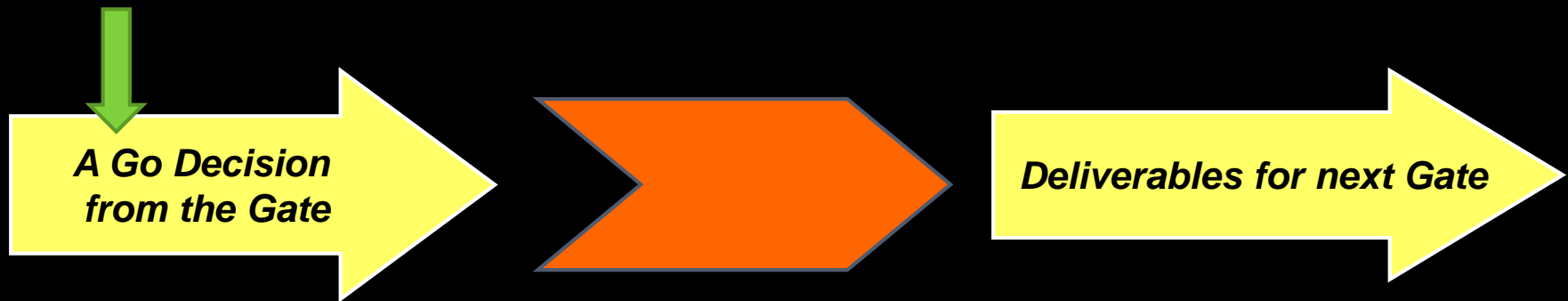
➤ Updates/Input - Senior Team engaged and informed

➤ *A deliverables pack*

➤ *A recommendation: Go / Kill*

➤ *If Go, a proposed*

➤ *Resources requested for next stage*



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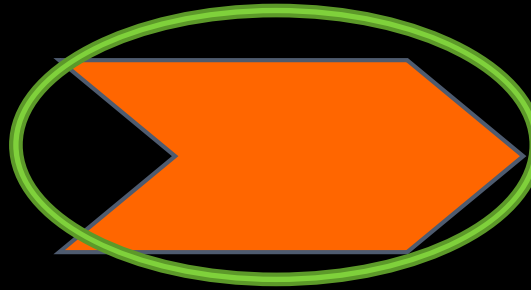
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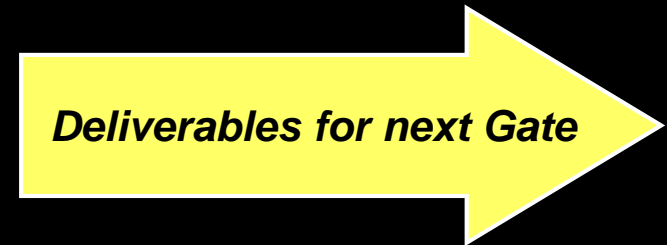
➤ *Resources requested for next stage*



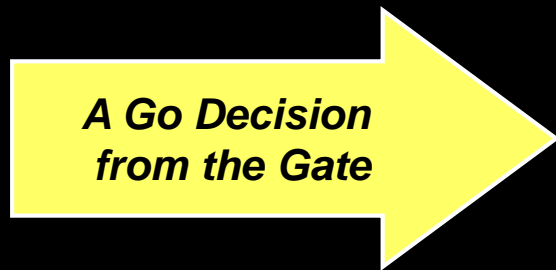
- *Action Plan*
- *Approved resources*
- *Date for next gate set*
- *List of Deliverables*



- Team decides **how to “work the stage”**
- Maps out the details of the **Forward Plan**
- Use the recommended list of best practice activities
- Apply sound **PM methods**
- Updates/Input – **Senior - Team** engaged and informed



- *A deliverables pack*
- *A recommendation: Go / Kill*
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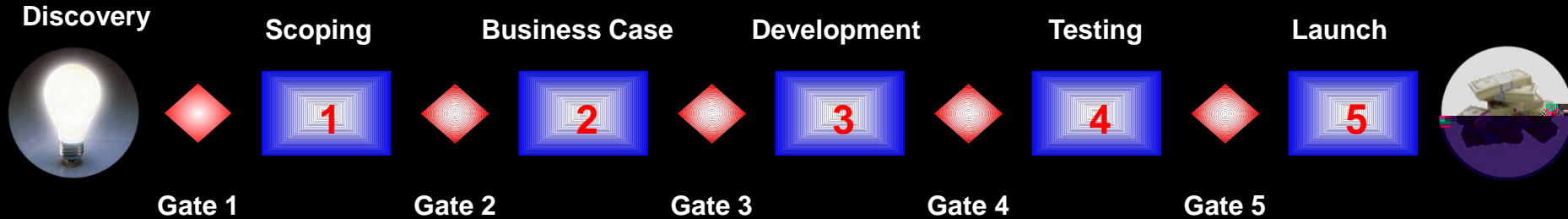
- Team decides how to “work the stage”
- Maps out the details of the Forward Plan
- Use the recommended list of best practice activities
- Apply sound PM methods
- Updates/Input - Senior Team engaged and informed



- A *deliverables pack*
- A recommendation: *Go / Kill*
- If *Go*, a proposed *Forward Plan*
- *Resources requested* for next stage



*Each **stage** is preceded by a **Gate***



Gates = Decision Points or Go / Kill Points

*Gates are where **projects get resources** & **are prioritized**
– get on management's radar screen*

***Gates** are the **check points** in the process*



- activities of the previous phase
- based on a standard list or menu
- key information for efficient decision making

Decision based upon...

Readiness check:

- *Quality of execution?*
- *Deliverables in place?*

Business rationale:

- *Is it an attractive investment opportunity?*

Action plans:

- *C good one?*
- *Are the resources available?*

Gate 1 - Scoping



ment to determine whether the project is worth
This stage is a relatively quick, internal scoping of the idea for the proposed project. This is not a detailed investigation, but a quick assessment to determine whether the project is worth further investigation in the next stage.

0 of 9 Deliverables completed

Deliverable Name	Status	Plan Date
Preliminary Integrated Product Definition	In Progress	Apr 14, 2010
Preliminary Roadmap	In Progress	Apr 15, 2010
Preliminary Market Assessment	In Progress	Apr 15, 2010
Preliminary Technical Assessment	In Progress	Apr 15, 2010
Preliminary Production/Supply-Options Assessment	In Progress	Apr 15, 2010
Preliminary Cash Flow Analysis	In Progress	Apr 15, 2010
Preliminary Business Case	In Progress	Apr 15, 2010
Gate 1 Scorecard	Not Started	Apr 22, 2010
Executive Gate Business Case	Not Started	Apr 22, 2010

Accolade Welcome Get Started Accolade Overview Process Manual Accolade Add-Ins Accolade Support

Discovery

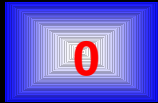
Scoping

Business Case

Development

Testing

Launch



Gate 1

Gate 2

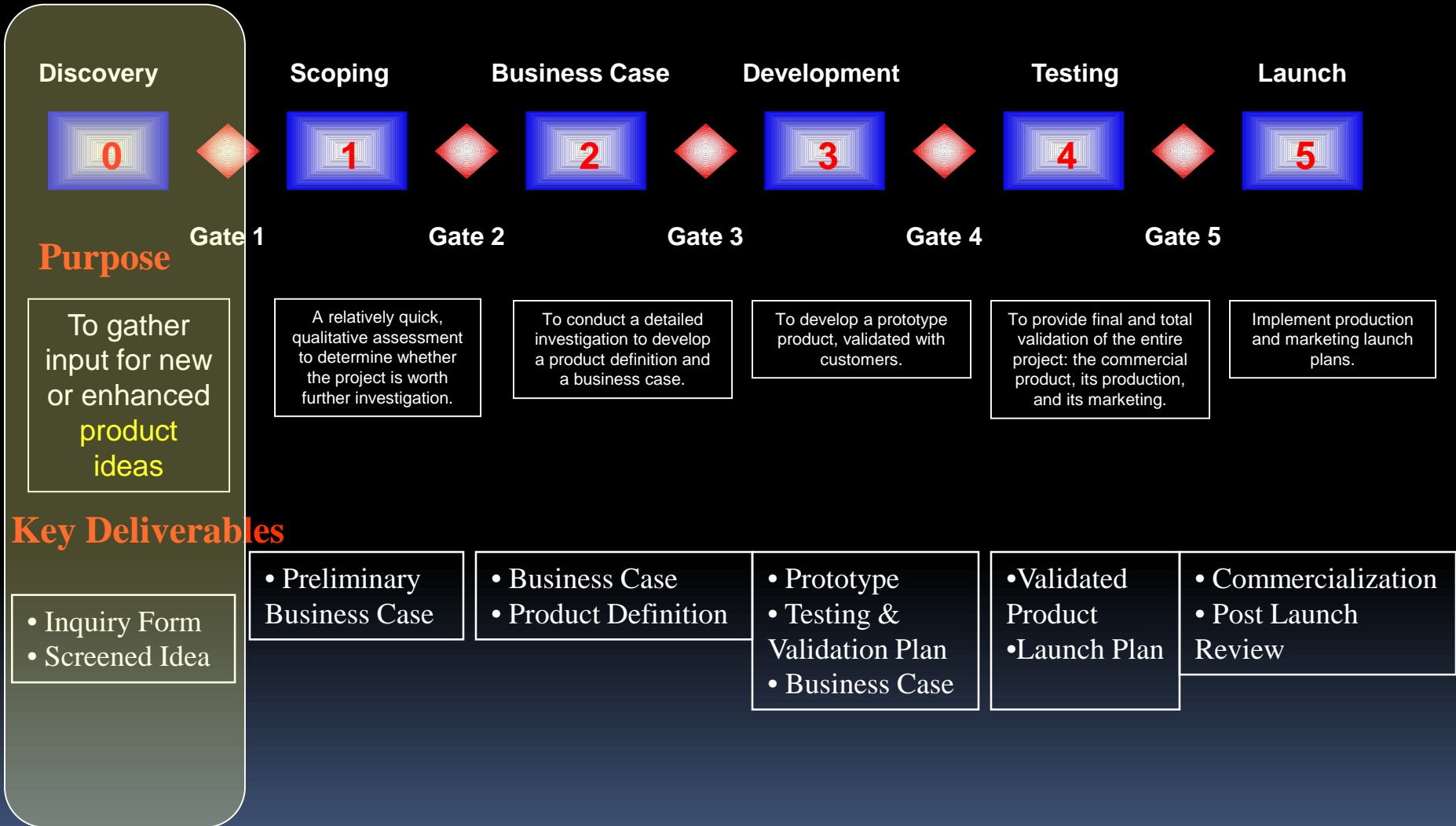
Gate 3

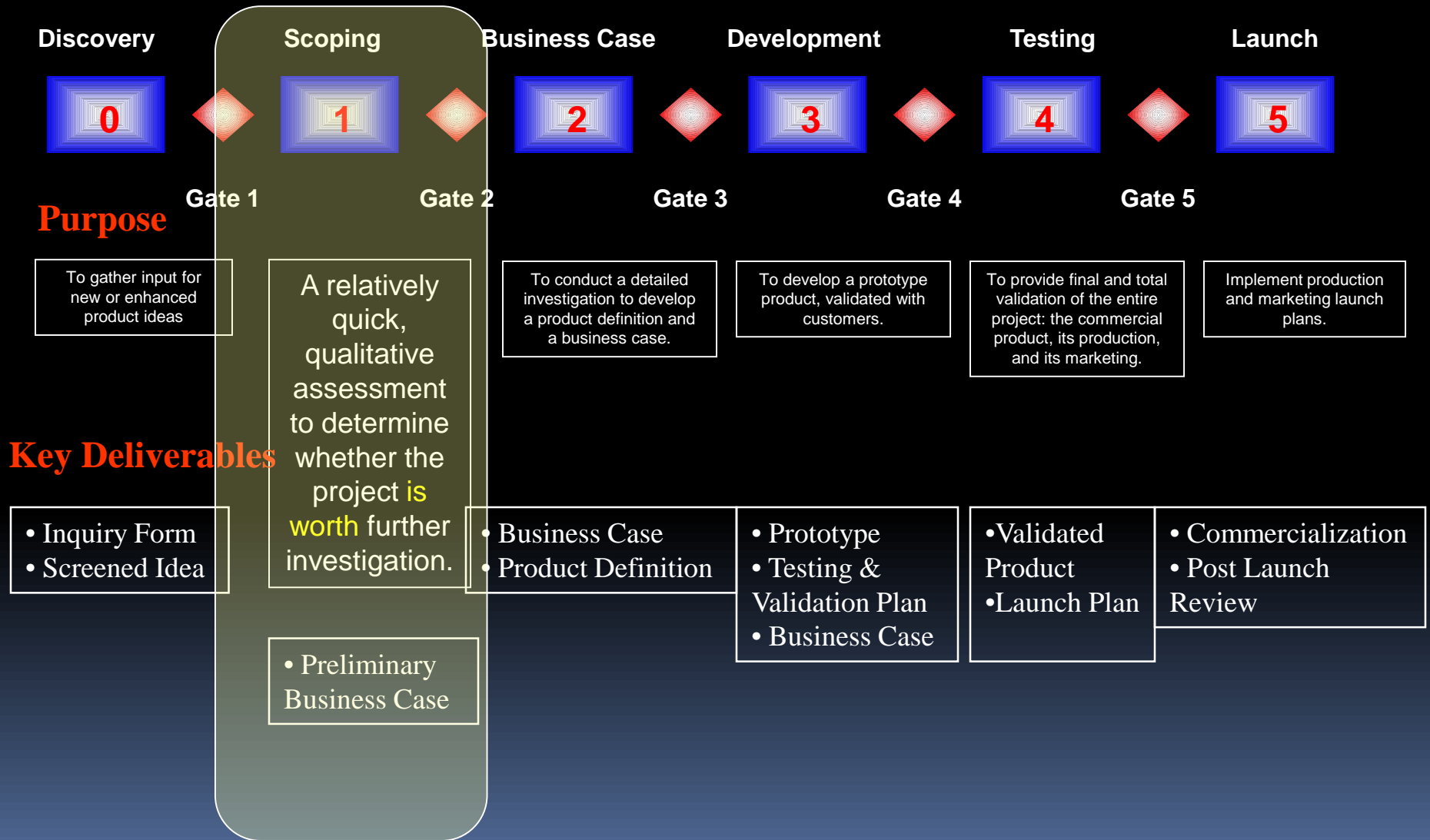
Gate 4

Gate 5

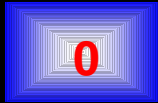
A relatively quick, qualitative assessment to determine whether the project is worth further investigation.

To conduct a detailed...

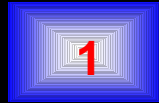




Discovery



Scoping



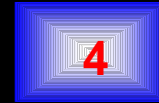
Business Case



Development



Testing



Launch



Purpose

Gate 1

Gate 2

Gate 3

Gate 4

Gate 5

To gather input for new or enhanced product ideas

A relatively quick, qualitative assessment to determine whether the project is worth further investigation.

To conduct a **detailed investigation** to develop a product definition and a business case.

To develop a prototype product, validated with customers.

To provide final and total validation of the entire project: the commercial product, its production, and its marketing.

Implement production and marketing launch plans.

Key Deliverables

- Inquiry Form
- Screened Idea

- Preliminary Business Case

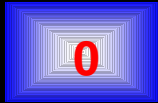
- Business Case
- Product Definition

- Prototype
- Testing & Validation Plan
- Business Case

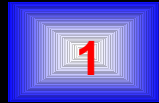
- Validated Product
- Launch Plan

- Commercialization
- Post Launch Review

Discovery



Scoping



Business Case



Development



Testing



Launch



Purpose

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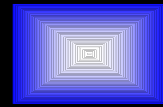
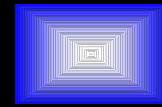
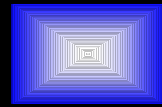
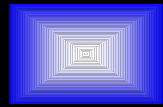
- Preliminary Business Case

- Business Case
- Product Definition

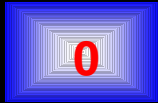
- Prototype
- Testing & Validation Plan
- Business Case

- Validated Product
- Launch Plan

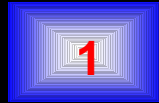
- Commercialization
- Post Launch Review



Discovery



Scoping



Business Case



Development



Testing



Launch



Gate 1

Gate 2

Gate 3

Gate 4

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Key Deliverables

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- Preliminary Business Case

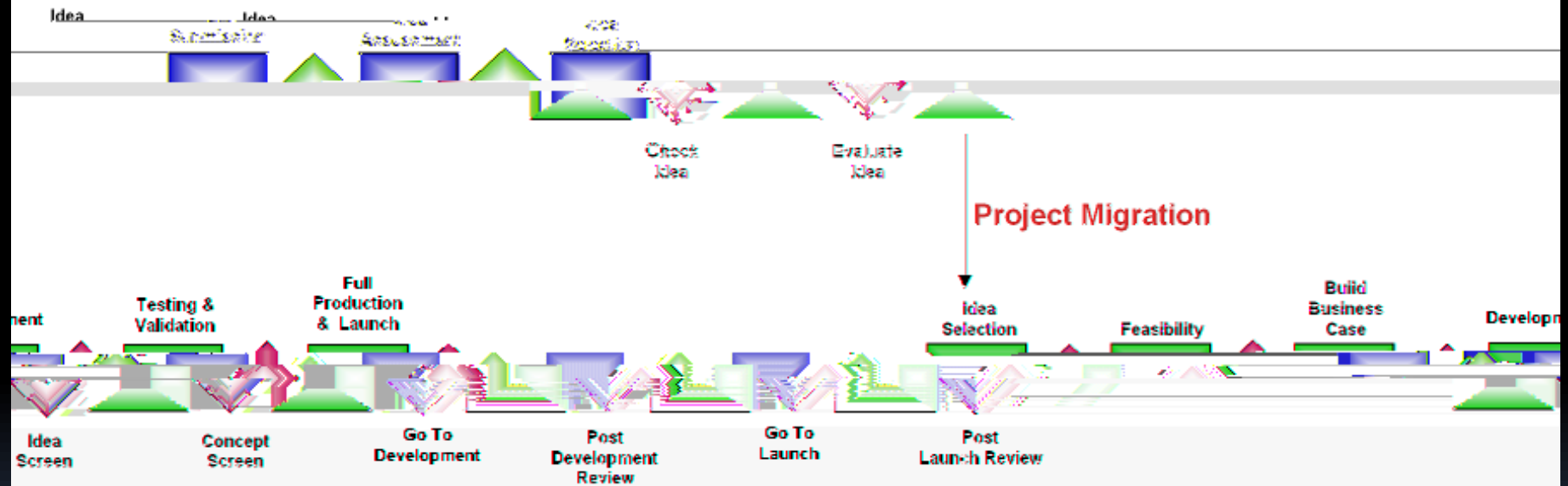
- Business Case
- Product Definition

- Prototype
- Testing & Validation Plan
- Business Case

- Validated Product
- Launch Plan

- Commercialization
- Post Launch Review

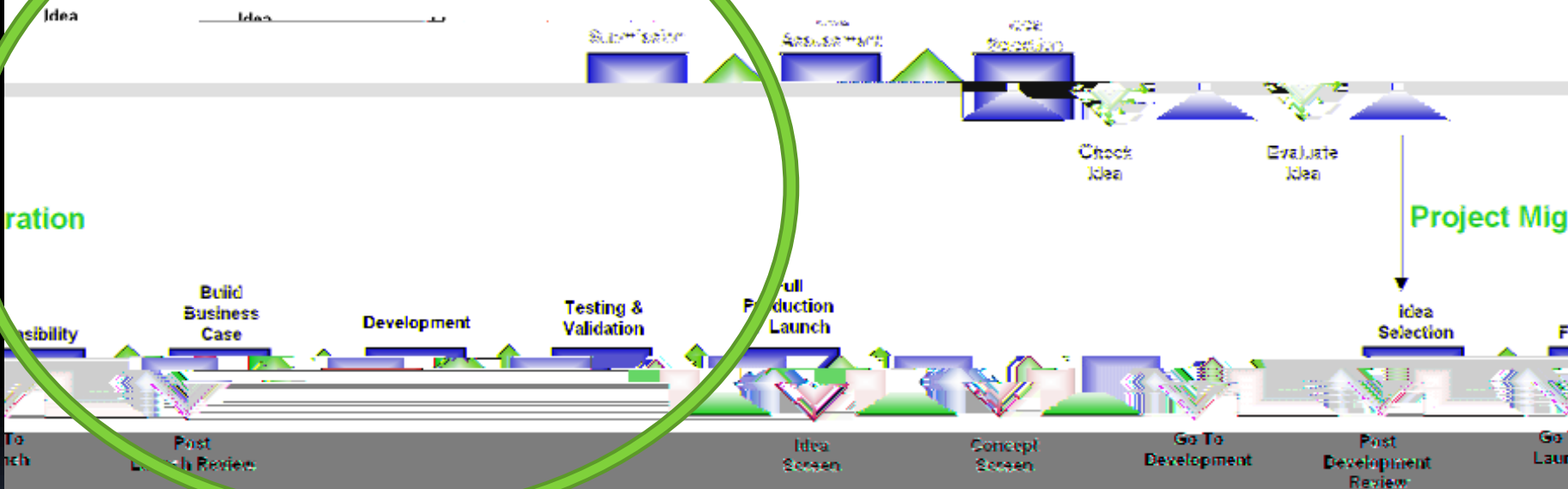
Idea Management Process



New Product Development Process

Ne

Idea Management Process



New Product Development Process

Generic Stage-Gate Process

Discovery



- Brainstorm with Industry and Technical Experts
- Intellectual Property Analysis
- Preliminary Market Assessment

Scoping



- Expert Opinions on Concept Feasibility
- Research on Standards and Regulations
- Examination of Aftermarket Environmental Issues
- Competitor Profiles
- Examination of Industry Situation and Trends
- Preliminary Technology Assessment
- Investigation of Licensable Technologies
- Research on Product Requirements
- Concept Testing

Build Business Case



- Identification and Investigation of Potential Strategic Partners
- Detailed Market Studies
- Channel Research
- Trademark Research
- Detailed Technical Assessment
- Business Model Assessment
- Positioning Research
- Pricing Research
- Identification and Profiling of Target Markets
- Assessment of "Make" vs. "Buy" Options

Development



- Evaluation of Alternative Production Processes / Procedures
- Expert Problem-solving and Decision-making Support
- Sourcing of Testing, Measurement and Monitoring Equipment
- Supplier Research
- Packaging Research
- Materials Research

Testing and Validation



- Assessment of Critical Test Criteria
- Expert Review of Test Findings
- Research on Optimal Test Methods
- Benchmarking Studies

Launch

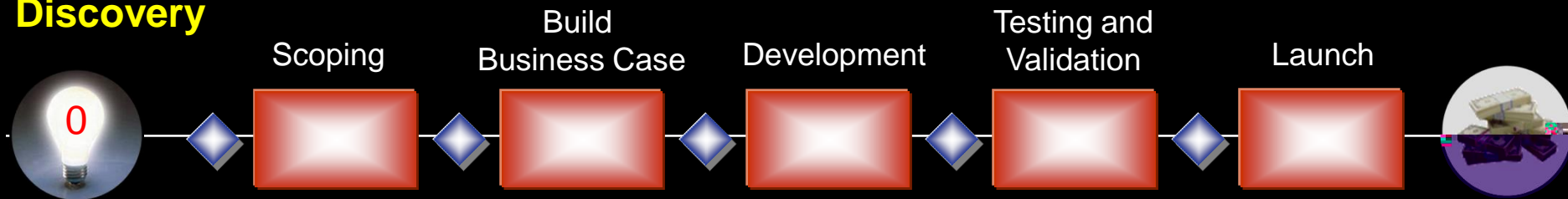


- Identification of New Markets and Market Segments
- Ongoing, Automatic Intelligence Gathering Related To:
 - Scientific and Technical Advances
 - Competitor Activities
 - Market Conditions and Trends
 - Patent Activity
 - Changes in Standards and Regulations
- Identification of New Users in Current Segments
- Research on Opportunities for Product Improvement



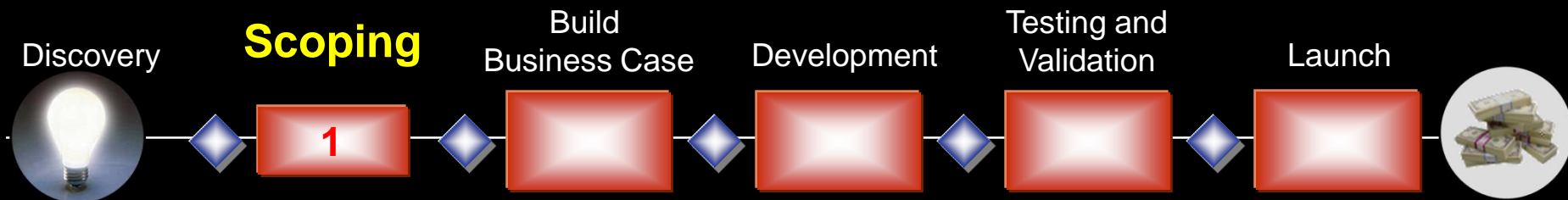
Stage-Gate Process: Stage 0

Discovery



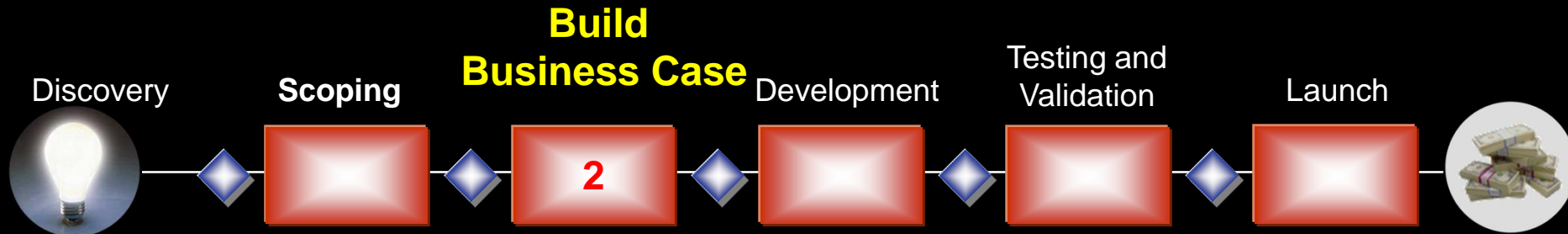
- Opportunities identification
 - Search for *existing products in market*
 - Look back *the products invented/developed in history*
- Brainstorm with Industry and Technical Experts
- **Intellectual Property** Analysis
- Preliminary Market Assessment

Stage-Gate Process: Stage 1



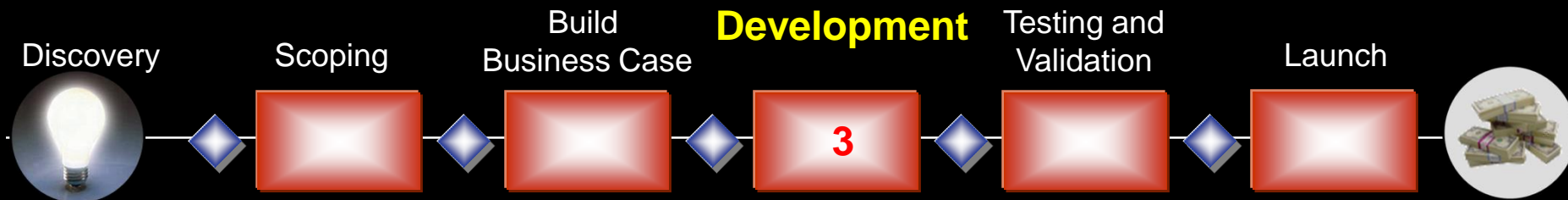
- **Expert** Opinions on **Concept Feasibility**
- Research on **Standards and Regulations**
- Examination of Aftermarket **Environmental Issues**
- **Competitor Profiles**
- **Examination of Industry Situation and Trends**
- Preliminary Technology Assessment
- Investigation of **Licensable Technologies**
- Research on Product **Requirements**
- **Concept Testing**

Stage-Gate Process: Stage 2



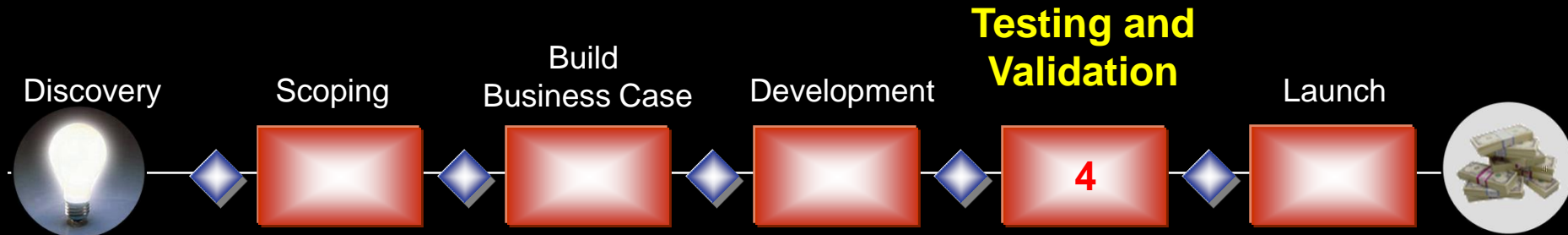
- Identification and Investigation of Potential **Strategic Partners**
- Detailed Market Studies
- **Channel and Trademark** Research
- Detailed Technical Assessment
- Business Model Assessment
- **Positioning** Research
- **Pricing** Research
- Identification and Profiling of **Target Markets**
- Assessment of “**Make**” vs. “**Buy**” Options
- **Project establishment**

Sample Stage-Gate Process: Stage 3



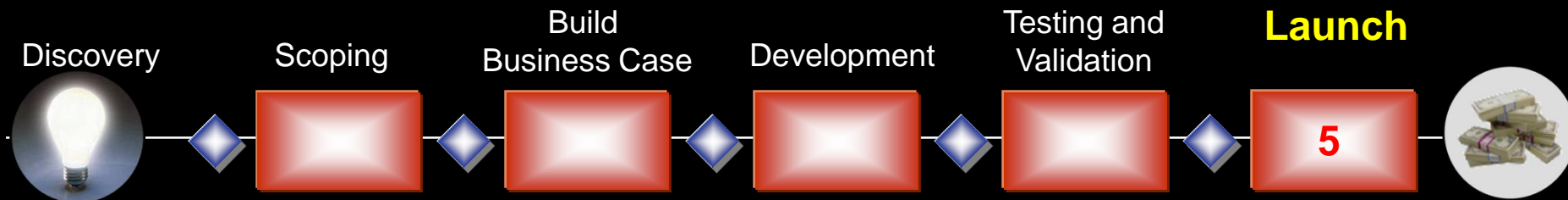
- Evaluation of **Alternative** Production Processes/ Procedures
- Expert *Problem-solving* and *Decision-making* **Support**
- **Sourcing** of Testing, Measurement and Monitoring Equipment
- *Supplier Research*
- *Packaging Research*
- *Materials Research*
- **Refinement**

Stage-Gate Process: Stage 4



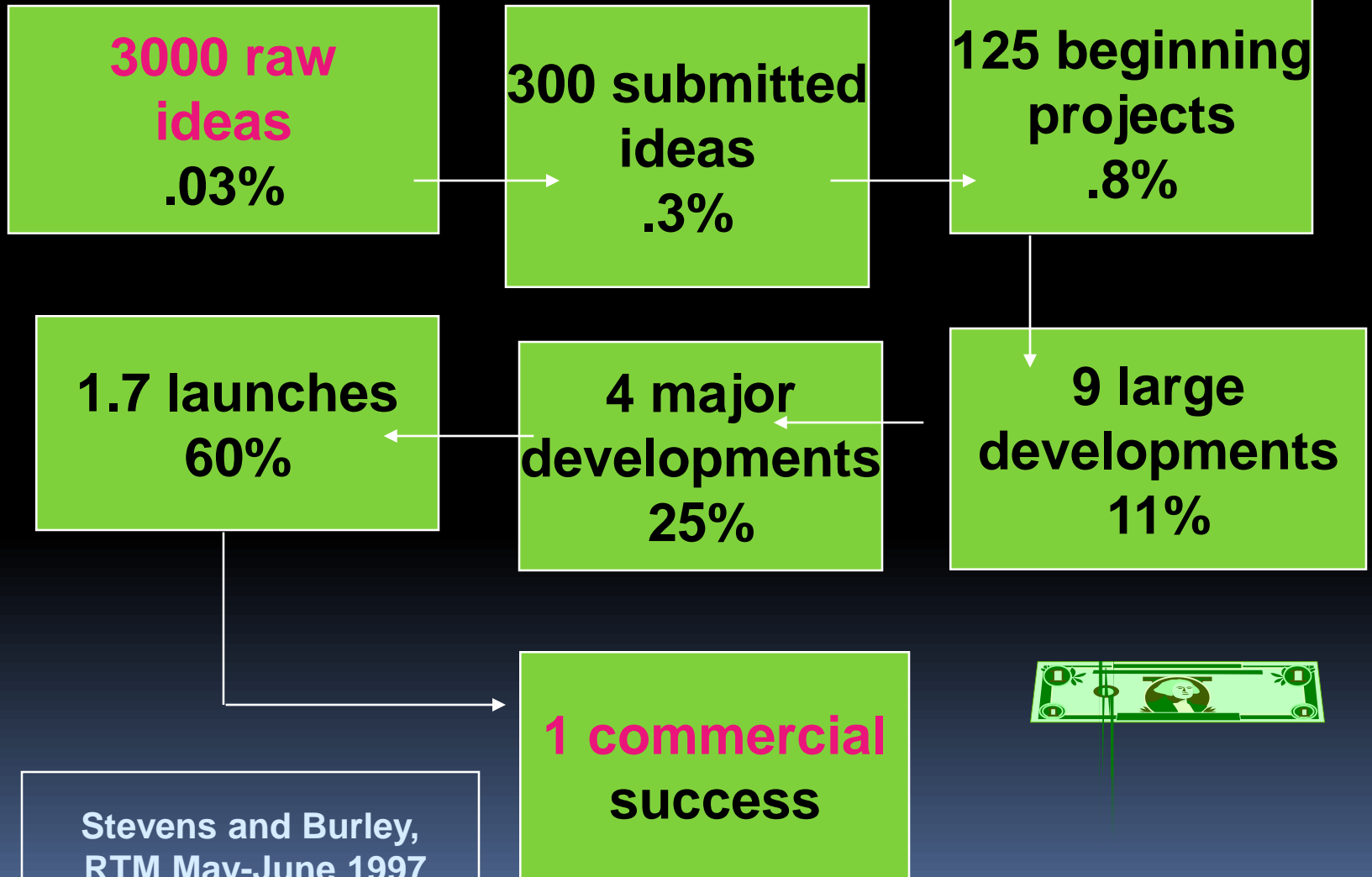
- Assessment of **Critical Test Criteria**
- Expert Review of **Test Findings**
- Research on **Optimal Test Methods**
- **Benchmarking** Studies

Sample Stage-Gate Process: Stage 5



- Identification of **New Markets** and **Market Segments**
- Ongoing, Automatic **Intelligence Gathering** Related To:
 - *Scientific and Technical Advances*
 - *Competitor Activities*
 - *Market Conditions and Trends*
 - *Patent Activity*
 - *Changes in Standards and Regulations*
- Identification of **New Users** in Current Segments
- **Research on Opportunities for Product Improvement**
- Review

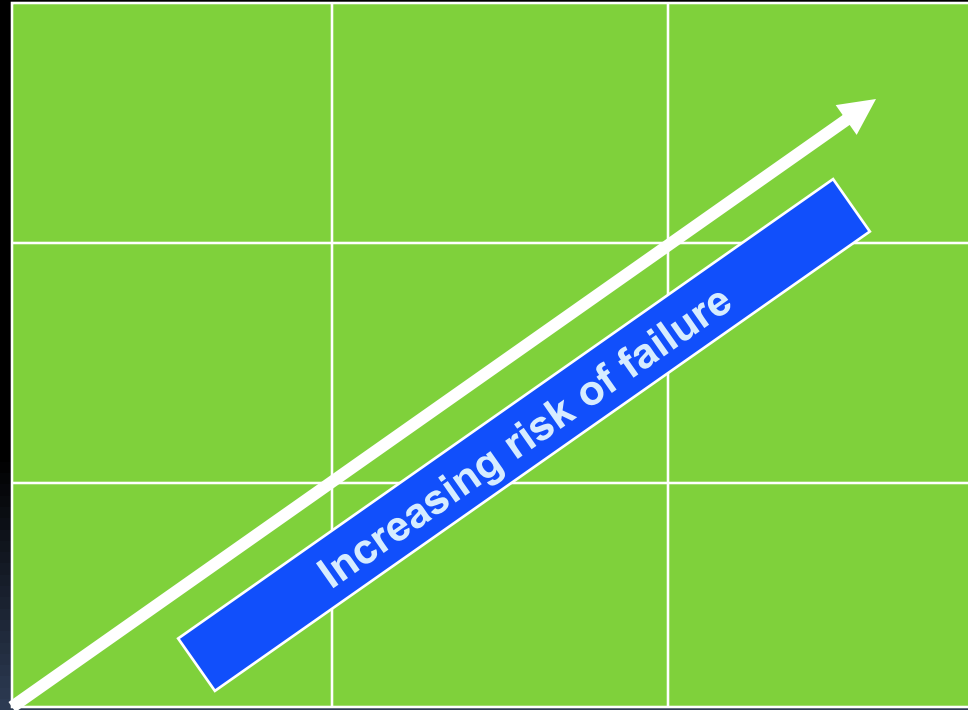
Success Rate Entirely New Products



Decreasing knowledge of the market



Familiar New, familiar New, unfamiliar

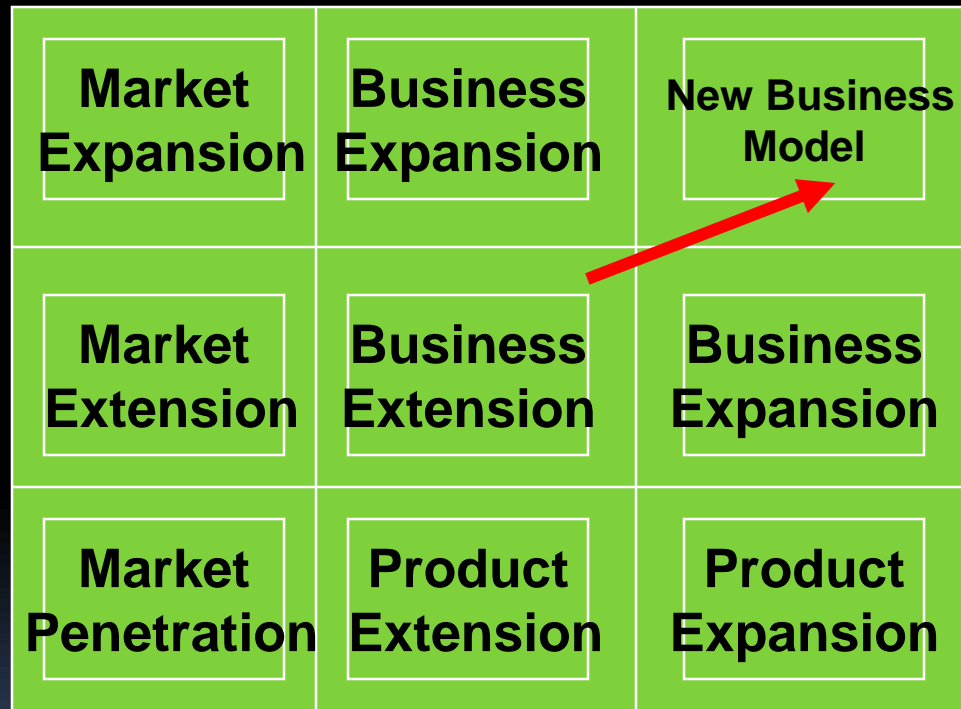


Familiar New, familiar New, unfamiliar



Decreasing knowledge of the technology

Decreasing knowledge of the market

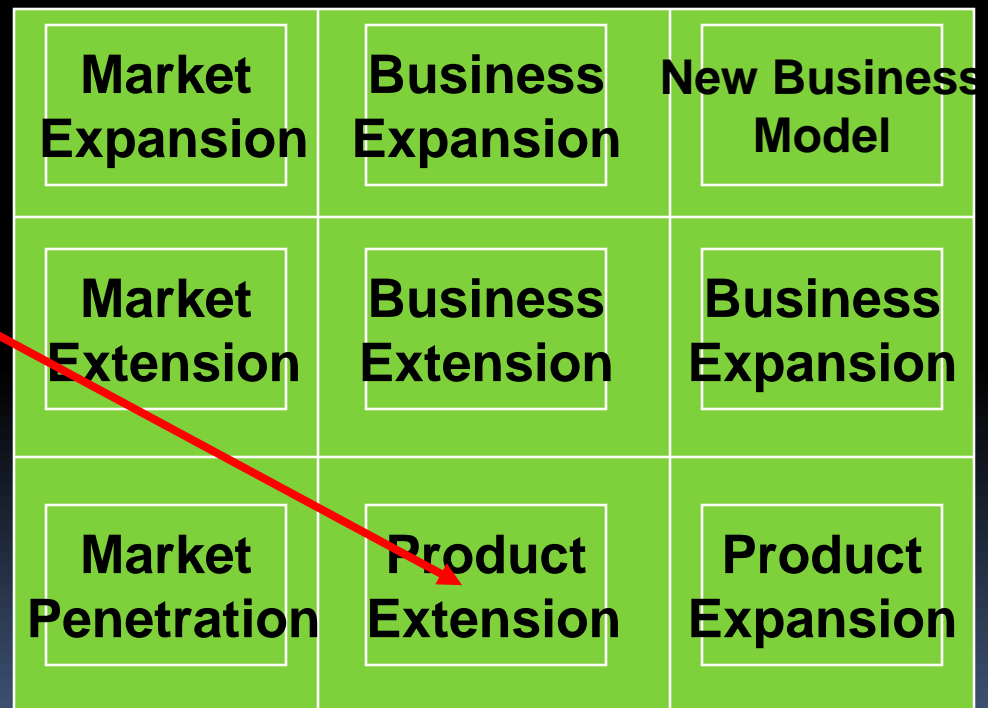


Decreasing knowledge of the technology

Probability of Success

New Product with unrelated technology in existing market:

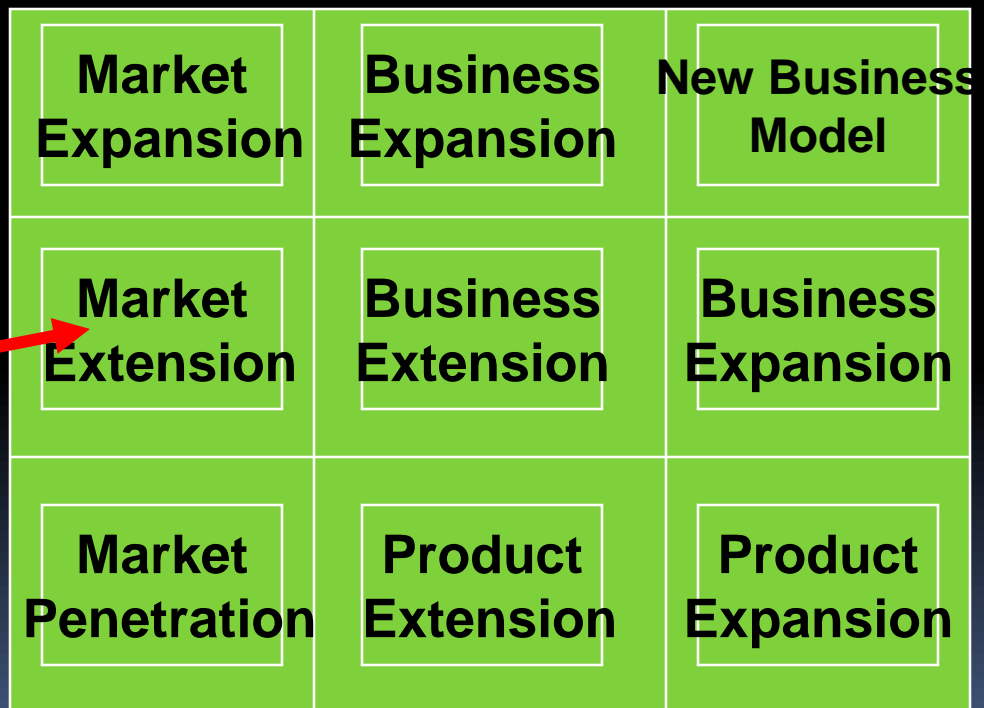
50%



Market Expansion	Business Expansion	New Business Model
Market Extension	Business Extension	Business Expansion
Market Penetration	Product Extension	Product Expansion

**Probability of
Success**

**Existing product in
a new market:
15%**



Market Expansion	Business Expansion	New Business Model
Market Extension	Business Extension	Business Expansion
Market Penetration	Product Extension	Product Expansion

Probability of Success

Improved product
in existing
market:

75%

“Suicide Square”

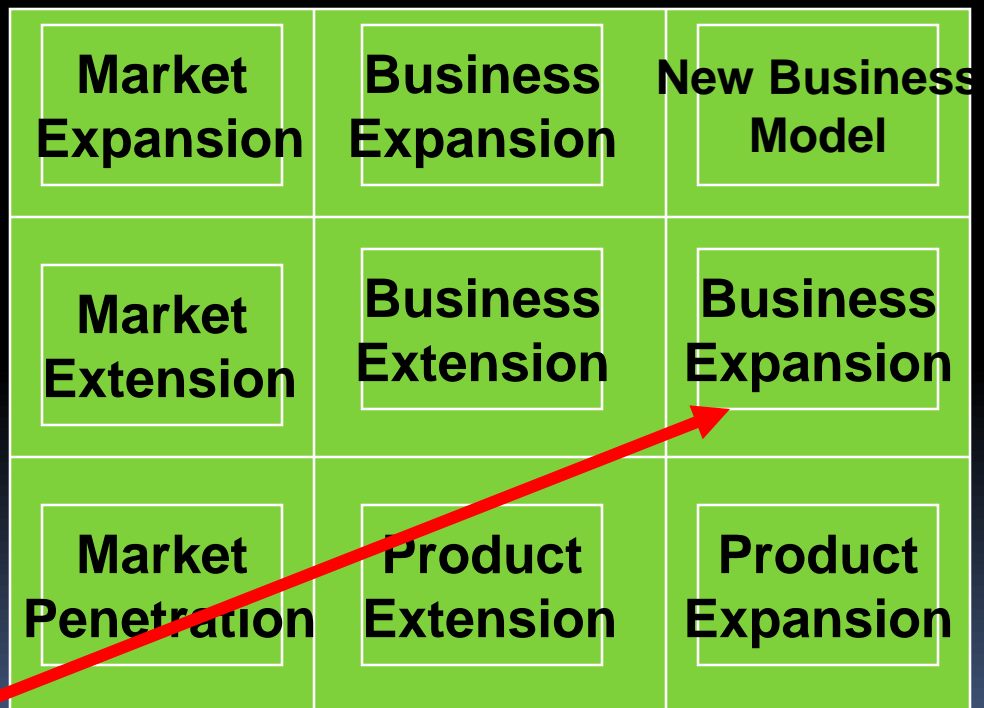
.03%

Market Expansion	Business Expansion	New Business Model
Market Extension	Business Extension	Business Expansion
Market Penetration	Product Extension	Product Expansion

Probability of Success

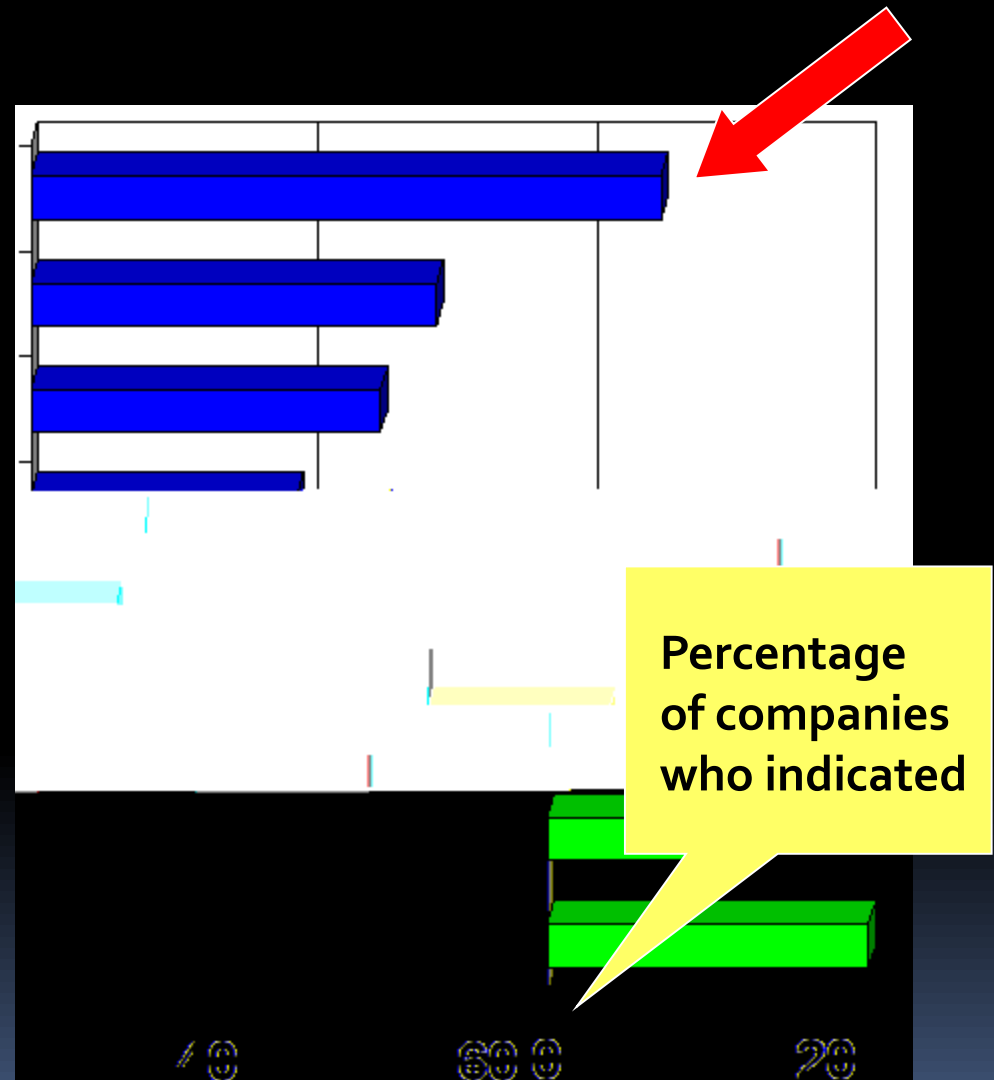
New Product in
a New Market:


5%



Market Expansion	Business Expansion	New Business Model
Market Extension	Business Extension	Business Expansion
Market Penetration	Product Extension	Product Expansion

- Inadequate Market Analyses**
- Product Problems or Defects**
- Lack of Effective Marketing**
- Higher costs than anticipated**
- Competitive Strength**
- Poor Timing of Introduction**
- Technical or Production Problems**
- Other Problems**





*New product development is **complex**, its success depends upon **cross-functional cooperation and support** that often extends across an entire organization;

- *Gate meetings are **deadlines**;
- *Decisions can be made based on **complete information**;
- ***Link to project planning**;
- *Reminders & alerts for **tracking progress**.



Thanks!

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huang188@gmail.com