

به نام خدا

کارگاه بهره‌برداری و مدیریت

محصول یا خدمات

دانشگاه شاهد

آبان ۸۸

امیرحسین ملکی

Invention is the discovery of new ideas and methods.

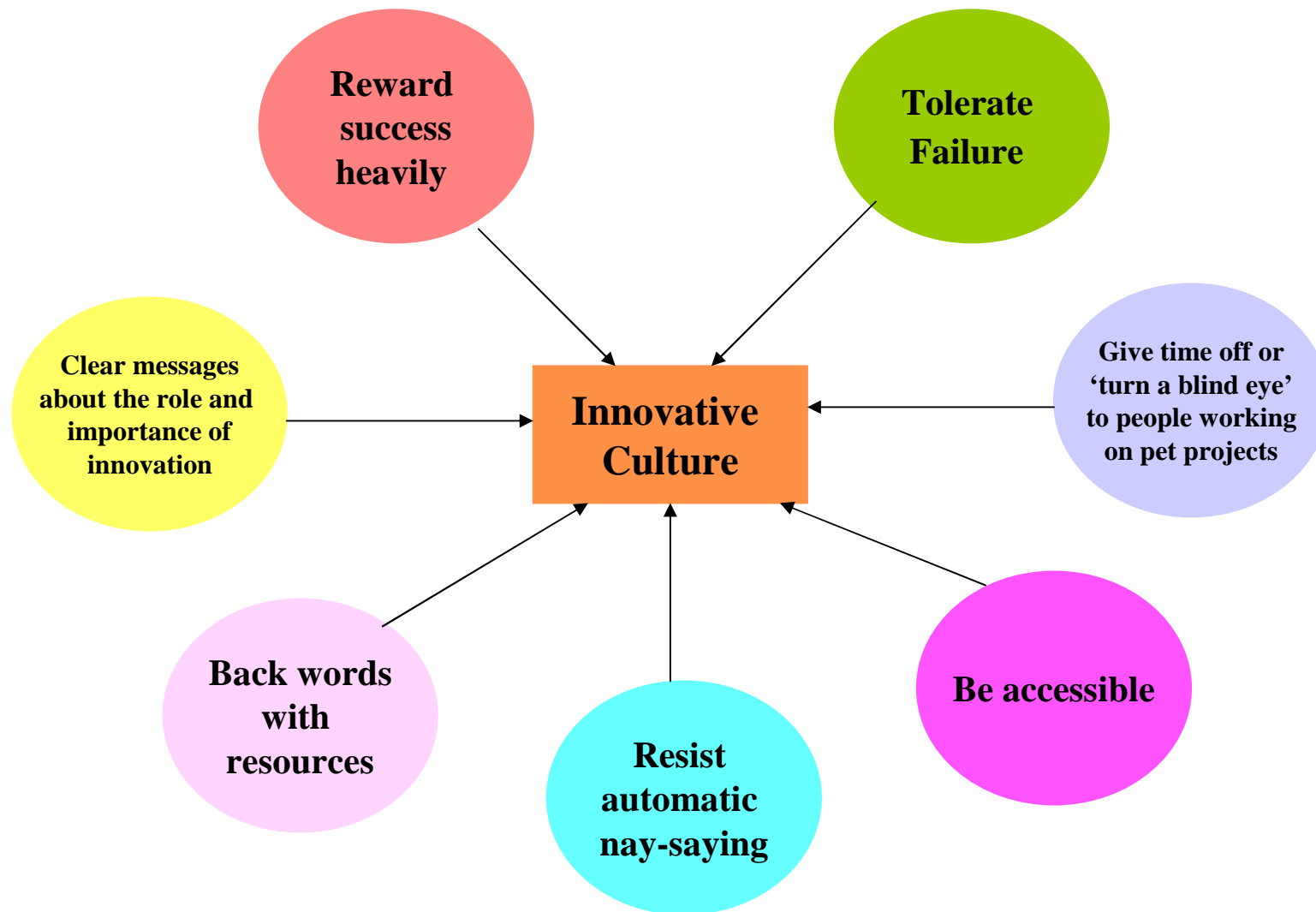
Innovation occurs when an invention is commercialized by bringing it to market.

A key point to remember is that the focus of innovation should be ***providing new solutions which better meet customer needs.***
Innovative solutions often do not require major breakthroughs in technology.

What is New Product?

- ***New – to – the – world product:*** these total around 10% of new product launches, and create entirely new markets. For example, the fax machine, the video recorder and camcorder have created new markets because of the highly valued customer benefits they provide.
- ***New product line:*** these total around 20% of new product launches, and represent a move into a new market. For example, in Europe Mars has launched a number of ice cream brands which is a new product line for this company. This strategy widens a company's product mix.
- ***Additions to existing lines:*** these accounts of about 25% of new product launches and take the form of new products that add to a company's existing product lines. this produces greater product depth.
- ***Product replacement and repositioning:*** these accounts for about 45% of all new product launches and include revisions and improvements to existing products (e.g.), repositioning (existing products being targeted at new market segments) and cost reductions (existing products being reformulated or redesigned to cost less to produce).

Creating and Nurturing an Innovative Culture



Organizing Effectively for New Product Development

■ Project Teams;

■ Product and Brand Managers

■ New Product Departments and Committees

Project Team

Project Teams involve the bringing together of staff from such areas as: R&D, Engineering, Manufacturing, Finance and Marketing to work on a New Product Development project. Often used in high technology companies such as Sony, Honda and 3M.

Advantages of Project Teams

- ◆ Fostering of a group identity and common purpose;
- ◆ Fast decision-making;
- ◆ Lowering of the bureaucratic barriers;
- ◆ Reducing the New Product Development time

Product and Brand Managers

Product and Brand Management entails the assignment of product managers to product lines (or groups of brands within the product line) and/or brand managers to individual brands who are responsible for:

- Their success and have the task of coordinating functional areas (e.g. production, sales, advertising and marketing research);
- New Product Development including the creation of new product ideas, improving existing products and brand extension.

New Product Departments

New product departments includes high-ranking functional managers who listen to progress reports and decide whether further funds should be assigned to the project. They may also be charged with deciding new product strategies and priorities.

**Venture
Teams**

**Product &
Brand
Management**

**New
Product
Department**

New Products Committee is often required
that oversees the process and services to give projects
a high corporate profile through the stature
of its membership

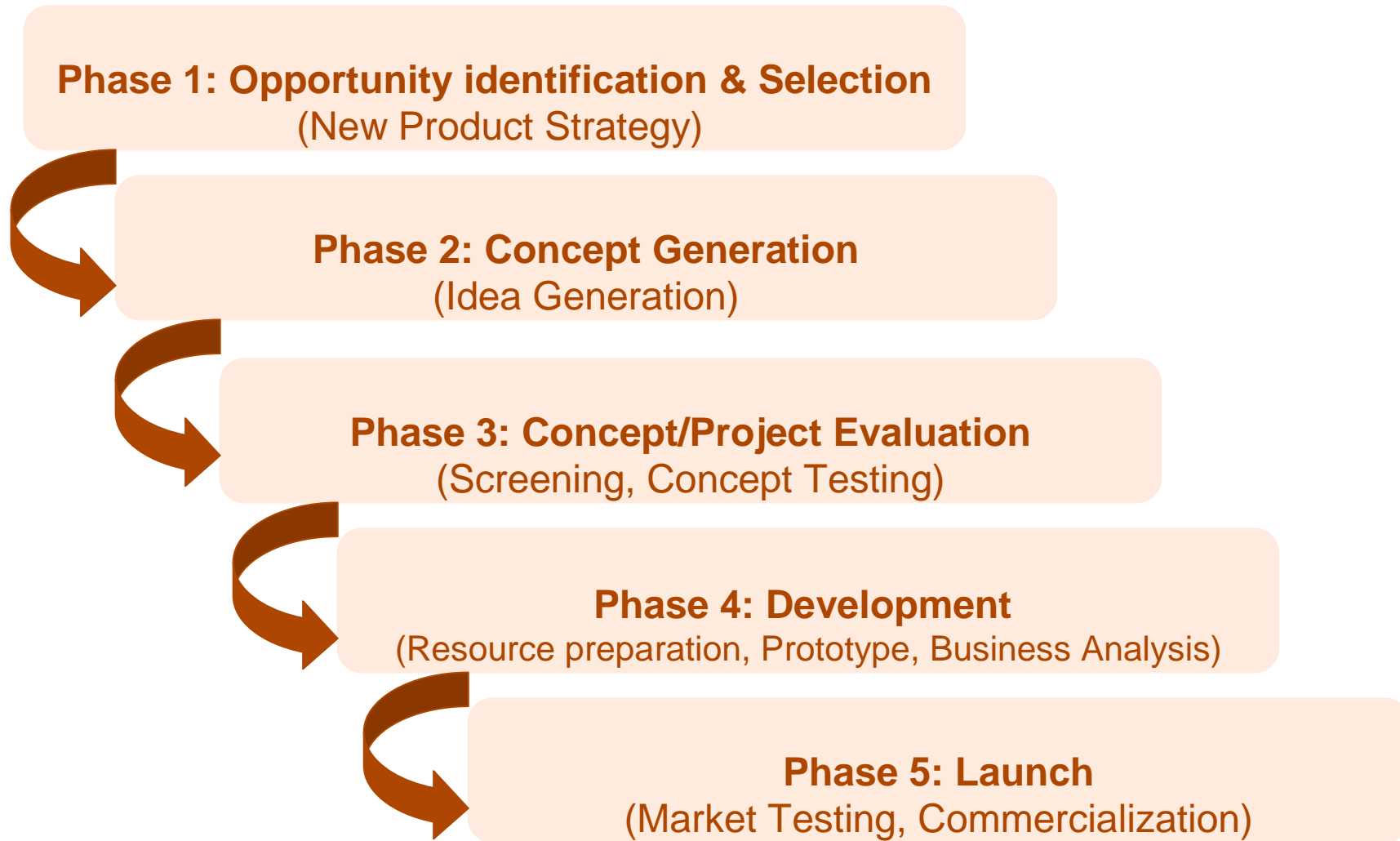
Role of Marketing Director

- ✿ Encourage teamwork;
- ✿ Improve the provision of marketing information and R&D;
- ✿ Take the R&D people out of the Lab;
- ✿ Develop informal relationships with R&D;
- ✿ Learn about technology; and
- ✿ Formalize the product development process

Role of Senior Management

- ✚ Make organizational design changes;
- ✚ Show a personal interest in new product development;
- ✚ Provide strategic directions;
- ✚ Encourage teamwork;
- ✚ Increase resources;
- ✚ Understand marketing's importance

Basic New Products Process



داستان HighLighter

- این داستان در مورد شرکتی است که در زمینه تولید نوشت افزار فعالیت می کند. موضوع اصلی ماژیک های فسفری می باشد.
- بازار اشباع شده – تحرک رقبا
- مدیریت اعلام می دارد این محصول برای شرکت مهم است.
- مدیر محصول به دنبال راه حلی می گردد.

داستان HighLighter

- از روش طوفان مغزی برای ارائه یک ایده استفاده می گردد و در نهایت به یک ایده جذاب می رسند.
- پس از ارائه ایده به تمامی قسمتها و تایید آنها مدیر محصول، مسئول پیگیری این پروژه می گردد.
- با شروع پروژه افراد فنی بر روی محصول و افراد بخش بازاریابی بر روی برنامه بازاریابی کار خود را ادامه می دهند.
- اولین نمونه های ساخته شده برای اطمینان از عملی بودنشان در محیط واقعی تست می شوند.

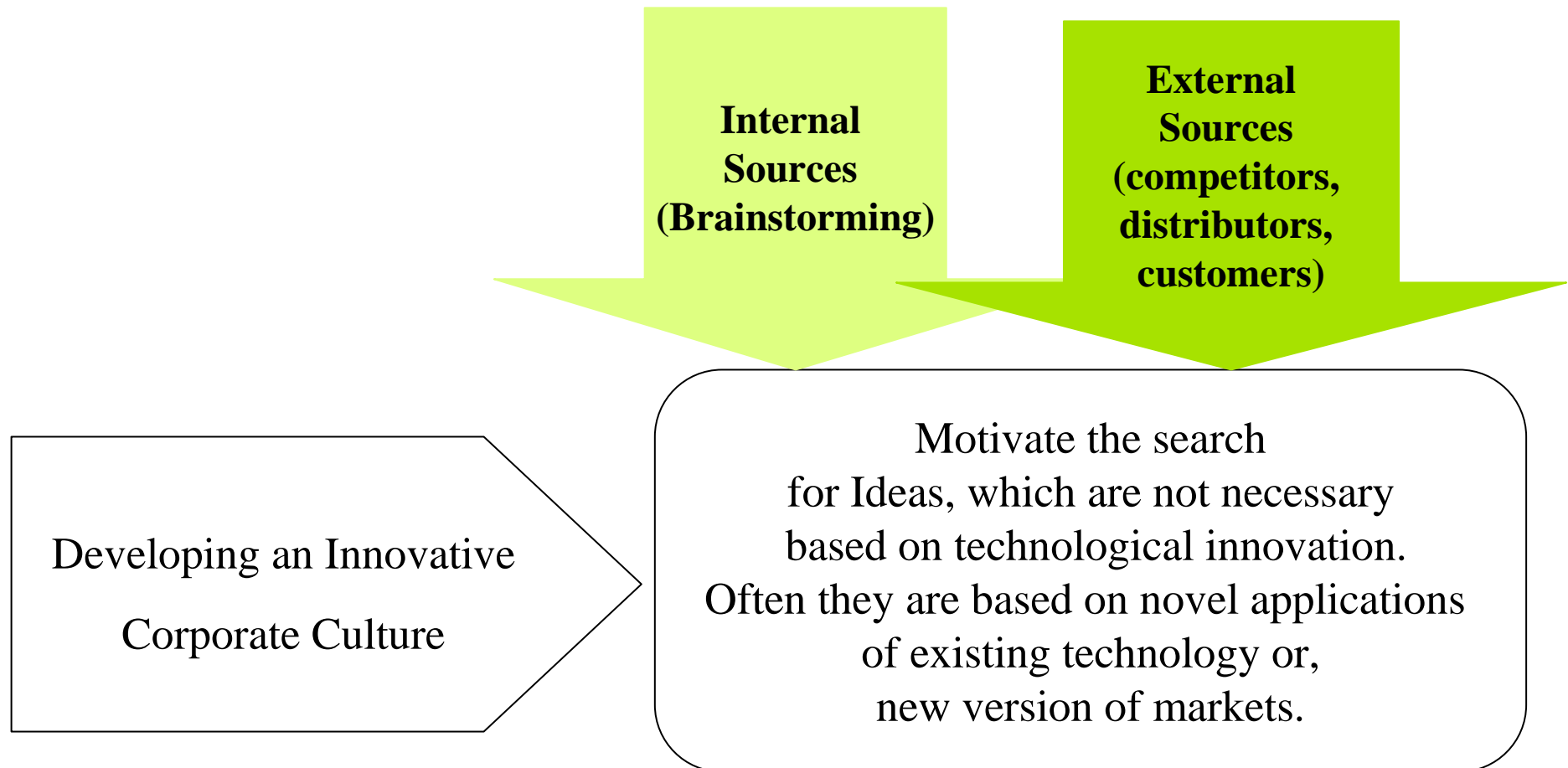
داستان HighLighter

- پس از تایید مدیریت، برنامه بازاریابی شروع می گردد.
- همچنین خط تولید برای محصول جدید آماده می گردد.
- آزمون های نهایی بر روی محصول انجام می شود. تحلیل های مالی و فرمولاسیون دقیق محصول تهیه می گردد.
- تولید نهایی آغاز می شود و برای منطقه ای محدود عملیات عرضه آغاز می گردد.
- اقدامات احتیاطی صورت می گیرد.
- فروش به خوبی و طبق برنامه انجام می شود.

1. New Product Strategy

Senior management provides strategic guidance about their vision and priorities for New Product Development. They can either provide a *focus for the area in which idea generation* should take place, or provide indicators for the *screening criteria* that should be used to evaluate those ideas.

2. Idea Generation

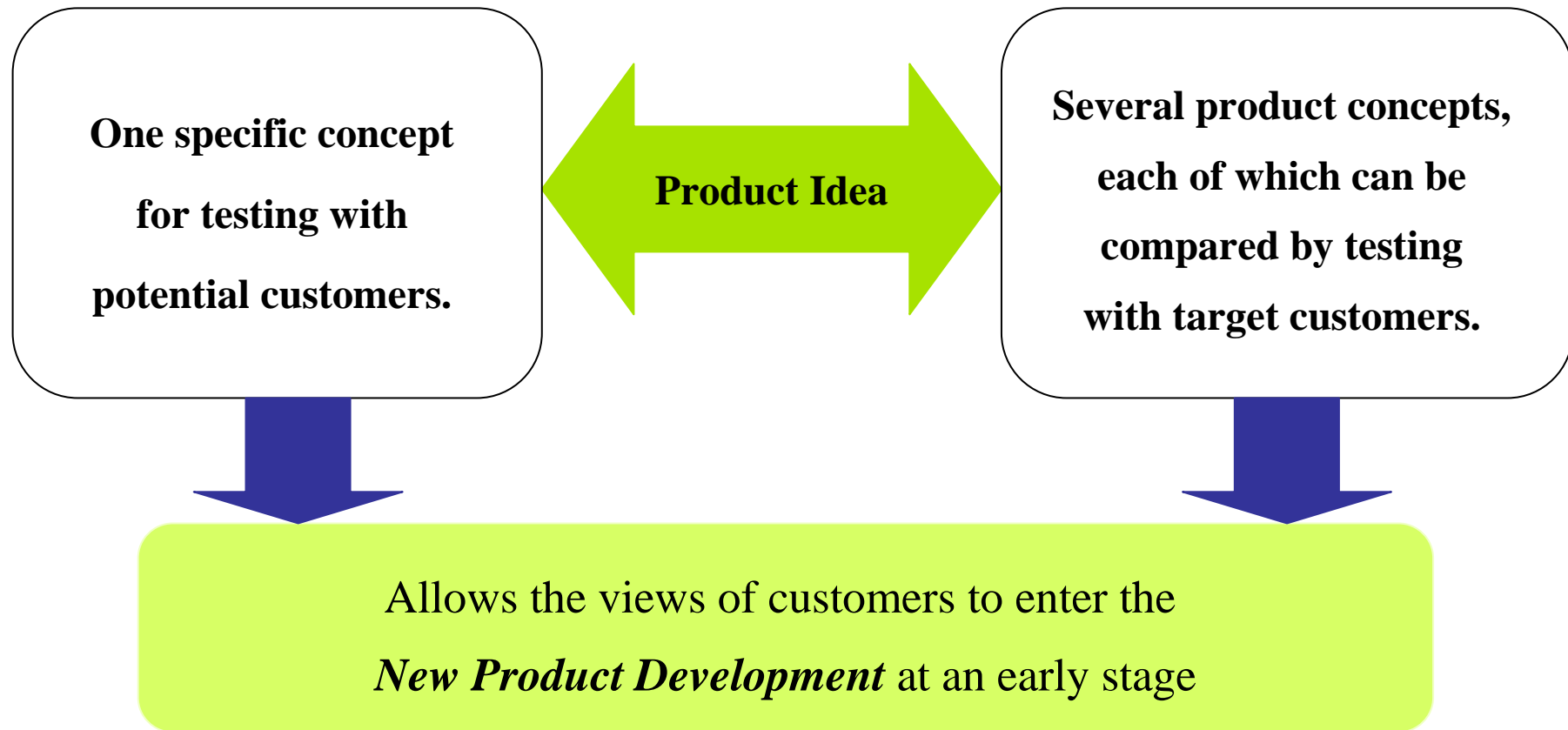


3.1 Screening

Having developed new product ideas , we need to screen New Product to evaluate their commercial worth:

- Formal checklist;
- Financial and market-based criteria;
- Flexible systematic approach
- Less systematic approach: flexible open discussion among members of the new product development committee

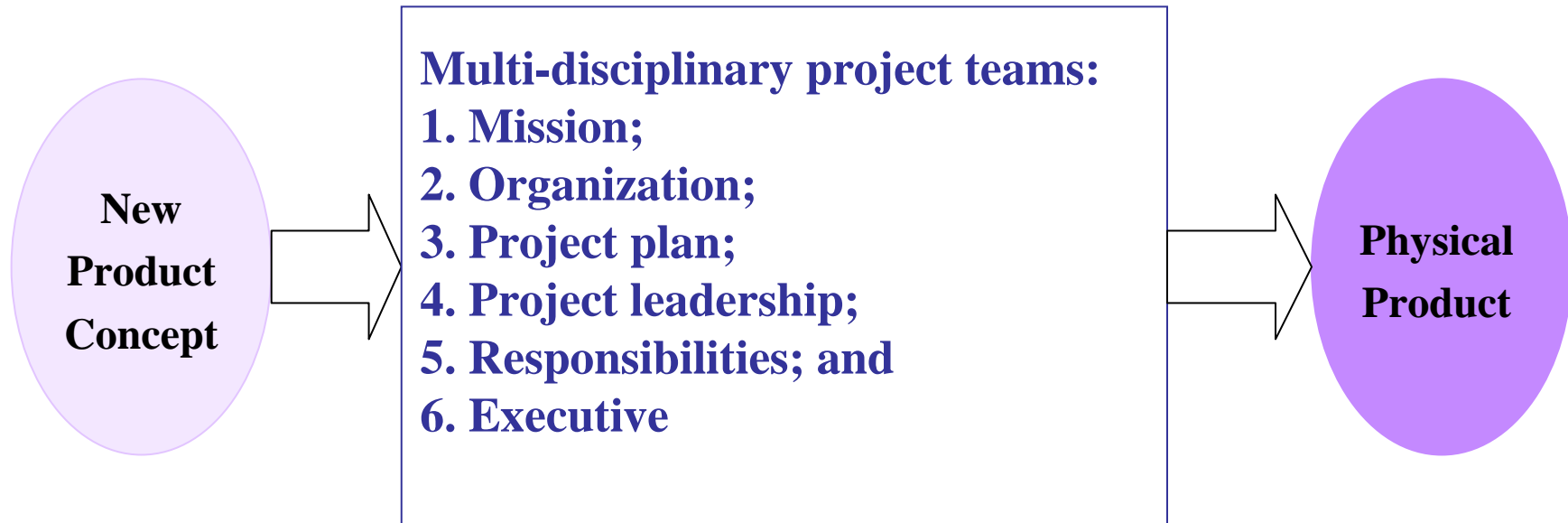
3.2 Concept Testing



4.1 Development: Business Analysis

- **Business analysis** based upon the results of the concept test and considerable managerial judgment, estimates sales, costs and profits;
- **Marketing analysis** identifies the target market, its size, and projected product acceptance over a number of years, various prices and its implications for sales revenue (and profit);
- **Break-even analysis**, where the quantity needed to be sold to cover costs is calculated, may be used to establish whether the project is financially feasible;
- **Sensitivity analysis**, in which variations from given assumptions about price, cost and customer acceptance, are checked to see how they impact on sales revenue and profits

4.2 Product Development



4.3 Market Testing

Market testing takes measurement of customer acceptance one crucial step further than product testing by forcing consumers to vote with their money.

Two major methods;

- 1. The simulated market test:** to set up a realistic market situation in which a sample of consumers choose to buy goods from a range provided by market research company.
- 2. Test marketing** involves the launch of the new product in one or a few geographical areas chosen to be representative of its intended market.

5 Commercialization

Commercialization Strategy relies upon marketing management making clear choices regarding the *Target Market* (where it wishes to compete), and the development of a marketing strategy that provides a *Differential Advantage* (how it wishes to compete).

داستان Nabisco

- شرکت تولید کننده بیسکویت.
- این شرکت با تاکید بر تولید محصولات جدید ۳۰٪ از فروش خود را از این راه بدست می آورد.
- این شرکت به این نتیجه رسید که باید بر اجزای محصول تمرکز کند نه بر نحوه توزیع یا خود محصول. **(مرحله ۱)**

داستان Nabisco

- سه نکته مهم در زمینه فعالیت آنها عبارت بود از:
 - ❖ محصولی که خلاء موجود را پر کند. **(مرحله ۱)**
 - خلاء بازار
 - خلاء محصول
 - ❖ محصولی که از یک روند حاصل شود. **(مرحله ۱)**
 - ❖ پروژه بدون مشکل انجام شود. **(مرحله ۲)**

داستان Nabisco

- پس از ایده پردازی، ایده SnackWell's شکل می گیرد.
(مرحله ۲)
- تستها و آزمونهای گوناگونی (بازاریابی) روی ایده انجام می شود و مفهوم کلی محصول حاصل می گردد. **(مرحله ۳)**
- در اینجا فعالیت بازاریابی و تولید فنی محصول آغاز می گردد. نامگذاری، تبلیغات تلویزیونی، استراتژی های متفاوت دیگر، هدایا و نمونه های تبلیغی.... **(مرحله ۴)**
- آزمونهای نهایی انجام می گیرد، همه قسمتها تأیید می کنند.
(مرحله ۴)

داستان Nabisco

- فعالیت تجاری سازی و تولید انبوه آغاز می گردد.
 - تبلیغات محسوس و بسته بندی شروع می گردد.
- (مرحله ۵)**

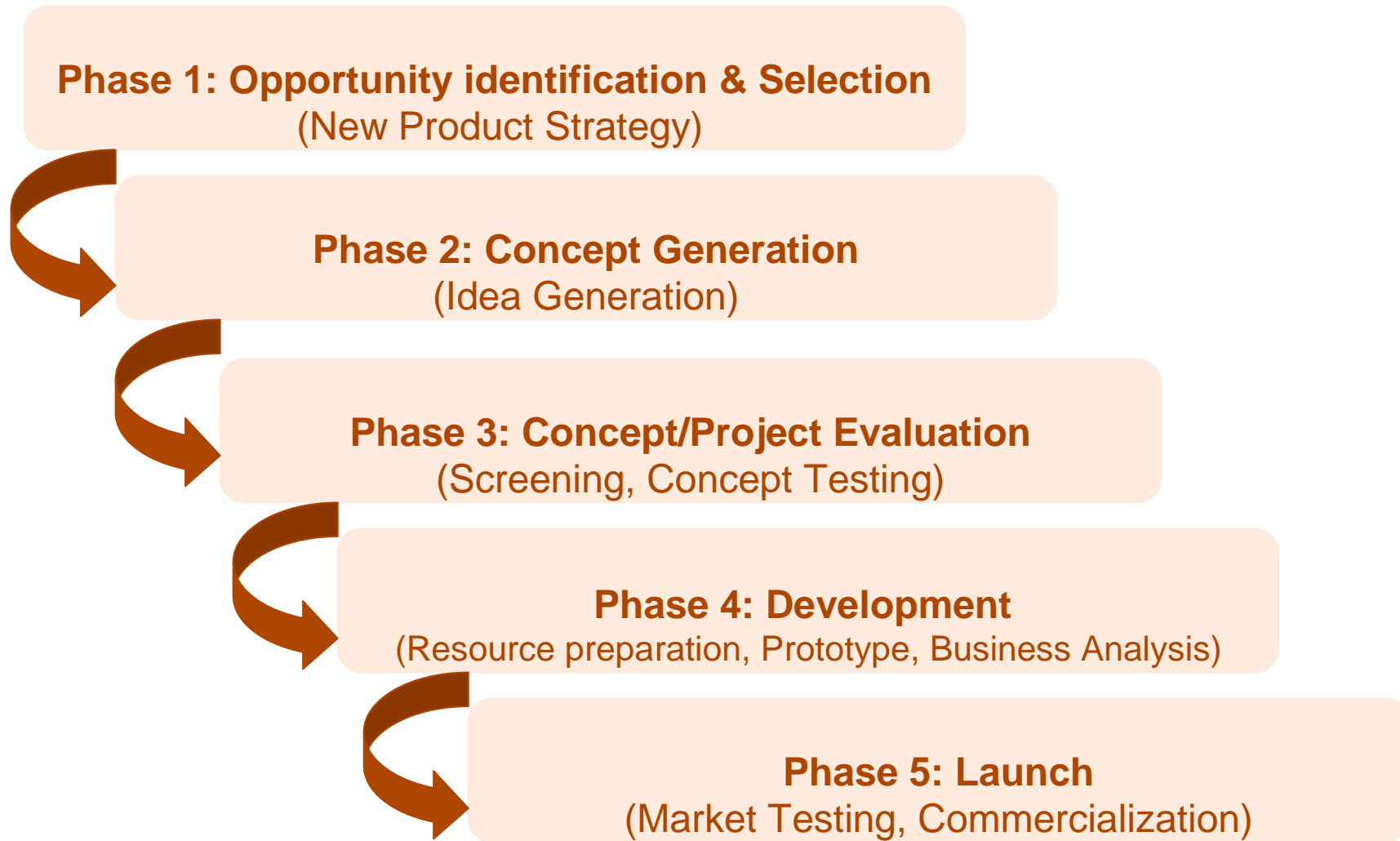
- ارزیابی های فنی، بازاریابی و مالی همچنان ادامه دارند.
- (مرحله ۵)**

- باید توجه داشت که مدیران شرکت از مراحل اولیه کار (خلق ایده) در جریان کار قرار داشتند.

مرحله اول

- فرآیند توسعه محصول جدید
- شناسایی و انتخاب فرصتها
- استراتژی توسعه محصول جدید

Basic New Products Process



Identifying Where the Greenfield markets are?

- Find another location or venue; (McDonalds in China)
- Leverage your firm's strengths in a new activity enter; (Nike moved into golf and hockey)
- Identify a fast-growing need, and adopt your products to that need; (HP & total information solution)
- Find a new to your Industry; (P&G in pharmaceutical)

Recommendations for Discovery of such Opportunities

- 📖 Looking for emerging trends;
- 📖 Find fringe markets that are becoming mainstreams;
- 📖 Find bottleneck in the flow of trade, and seek to eliminate them; and
- 📖 Look for 'ripple effects' on business opportunities

Market Opportunities

User (category)
User (for our product)
Customer (buyer)
Influencer
Potential user
Nonuser
Demographic set
Psychographic set
Geographic set
Retailer
Wholesaler
Agent
Use
Application
Activity
Franchise
Location
Competitor
Regulator

Technology Opportunities

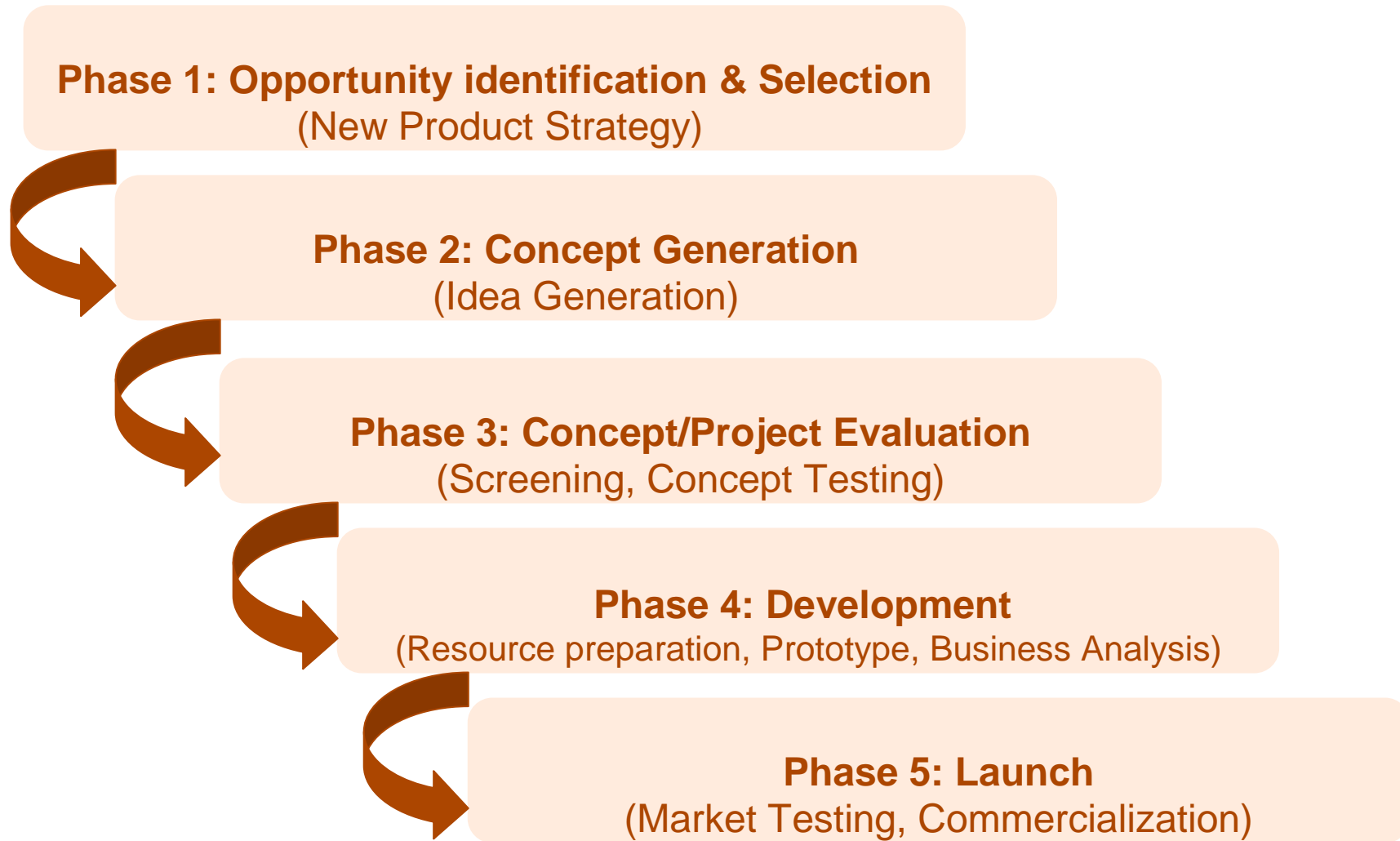
Product type
Specific product
Primary packaging
Design process
Production process
Distribution process
Patent
Science
Material
Individual
Management system
Analytical skill
Expert system
Project control
Quality attainment
Project design

مرحله دوم

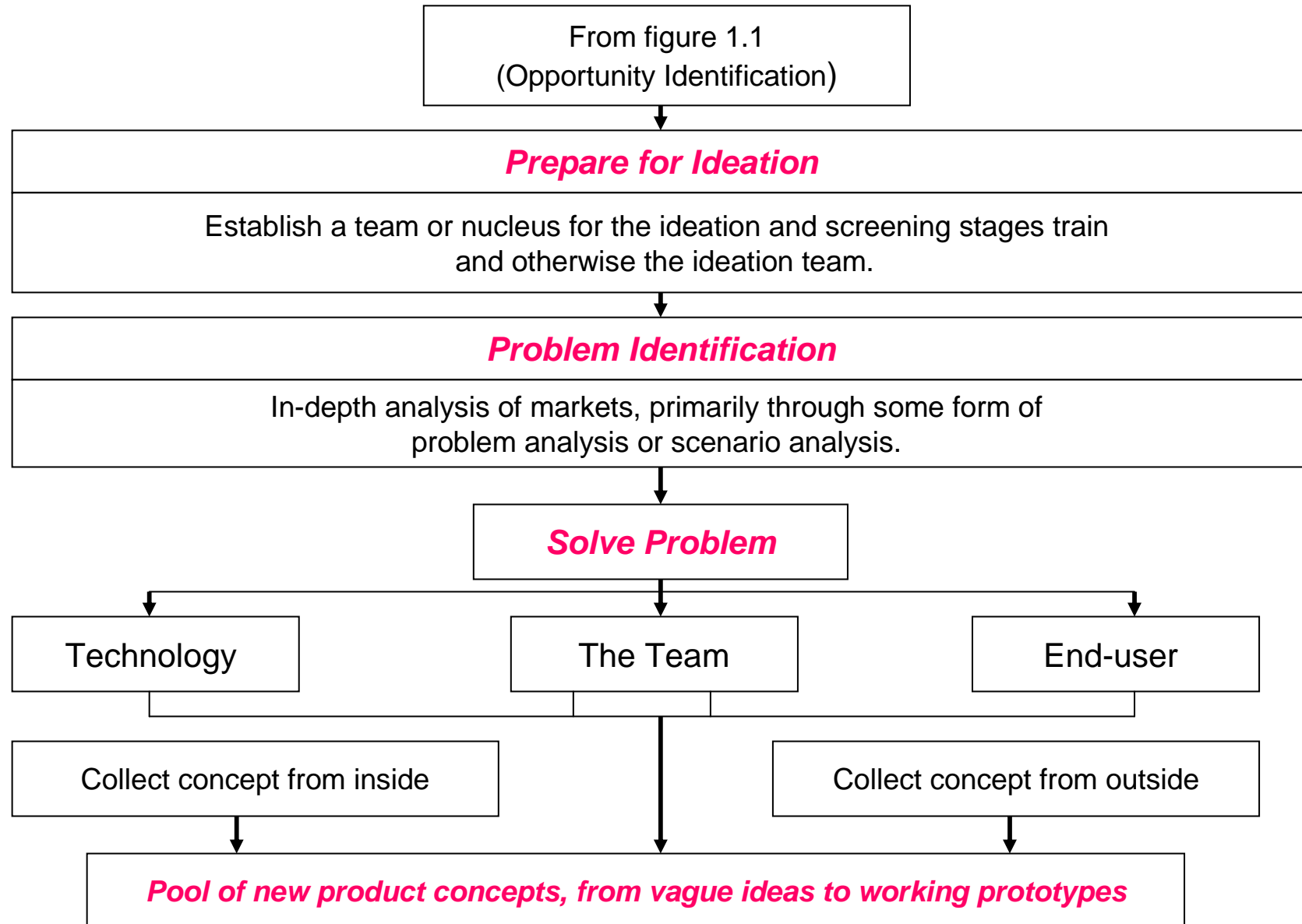
■ فعالیتهای مقدماتی ؛

■ شناسایی مفاهیم موجود ؛

Basic New Products Process



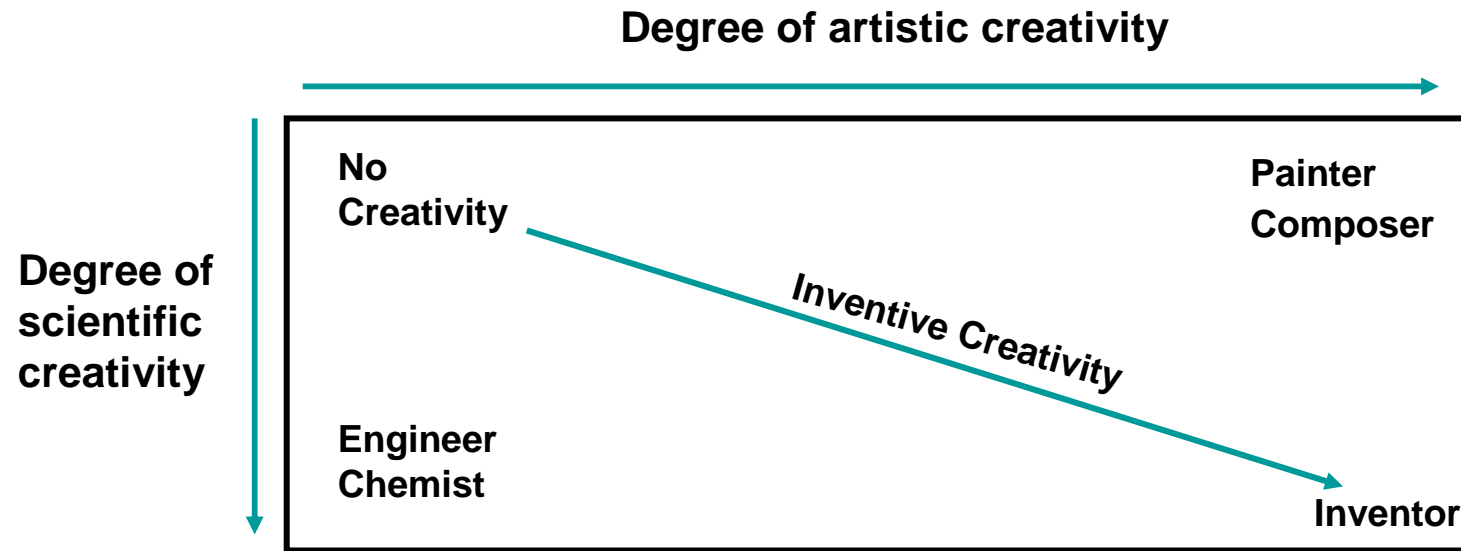
Concept Generation



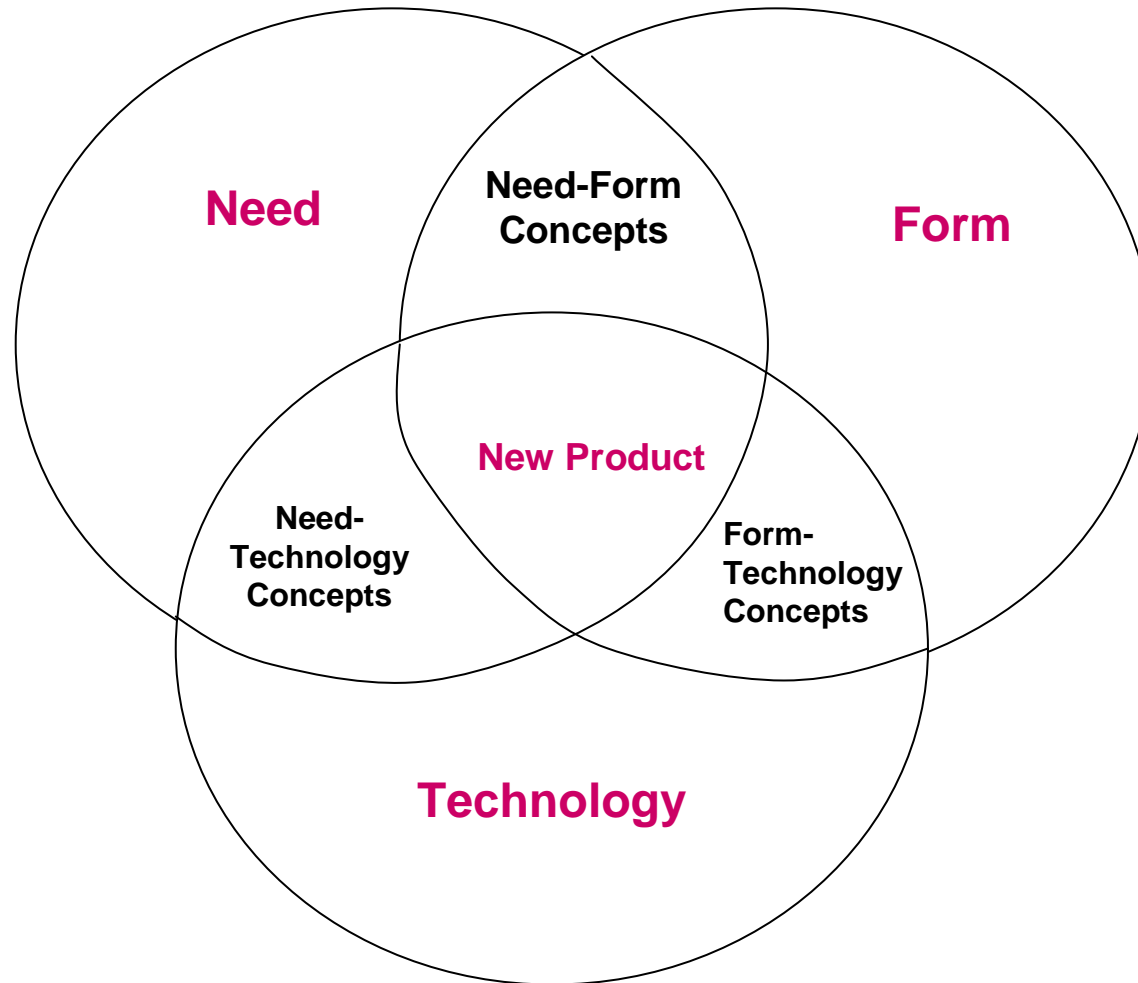
Preparation & Alternatives

- ✿ Finding the right people;
- ✿ Making creative people productive;
- ✿ Encouraging creativity;
- ✿ Providing special rewards; and
- ✿ Removing the roadblocks

The Three Kinds of Human Creativity



The New Product Concept



How should we go about generating new product concept?

Technology

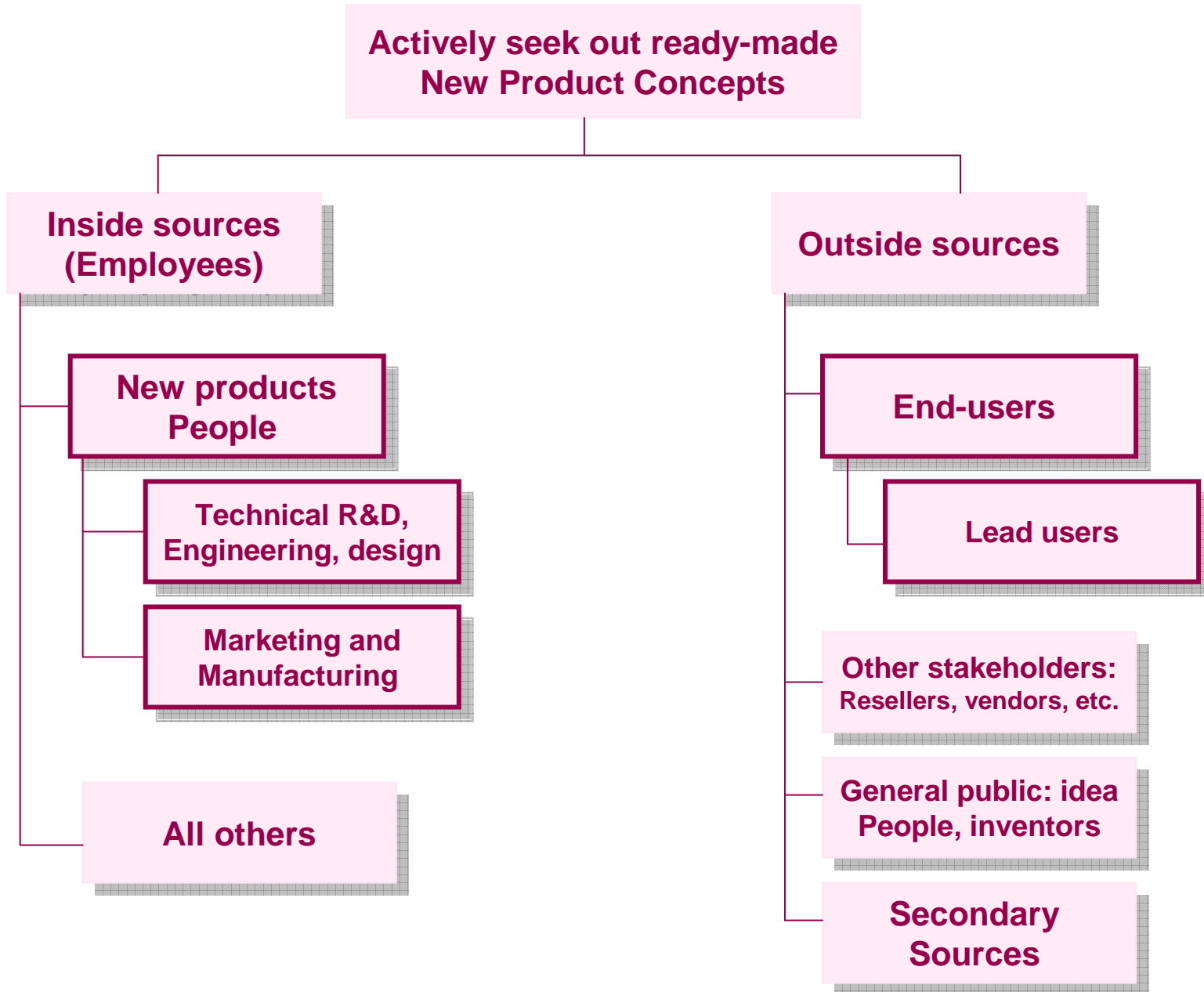
End-Users

Team

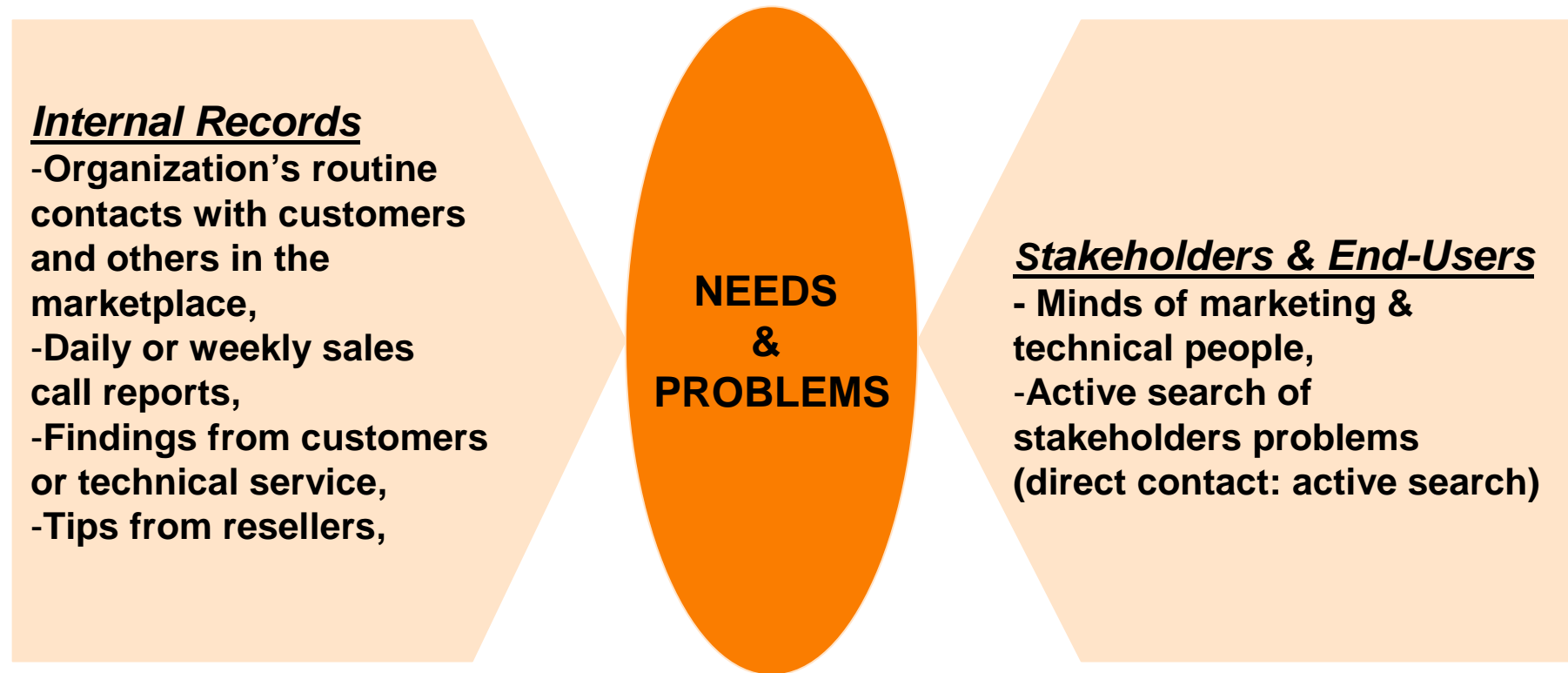
**Other
Insiders**

**Other
Outsiders**

Sources of Ready-Made New Product Concepts



Within the Firm Sources



Methodologies to Gather the list of Consumer Problems

- ✿ **Experts;**
- ✿ **Published sources:** industry studies, the firm's own past studies on allied subjects, government reports, scientific studies , etc.
- ✿ **Stakeholder contacts:** asking household or business/industry consumers directly;
- ✿ **Interviewing:** direct, one-on-one, very formal and scientific, with lead users;
- ✿ **Focus group;** and
- ✿ **Observation**

Problem-Solving Methods

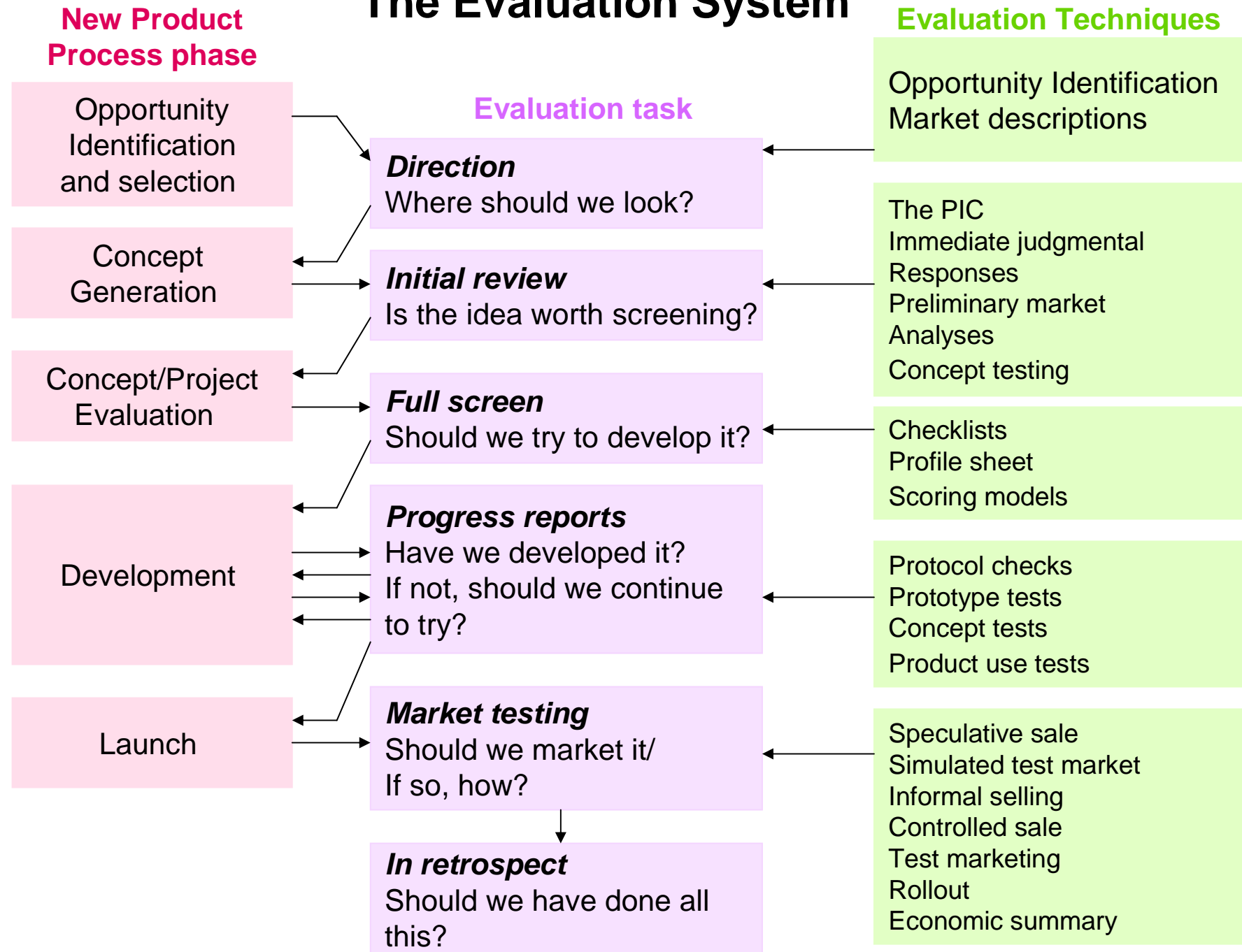
- ☀ ***Individuals thinking***;
- ☀ ***Group creativity*** (two heads are better than one):
 - ☀ ***Brainstorming***:
 - ☀ Participants to be free to express any idea that comes to mind without having to worry about criticism or snickering from the others in the group,
 - ☀ Break through the habitual thoughts and ideas,
 - ☀ ***Electronic brainstorming and computer-assisted creativity technique***
- ☀ ***Disciplined panel***; to assemble experts from all relevant disciplines and have them discuss the problem
- ☀ ***Concept generation techniques in action***

سیستم ارزیابی مفهوم / ایده

New Products Fail

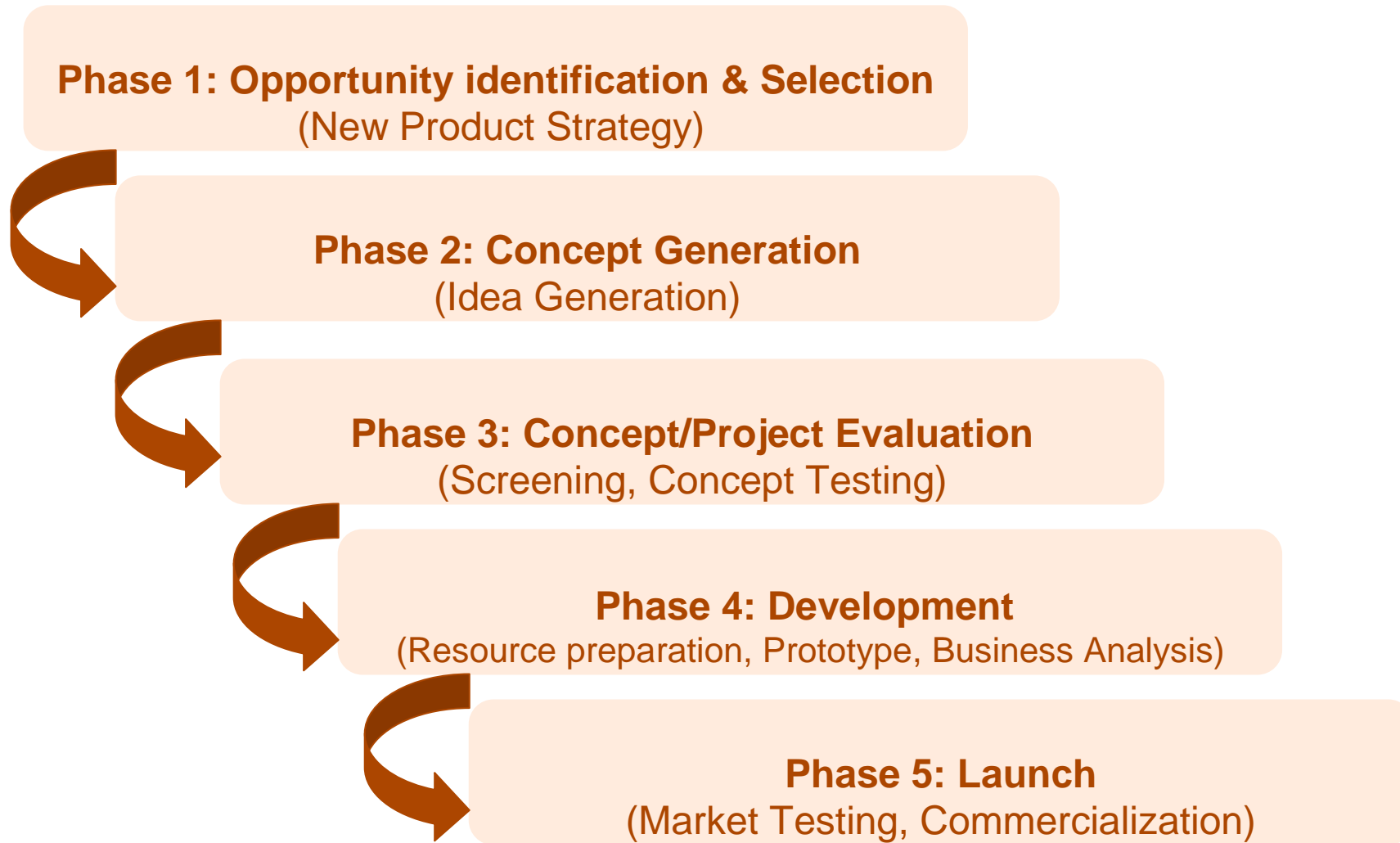
- There was no basic need for the item;
they didn't need it,
- The new product did not meet its need;
it didn't work,
- The new product idea was not properly communicated;
it didn't work

The Evaluation System

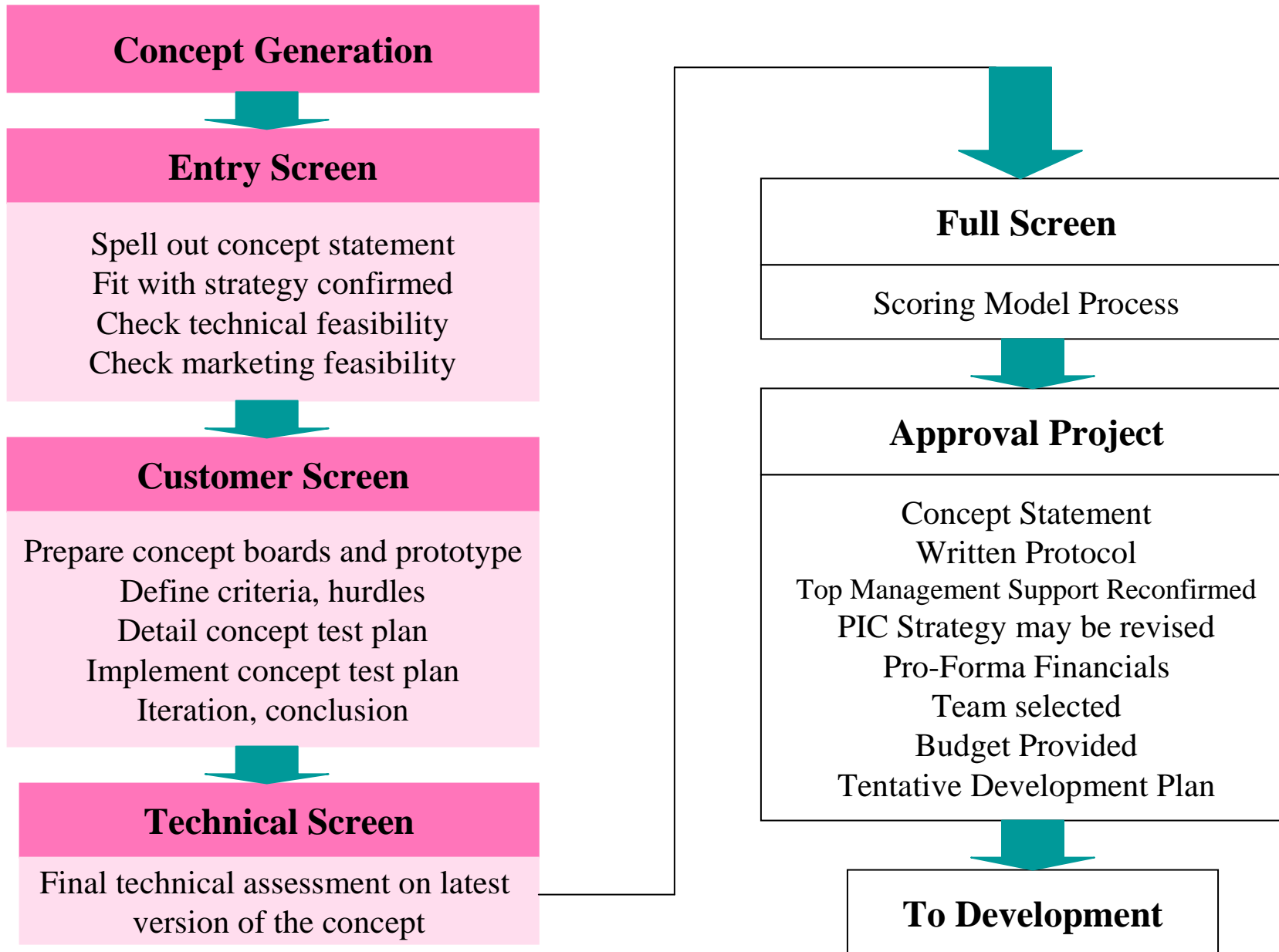


مرحله چهارم: آزمون مفهوم

New Product Development Process



Concept / Project Evaluation



The Purposes of Concept Testing

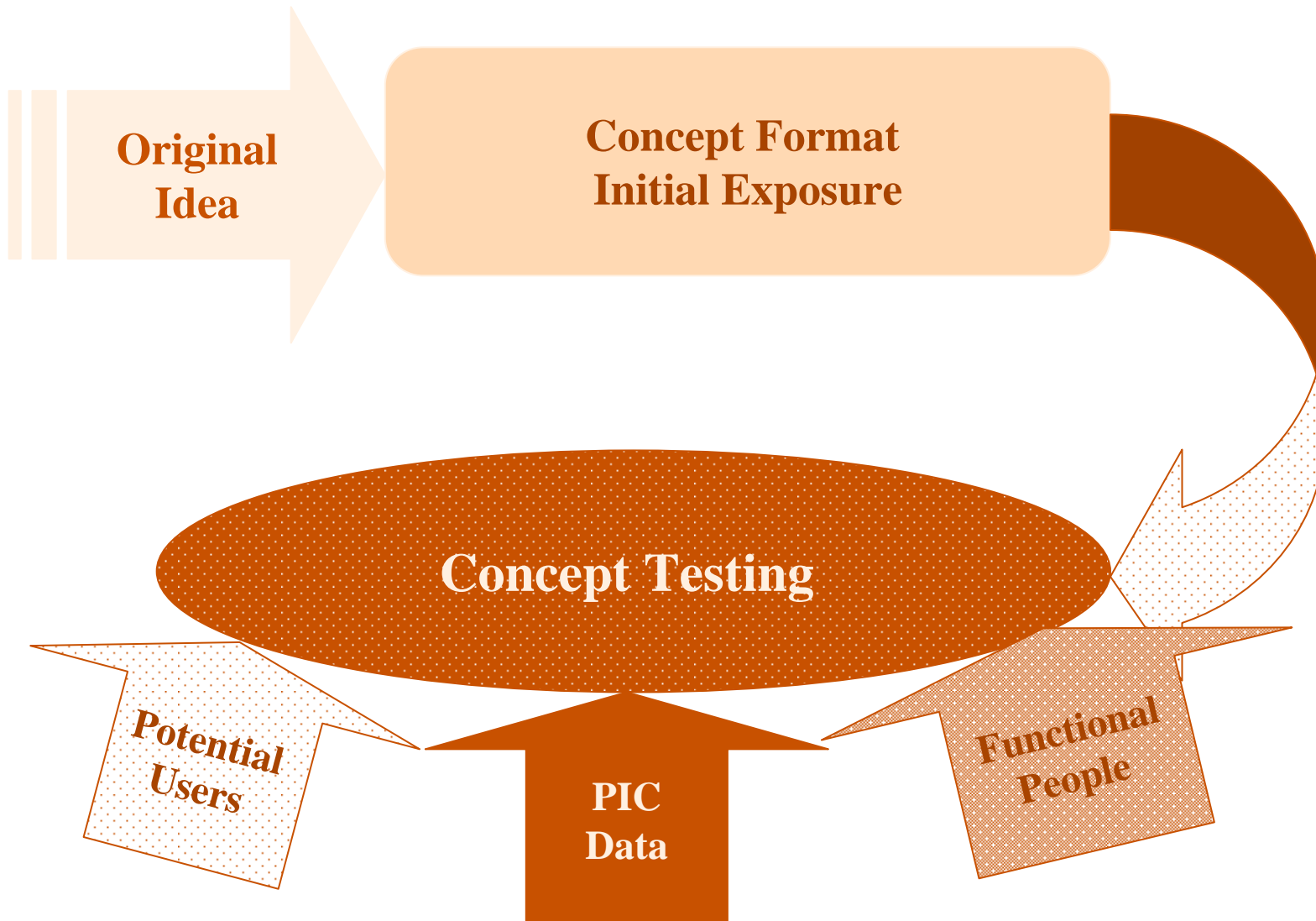
- ❑ To identify the ***very poor concept*** so it can be eliminated,
- ❑ To estimate (even crudely) the ***sales or trial rate*** that the product would enjoy – a sense of market share or a general range of revenue dollars, estimating ***buying intention***
- ❑ ***To help to develop the idea, not just test it***

Concept Testing Research Considerations



- ✿ Prepare the Concept Statement – make the new item's difference absolutely clear
 - ✿ Present information to potential buyers in one of several **Formats**: narrative, drawing or diagram, model or prototype, or virtual reality
 - ✿ **Commercialize Concept Statements** – to present it in promotional style
 - ✿ Make customer realize that the offer is new by providing a full **data sheet about each competitive product**,
 - ✿ Put a **Price** in Concept Statement
- ✿ Define the Respondent Group
- ✿ Select the Response Situation
- ✿ Prepare the Interviewing Sequence

نمایش کامل (Full Screen) جلسه یازدهم و دوازدهم

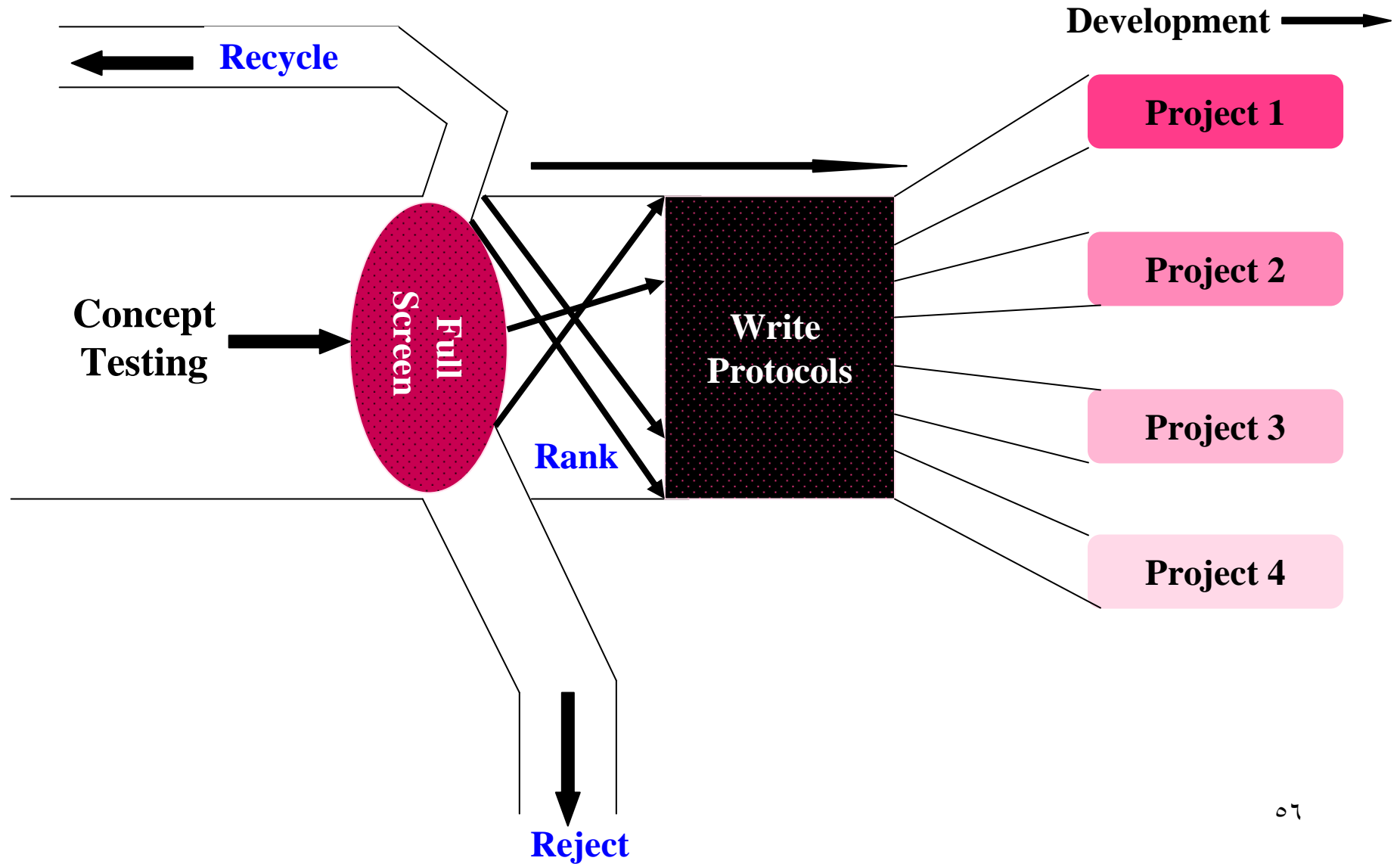
- ◆ اهداف نمایش کامل
- ◆ رویکردهای مختلف به نمایش کامل
- ◆ مدل امتیاز دهی (Scoring Model)
- ◆ فرآیند توسعه مدل امتیاز دهی
 - ◆ امتیاز دهی
 - ◆ امتیاز دهندگان
 - ◆ سنجش
- ◆ فرآیند رتبه بندی تحلیلی (Analytic Hierarchy Process/AHP)



Why Do We Do Full Screen?

- ✿ *First*, we need a screen that helps us decide whether technical resources (R&D, system design for services, engineering, etc) should be devoted to the project and if so, how vigorously;
 - ✿ “Can do”  *Feasibility of technical accomplishment*
 - ✿ “Want to”  *Feasibility of commercial accomplishment*
- ✿ *Second*, the screening steps helps manage the process by:
 - ✿ *Cycling unacceptable but potentially worthwhile concepts back into concept development,*
 - ✿ *Rank-ordering the good concepts,*
 - ✿ *Recording the appraisal on rejected concepts*
- ✿ *Third*, the screening process encourages cross-functional communication

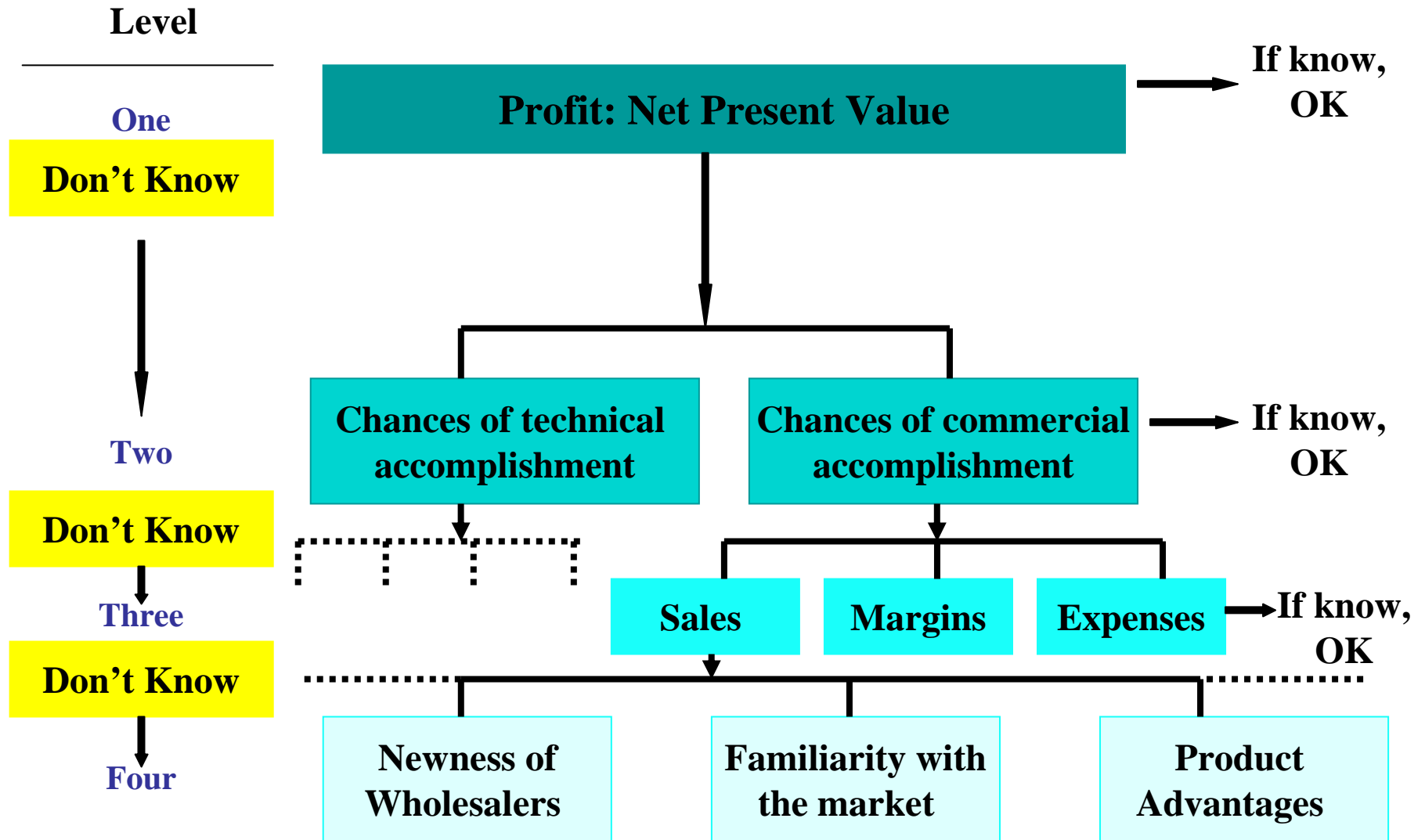
New Product Process



Screening Alternatives

- Small firms not doing much new product work:
Screening is an “Opinion Poll”, “judgment on some informal check list”;
- Me-too products, pre-packaged goods:
Screening is pre-market testing sales forecasting models
- Screening involves the use of **Scoring Model**, which is nothing more than a mechanical arrangement of checklist factors with weights (importance) on them

Sources of Scoring Model Factors



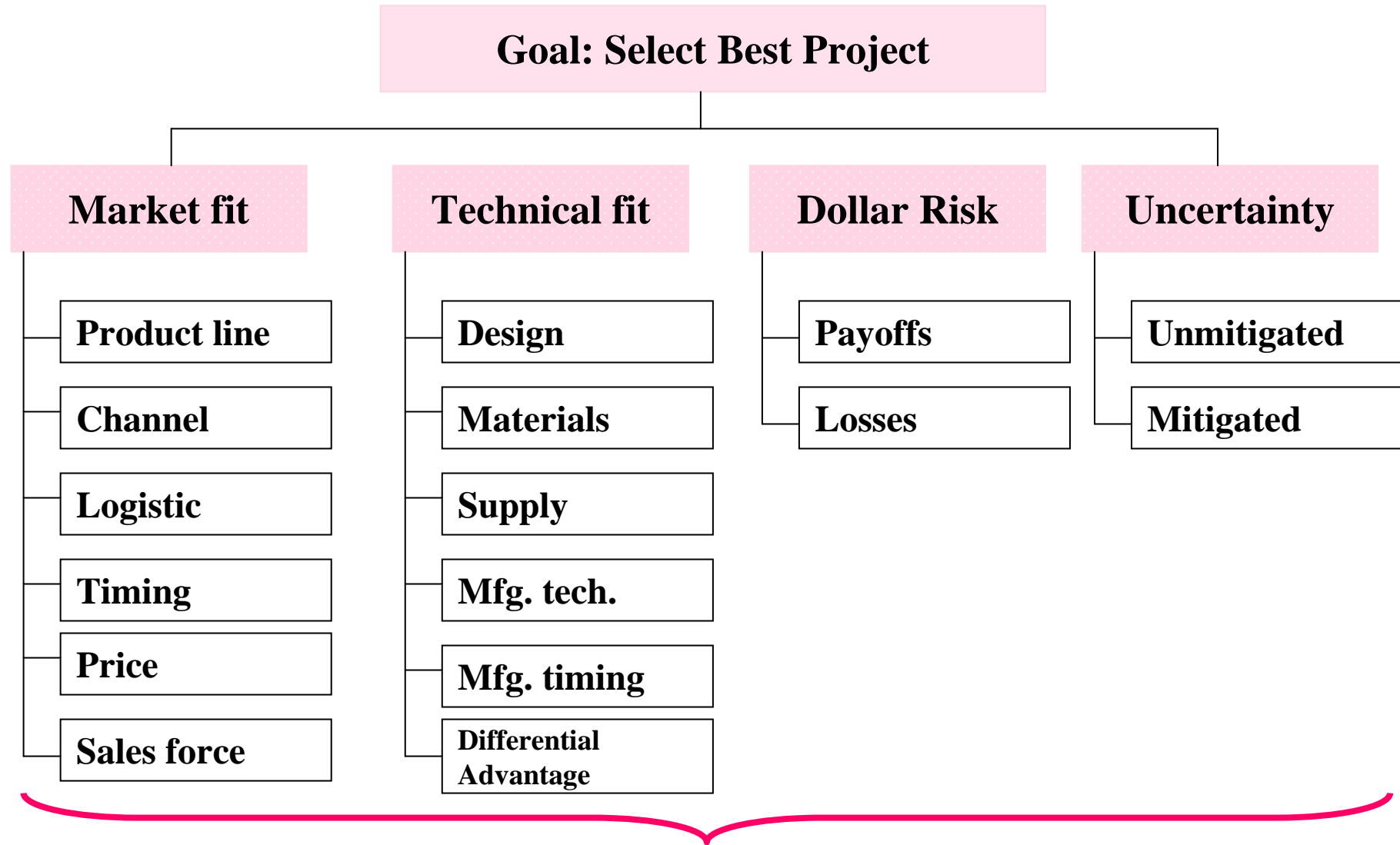
Scoring Model Procedures

- Selecting Factors;
- Scoring;
- Unusual Factors;
- Selecting Scorers;
- Weighting

The Eight Factors of the New Prod Model

■ Product Superiority, quality, uniqueness	1.744
■ Product is superior	
■ Product has unique feature	
■ Product is higher quality	
■ Product does unique task	
■ Product cuts user's costs	
■ Product is first of kind	
■ Overall product firm/resource compatibility	1.138
■ Market need, growth, and size	0.801
■ Economic advantage of product to end-user	0.722
■ Technological resource compatibility	0.342
■ Product scope mass rather than narrow specialty)	0.225
■ Market competitiveness	-0.301
■ Newness to the firm	-0.354

Analytic Hierarchy Process (AHP)



Product 1, 2, 3, and 4

پیش بینی فروش و تحلیل مالی

جلسه سیزدهم

- تکنیکهای پیش بینی فروش
- مشکلات پیش بینی فروش
- راههای مقابله با مشکل

Commonly Used Forecasting Techniques

<u>Technique</u>	<u>Time horizon</u>	<u>Cost</u>	<u>Comments</u>
Simple regression	short	low	easy to learn
Multiple regression	short-medium	moderate	more difficult
Econometric analysis	short-medium	moderate to high	complex
Simple time series	short	very low	easy to learn
Advanced time series	short-medium	low to high	can be difficult to learn
Jury of executive opinion	medium	low	interpret with caution
Scenario writing	medium-long	moderately high	can be complex
Delphi probe	long	moderately high	difficult to learn and interpret






The Purpose of Concept Testing



.....



To estimate (even crudely) the ***sales or trial rate*** that the product would enjoy – a sense of market share or a general range of revenue dollars, estimating ***buying intention***

-  *Definitely would buy;*
-  *Probably would buy;*
-  *Might or might not buy;*
-  *Probably would not buy;*
-  *Definitely would not buy*



.....

The A-T-A-R Model

Profit = Unit sold x Profit per unit



Units sold = Number of **buying units**

- X Percentage who become **aware** of the product
- X Percentage who opt to **try** the product if they can get it
- X Percentage of intended triers who can get the product (if it is **available** to them)
- X Percentage of triers who like the item enough to **repeat** their purchase
- X Number of units that repeaters will buy in a year



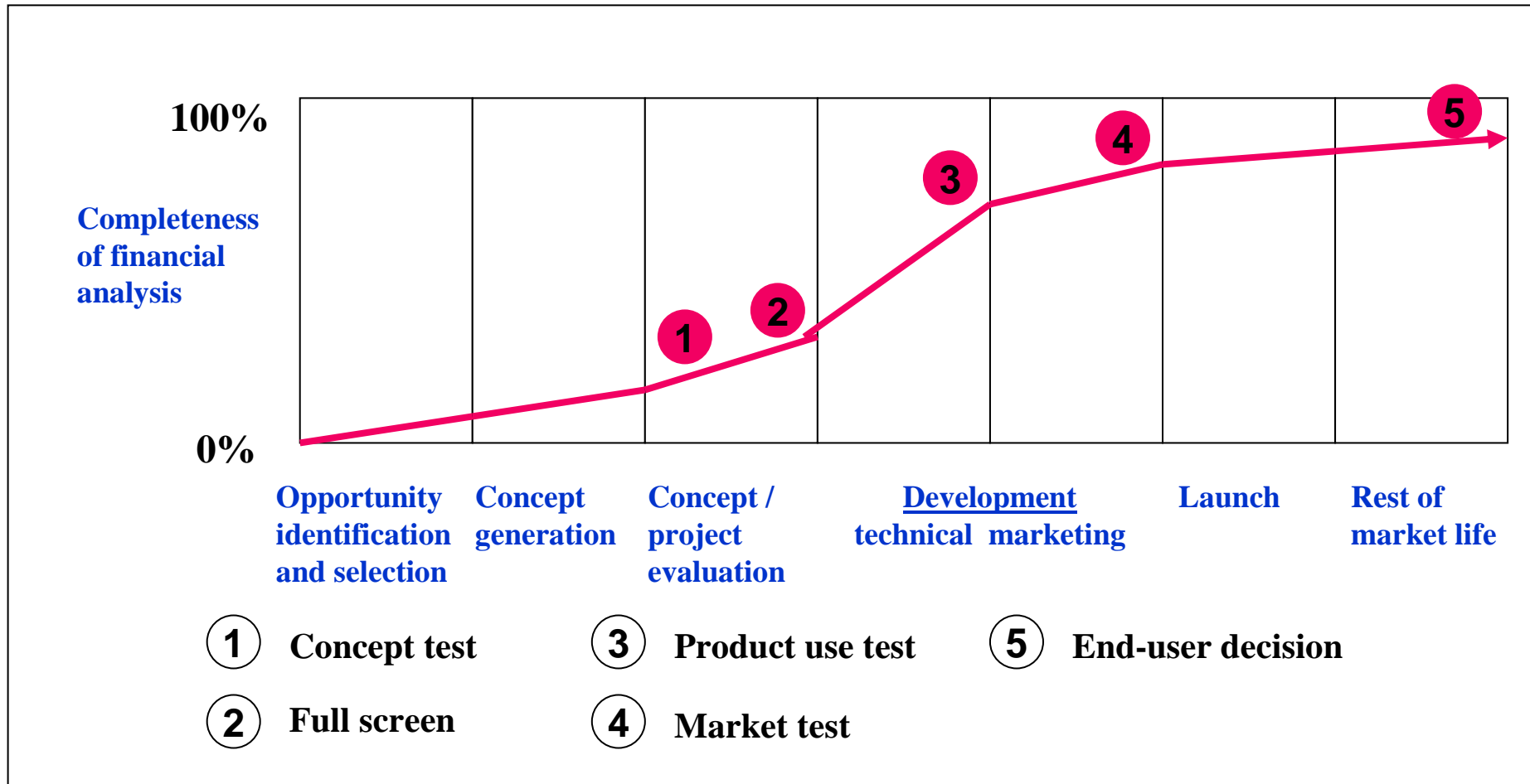
Profit per unit = Revenue per unit (unit list price less trade margins, promotional allowance, freight, etc...)

Therefore: \longrightarrow Profit = buying unit X percent aware X percent trial X percent availability X percent repeat X annual units bought X (revenue per unit – costs per unit)

Problems with Sales Forecasting

- Target users don't always know what the new product will actually be, nor will they have had a chance to use it;
- Lack of information about marketing support;
- Rushing the new products out, without stopping to field test the new items;
- Forecasting methods are extrapolations and work well on established products, while new products don't have history

The Life Cycle of Assessment



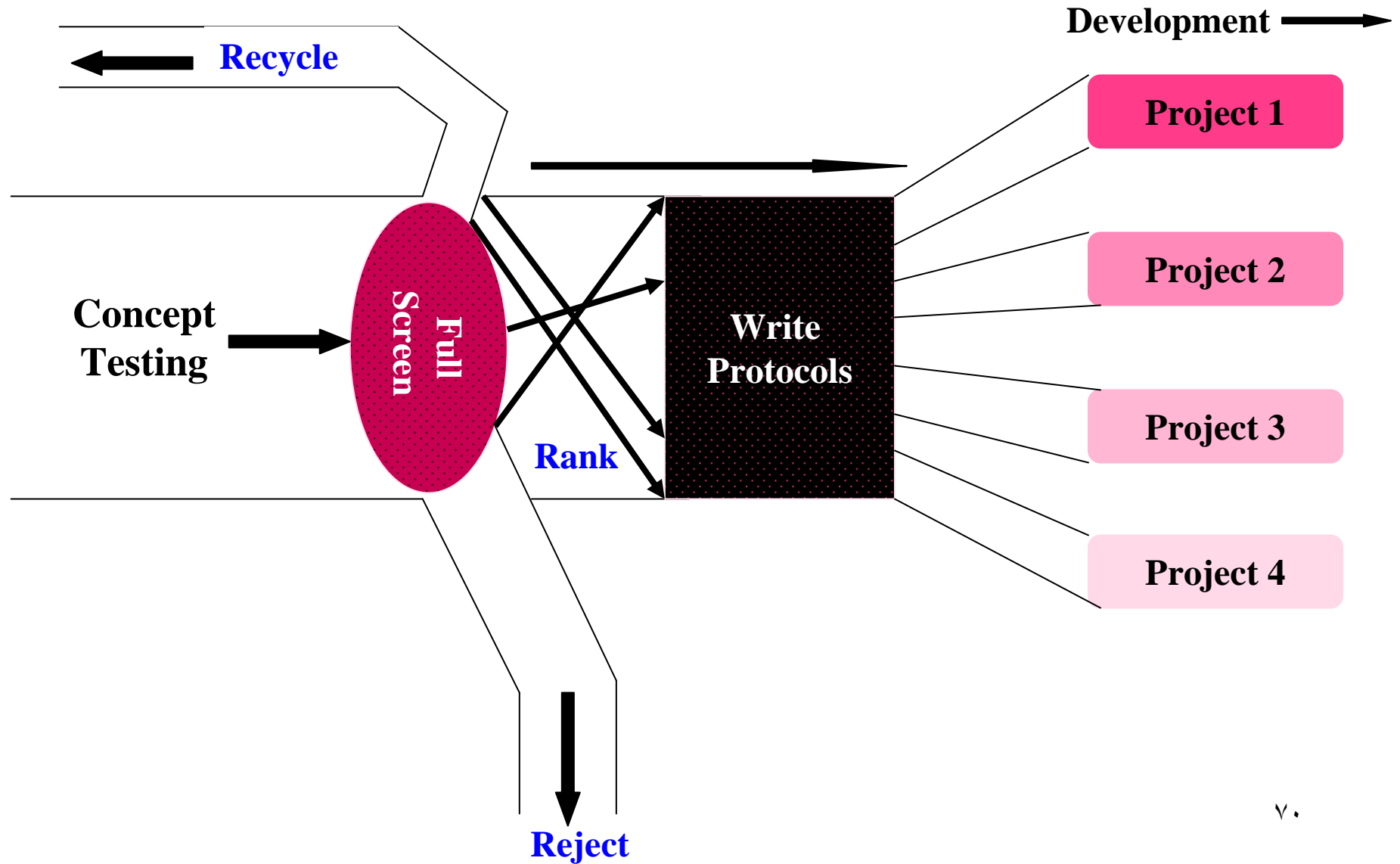
Ways of Reducing Dependence on Poor Forecasts

- Forecast what you know;
- Approve situation, not numbers;
- Commit to a strategy of *Low Cost Development and Marketing*;
- Go ahead with sound forecasts but prepare to *handle the risks*;
- Improve current financial forecasting methods

مراحل چهارم و پنجم: توسعه و اجرا

- اهداف پروتکل
- محتوي پروتکل
- توسعه محصول جديد

New Product Process

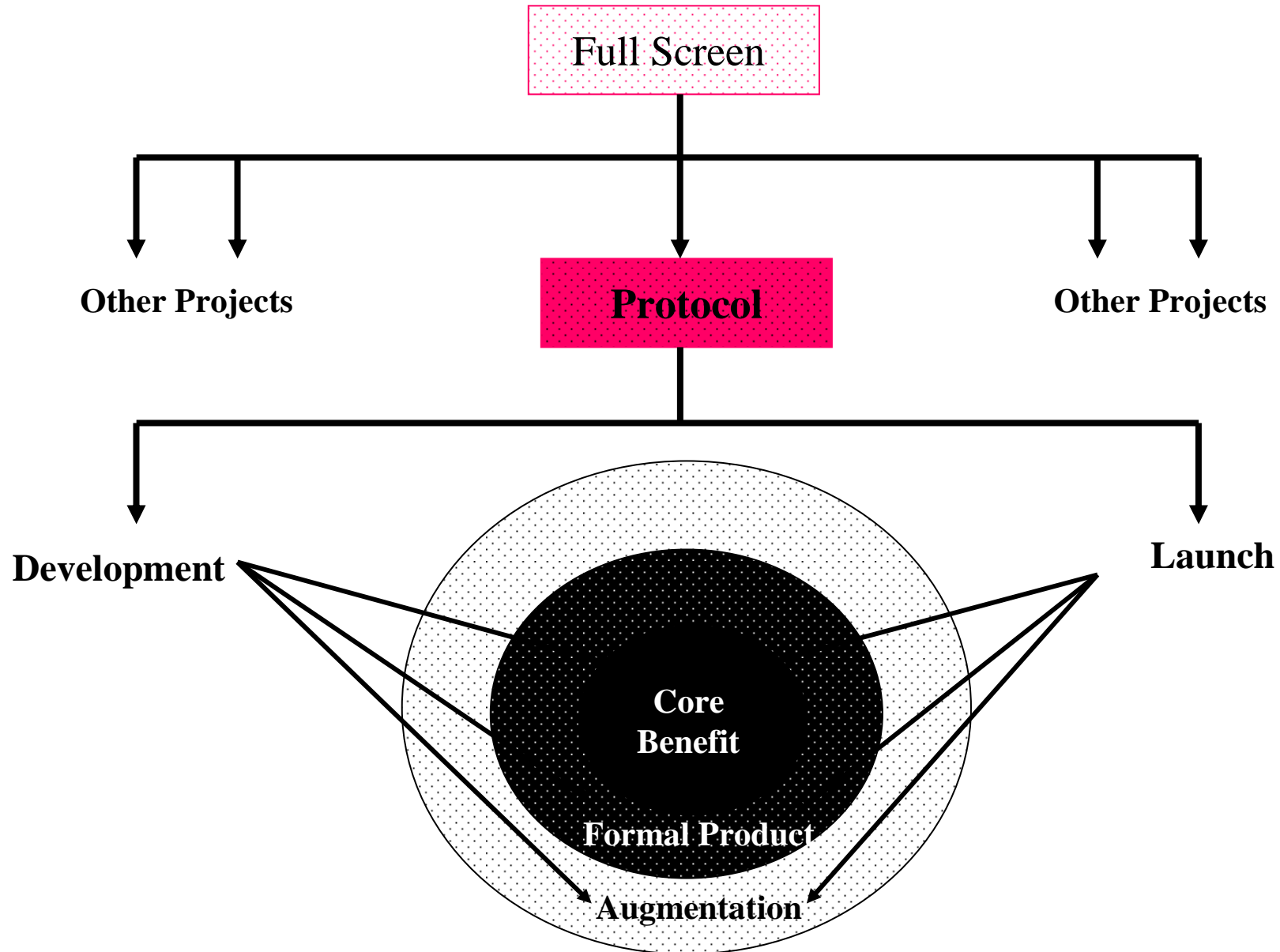


Product Protocol

Protocol is a signed document containing a record of the points on which agreement has been reached by negotiating parties. (*Webster's New World Dictionary*)

Product Protocols (product requirements, product definition, and deliverables) is: the final package of output from the development system, product's benefits or performance will be delivered to the customer, and change would be brought in the market place.

The Integrating and Focusing Role of Protocol



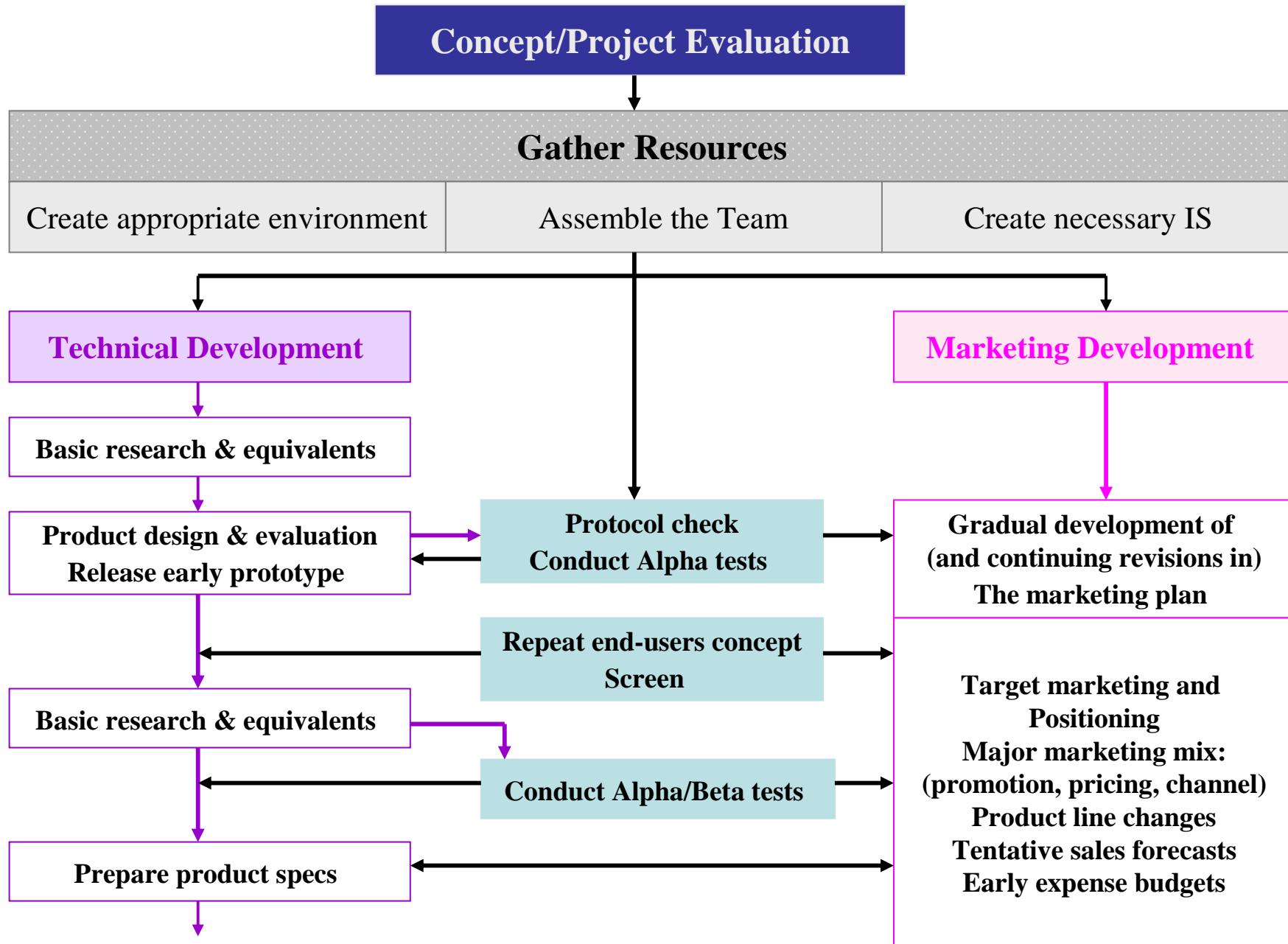
Purposes of the Protocol Statement

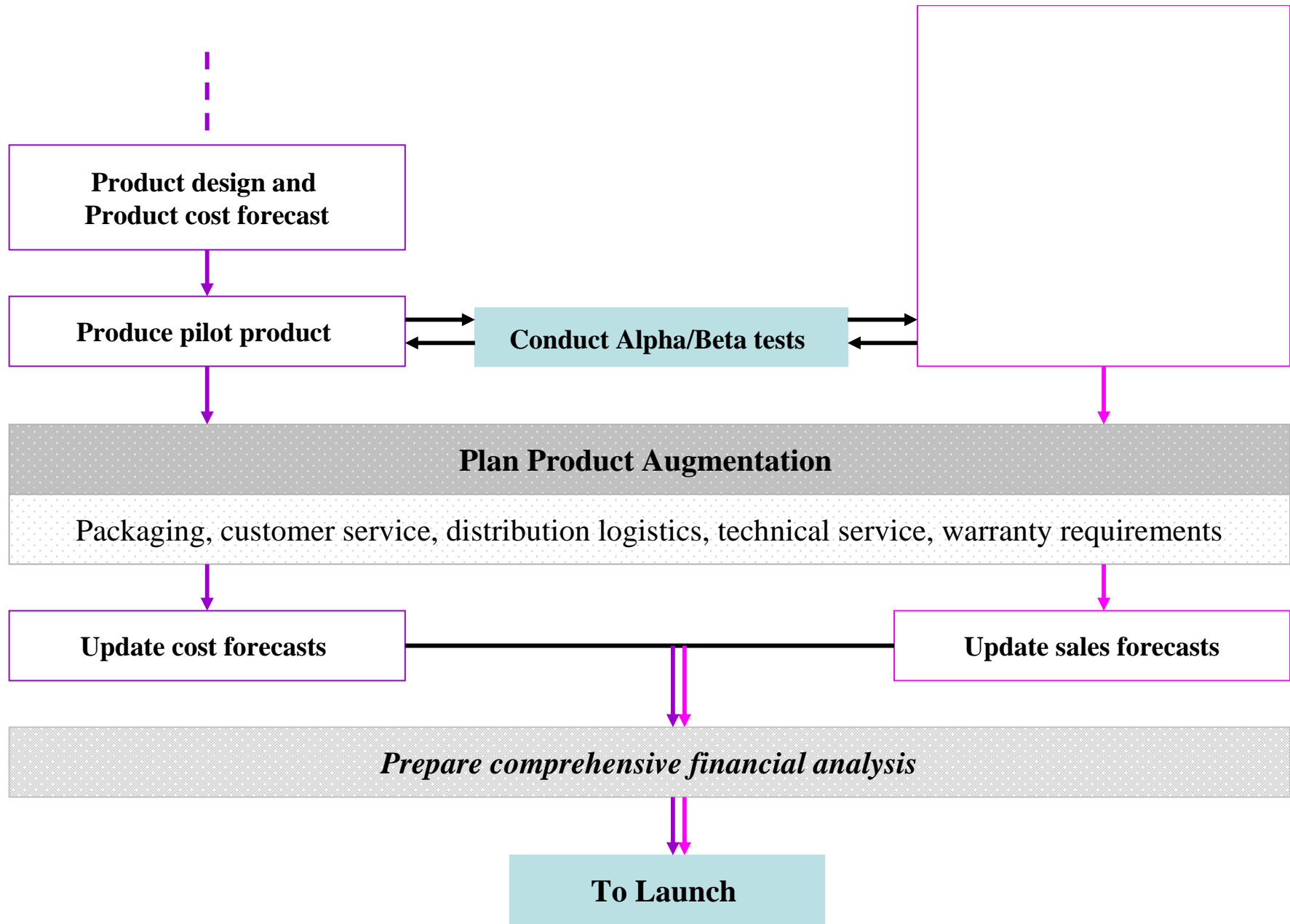
- To direct and integrate the team;
- To communicate essentials to all of the players, helps lead them into integrated actions, helps direct outcomes that are consistent with the full screen and financials, and gives all players their targets to shoot for;
- To determine the time through the process, or cycle time
- To define requirements in measurable words: when, why, how, who, and whether

Protocol's Contents

- ✱ Target Market;
- ✱ Positioning;
- ✱ Product Attributes;
 - ✱ Functions: how the item will work,
 - ✱ Feature; what is it,
 - ✱ Benefits: uses
- ✱ Competitive Comparison & Augmentation /dimensions;
- ✱ Marketing Requirements,
- ✱ Timing;
- ✱ Financial, corporate strategy, and regulatory requirements

Development





Development, today include creation of everything needed to market the product, including funding, distribution, promotion, and technical services.

Marketing's Role in the Development Process

- ② To make absolutely clear to everyone *what the protocol calls for*;
- ② To make sure that this *protocol task is technically feasible and doable* within the time and dollars imposed by the development budget;
- ② To provide an *open window for industrial and system* designers to all influential forces in the marketplace;
- ② To provide a *continuous interim of opportunity to pretest various versions* of the new product;
- ② To be *available to technical progress*, via team meetings, lab visits, social contacts, and so forth;
- ② To *involve technical people in the decision making* on the marketing side of the development stream;
- ② To stay *continuously alert to the project's progress* and to be creative in finding ways to help;
- ② To flag the various ways that work in *nonmarketing department impacts directly on marketing plan*