



Stevens Institute of Technology

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Hoboken, NJ 07030

Wesley J. Howe School of Technology Management

As a leader in Research and Development, we are asking for your help with a benchmarking study of your company's Front End of Innovation activities. The survey will take **no more than 45 minutes** of your time.

The objective of this effort which is being done under the auspices of Industrial Research Institute and the National Science Foundation to determine and disseminate effective practices in the front end in order to increase the number of highly profitable and commercially successful major products that may be fed into the New Product Development (NPD) portion of the innovation engine.

Why should you participate?

- The survey deals with aspects that could be of great importance to your firm. When answering the questions, **topics may be raised** you hadn't considered before and may be value to your current front end innovation efforts.
- We will have data from other companies which will permit us to create average values. Within 2 weeks after receipt of your surveys you will be send a **benchmarking report** in which your company is compared against "best practice" SBU's (top 25 percent).

Please be assured: all information collected in this survey will be kept strictly confidential. Your name and your company name will not be connected to your individual responses.

We urge you to participate in this groundbreaking research. Please do not hesitate to contact either one of us with questions, concerns, and comments. Thank you for your valuable time!

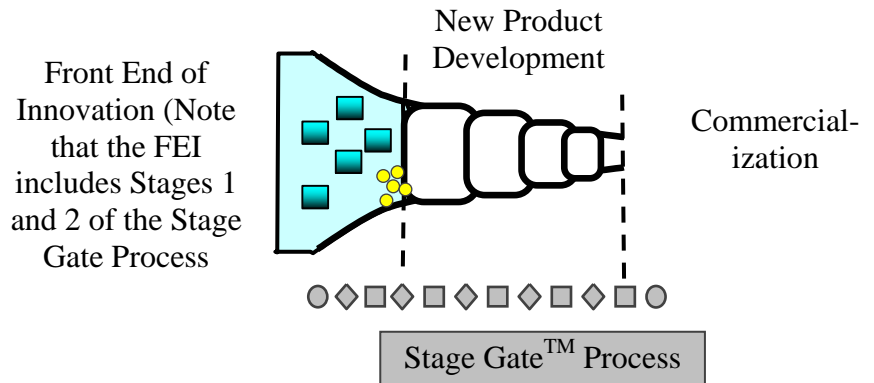
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A Benchmarking Study of Front End of Innovation Activities and Performances

Please read the following paragraphs before completing the survey.

What is the Front End of Innovation (FEI)? The Front End is defined by those activities that come before the formal and well structured new product development portion of the innovation process. FEI is the first part of a three part innovation process that includes the front end of innovation (a.k.a. Fuzzy Front End), new product development and commercialization. Despite the continuum between the FEI and new product development, the activities in the FEI are often chaotic, unpredictable and unstructured.



Level of Innovativeness (Category I vs. Category II): We categorize projects into 2 levels of innovativeness. Category I includes cost reductions and repositioning, improvements/revisions to existing products, and additions to existing product lines. Category II consists of new product lines for existing markets and technology known to the Strategic Business Unit (SBU), new product lines for new markets and new technology to the SBU, and new to the world.

Study segment (Company vs. SBU)

In some companies, there is only one FEI program for all products and markets, while other organizations handle multiple product/market segments using relatively autonomous divisions or SBUs. The SBU is a unit that has its own strategy formulation and profit and loss responsibility. If the SBU scenario is yours, **please answer all questions for your division/SBU. If not, fill out the survey based on your entire company.**

Products, Processes, and Services

Innovation is required in the FEI for new products, processes, and services. For simplicity, our questionnaire has formatted all questions as new products. Please respond to the questions to best fit your organization's R&D products be they products, processes, or services

Please identify your company name and the division/SBU you work in, if applicable. All information will be kept confidential and your responses will not be connected to you or your individual company.

Company Name: _____ **Division/SBU (if applicable):** _____

II. Strategy, Senior Management Commitment, Resources and Climate of the Front End

Please use the following scale to answer questions 1 through 3

Strongly Disagree
Neither Agree nor Disagree
Strongly Agree
1
2
3
4
5
6
7

| | Strongly Disagree | | | | | | Strongly Agree |
|---|-------------------|---|---|---|---|---|----------------|
| 1. Front End Vision | | | | | | | |
| The vision of our organization clearly establishes areas for front end projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's vision gives clear directions for all front end projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's vision statements have clear long term directions for front end projects... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's front end vision is shared and supported by senior management..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's front end vision is shared and supported by everyone involved in front end projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's front end vision is perceived as relevant by the people who have to deliver it..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| The front end vision is understood by the people in our organization..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's front end vision statements are stable over time for markets..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's front end vision statements are stable over time for technology..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's vision statements are stable for front end projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 2. Front End Strategy | | | | | | | |
| Our organization has aggressive goals for our front end efforts..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organizations front end efforts are within the defined arenas of strategic thrust: | | | | | | | |
| For new product areas..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| For new markets..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| For new technologies..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| For disruptive businesses..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization's strategy assures that all front end efforts are aligned with our core competencies..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 3. Front End Senior Management Commitment | | | | | | | |
| Senior management is personally involved in front end activities by playing a central role in project reviews..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Senior management participates in making key decisions in project reviews..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Senior management champions major new front end projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Senior management is strongly committed to all front end activities..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Senior management plays an integral role in most Category II projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

III. Human Resource Factors

Please use the following scale to answer the next question

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

| | Strongly Disagree | | Neither Agree nor Disagree | | | Strongly Agree | |
|---|-------------------|---|----------------------------|---|---|----------------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Open informal communication among employees is encouraged across functions, locations, etc..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Sharing knowledge, expertise and information is recognized and rewarded..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization encourages and supports communities of practice (i.e. volunteer groups) formed around key areas of interest..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Each community of practice has a dedicated coordinator with a budget..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Each community of practice coordinator has a formalized time commitment of at least 25 per cent..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization rewards our top inventors..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization encourages and supports relationships between our marketing and technical people..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Intrapreneurs (i.e. new product champions) are recognized in our organization..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization has an evaluation and learning process for continuously improving our front end..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Non-successful efforts spent in the front end are regularly assessed for future process improvements..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

IV. FEI Project Teams

Please use the following scale to answer the next question

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

| | Strongly Disagree | | Neither Agree nor Disagree | | | Strongly Agree | |
|---|-------------------|---|----------------------------|---|---|----------------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Our FEI team leaders have recognized credibility throughout the organization for their leadership experience..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI team leaders assure team performance that exceeds expectations..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI team leaders enable and support commitment of all team members..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI project teams are well balanced between creative, analytic, and practical personnel.. | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization applies thinking style tools (e.g. Myers-Briggs) to select FEI team members..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| FEI team members are selected based on their high levels of specialized project knowledge... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Team conflicts are rarely due to personnel problems..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI team members are well networked across all departments within the organization. | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| FEI projects are sufficiently resourced to allow team members to concentrate on project work..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| FEI team members are passionately committed to their FEI projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| FEI team members spend time and effort well beyond their expected job requirements..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| FEI project teams are multi-disciplinary (i.e. cross functional). The team members are from different functions (as appropriate) – R&D, marketing, regulatory, etc..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI teams are effective even when team members are in locations significantly distant from each other..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI teams are proficient in IT tools which allow them to effectively communicate either team members who are significantly distant from each other..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our FEI teams are competent in developing projects in multiple countries which are culturally different..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

V. Level of Innovation

This section asks questions related to the techniques and tools used in your organization as a function of the **INNOVATIVENESS LEVEL** in your organization.

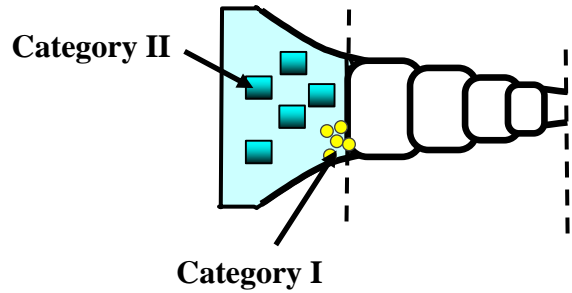
There are 2 levels of innovativeness.

Category I includes:

- 1) **Cost Reductions and Repositioning**
- 2) **Improvements/Revisions to existing products**
- 3) **Additions to Existing Product Lines**

Category II includes:

- 4) **New Product Lines for existing markets and technology known to the organization**
- 5) **New Product Lines for new markets and new technology to the organization**
- 6) **New to the World**

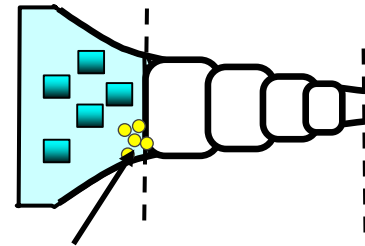


How is your total budget for front end activities distributed among the following six categories? (Your answers must add up to 100%):

| | | |
|---|------|---|
| 1. Cost Reductions and Repositioning..... | | % |
| 2. Improvements/Revisions to existing products..... | | % |
| 3. Additions to Existing Product Lines..... | | % |
| 4. New Product Lines for existing markets and technology known to the organization..... | | % |
| 5. New Product Lines for new markets and new technology to the organization..... | | % |
| 6. New to the World..... | | % |
| Must add up to 100% | 100% | All <u>front end</u> activities of the organization |

VI. Category I Activities

This next section asks questions related to **CATEGORY I** (cost reductions and repositioning, improvements/revisions to existing products, and additions to existing product lines) project activities over the last year only.



Category I

Please use the following scale to answer questions 1 through 3:

Strongly Disagree Neither Agree nor Disagree Strongly Agree
 1 2 3 4 5 6 7

| | Strongly Disagree | | | | | | | Strongly Agree |
|--|-------------------|---|---|---|---|---|---|----------------|
| 1. Opportunity Identification and Analysis for Category I projects during the last year. | | | | | | | | |
| (Opportunity identification and analysis concerns the activities that a company uses to identify markets or technology arenas that are attractive to the company. Identifying an opportunity space determines the “sandbox” the company wants to play in – NOT specific products). | | | | | | | | |
| Our organization performs a thorough external environment analysis (e.g. economic, regulatory trends, etc.)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization’s external review approach is a formal, documented process..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization understands customer’s buying behavior and what drives their purchase decisions (needs)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization understands its core competencies (what we can do ourselves and what we have to outsource)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization performs thorough analysis of the market potential (e.g. size of market, buying power, etc.)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization is satisfied that we are applying the appropriate criteria to screen the areas of opportunity that we have identified..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Opportunity analysis process is consistently applied to all category I projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| A formal process is used to screen and select opportunity areas for category I projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| | Strongly Disagree | | | | | | | Strongly Agree |
| 2. Idea Genesis and Enrichment for Category I projects during the last year. (Idea generation and enrichment is concerned with the birth, development, maturation and selection of ideas – which are the embryonic form of a new product or solution.) | | | | | | | | |
| Our organization has a systematic method for capturing and sharing ideas..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization has a company wide system for recording ideas..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization has a company wide system for providing feedback for ideas received..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization has methods for sharing and capturing ideas in an open web environment... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization is proficient in using established methods to identify/obtain new ideas (e.g. focus groups, market surveys, brainstorming)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization has an IT based system for sharing, capturing and easily accessing information developed for R&D projects..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization has an IT based system that allows people to easily find who and what R&D people are doing..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization has an IT based system that features semantic and natural language search tools..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |
| Our organization IT based system is actively used by most of the R&D people..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | |

VI. Category I Activities - continued

Please use the following scale to answer questions 3 through 5
Neither Agree nor Disagree

Strongly Disagree
1 2

3

4

5

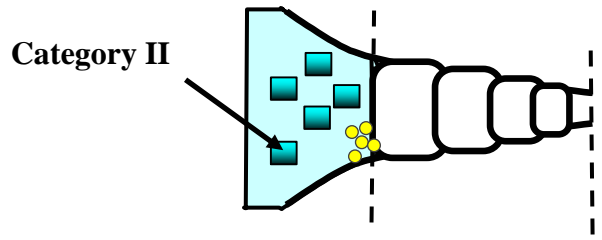
6

Strongly Agree
7

| | | Strongly Disagree | | | | | Strongly Agree |
|--|---|-------------------|---|---|---|---|----------------|
| 3. Idea Selection for Category I projects during the last year. | | | | | | | |
| Our organization has an idea review board (or similar organization that plays a key role in idea selection..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization has a comprehensive method of evaluation for idea selection..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization has a defined set of idea selection criteria..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 4. Concept Definition for Category I projects during the last year. (Concept definition, is the development of a concept which has a defined form with features and customer benefits. Typically a business case is developed in this section.) | | | | | | | |
| The feasibility of manufacturing of concept is understood..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| The feasibility of market/sales effort is understood..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| The feasibility of technical requirements is understood..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| The feasibility of economics is understood..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| The expected competitive response is understood..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Intellectual property, intellectual assets and intellectual capital strategy are defined..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 5. Concept Selection for Category I projects during the last year. | | | | | | | |
| A formal concept selection process is used..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Standard financials (i.e. ROI, NPV, DCF) dominate the selection process..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Periodic review of the concept selection process is performed for improvement..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

VII. Category II Activities

This next section asks questions related to **CATEGORY II** (new product lines for existing markets and technology known, new product lines for new markets and new technology, and new to the world) project activities over the last year only.



Please use the following scale to answer this question

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

| | Strongly Disagree | | Neither Agree nor Disagree | | | | Strongly Agree |
|---|-------------------|---|----------------------------|---|---|---|----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Opportunity Identification and Analysis for Category II Projects during the last year. (Opportunity identification and analysis concerns the activities that a company uses to identify markets or technology arenas that are attractive to the company. Identifying an opportunity space determines the “sandbox” the company wants to play in – NOT specific products). | | | | | | | |
| Our organization assesses the external environment as it impacts our business for Category II projects by reviewing: | | | | | | | |
| Economic/demographic trends..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Regulatory shifts/developments..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| New/emerging technologies | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Competitive environment..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| New business models..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Consumer or cultural trends..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| International vs. Domestic vs. Regional needs..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Our organization has a formal opportunity identification groups (i.e. personnel are specifically allocated)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization understands our customers’ buying behavior and what drives their purchase decisions (needs)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization understands its core competencies (what we can do ourselves and what we have to outsource)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization anticipates our competitors’ future reactions to our new product efforts..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| When looking at the market potential of opportunity areas for Category II projects, our organization reviews: | | | | | | | |
| Buying power of the customers | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Opportunity for new to the world products..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Potential for platform development..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Number of new customers we don’t traditionally sell to..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | |
|--|---|---|---|---|---|---|---|
| Our organization looks actively for disruptive business (i.e. ones that could replace our current business)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization will accept disruptive business margins which are less than our current business..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization actively looks for opportunities at the margins of our business (i.e. either the over-served or under-served potential customer)..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our organization is satisfied that we select the opportunities that have the greatest potential for successful new product developments..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

Please use the following scale to answer the next question:

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Strongly Disagree Strongly Agree

2. Idea Genesis and Enrichment for Category II Projects during the last year. (Idea generation and enrichment is concerned with the birth, development, maturation and selection of ideas – which are the embryonic form of a new product or solution).

The best ideas are generated by a handful of inventive individuals in our organization..... ① ② ③ ④ ⑤ ⑥ ⑦

Please use the following scale to answer the next question:

Never 1 2 3 4 5 6 7 Always

The following methods are used to identify/obtain new ideas:

Traditional market research methods (e.g. focus groups, market surveys, etc.)..... ① ② ③ ④ ⑤ ⑥ ⑦

Brainstorming (e.g. Synectic, facilitated creativity sessions, etc.)..... ① ② ③ ④ ⑤ ⑥ ⑦

Observing our customers in their own environment (e.g., ethnography with our customers)..... ① ② ③ ④ ⑤ ⑥ ⑦

Observing potential customers in their own environment (e.g., ethnography with potential customers)..... ① ② ③ ④ ⑤ ⑥ ⑦

Understanding the unarticulated reasons why the customers are making product choices. (e.g. Customer archetypes)..... ① ② ③ ④ ⑤ ⑥ ⑦

Co-operating with lead users..... ① ② ③ ④ ⑤ ⑥ ⑦

Partnering with customers..... ① ② ③ ④ ⑤ ⑥ ⑦

Using alliances, partnerships, licensing and joint ventures..... ① ② ③ ④ ⑤ ⑥ ⑦

R&D activities in our organization..... ① ② ③ ④ ⑤ ⑥ ⑦

Centralized corporate research..... ① ② ③ ④ ⑤ ⑥ ⑦

Assessing emerging new technologies..... ① ② ③ ④ ⑤ ⑥ ⑦

Assessing technology driven inventions..... ① ② ③ ④ ⑤ ⑥ ⑦

Basic (pure) science research..... ① ② ③ ④ ⑤ ⑥ ⑦

Please use the following scale to answer the next questions:

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Strongly Disagree Strongly Agree

3. Idea Selection for Category II Projects during the last year.

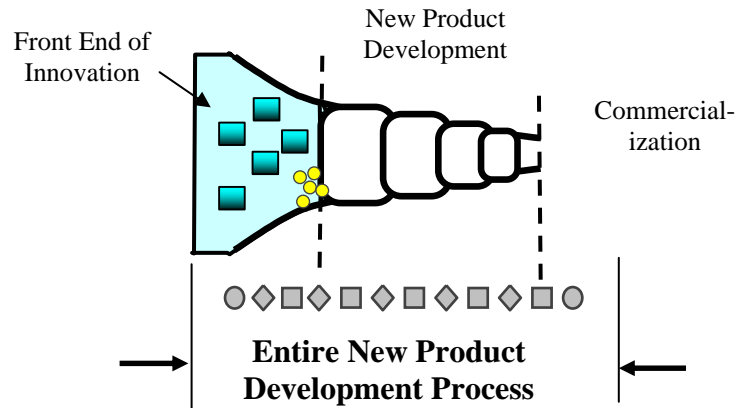
Our organization has an idea review board (or similar organization) that plays a key role in idea selection..... ① ② ③ ④ ⑤ ⑥ ⑦

Our organization has a comprehensive method of evaluation for idea selection..... ① ② ③ ④ ⑤ ⑥ ⑦

Our organization's set of criteria for Category II projects are different than those used for Category I projects. ① ② ③ ④ ⑤ ⑥ ⑦

VIII. New Product Process

This next section asks questions related to the entire new product process of the organization consisting of the Front End of Innovation, new product development and commercialization. Please answer the questions based on your successes over the last 3 years.



Please use the following scale to answer the next question:
Neither successful nor unsuccessful

Not at all successful 1 2 3 4 5 6 7 Very successful

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|------------|---|---|---|---|---|------|
| | Not at all | | | | | | Very |
| How successful has your organization new product program been over the <u>last 3 years</u> in terms of: | | | | | | | |
| Opening up new markets; markets that had not been served before..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Enabling us to enter new product categories, areas or types..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Integrating scientific knowledge or leveraging our technical know how..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Getting us into new technologies..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| How successful has your organization's new product program been relative to your spending over the <u>last 3 years</u> in terms of: | | | | | | | |
| Our new product program has been profitable..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our new product program has exceeded its sales objectives..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Our new product program has exceeded its profit objectives..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Compared to competitors our program has been more successful and profitable..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| From a technical standpoint our new product development program has been successful..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| How successful has your organization been relative to effectiveness and efficiency over the <u>last 3 years</u> : | | | | | | | |
| All NPD projects were on budget..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| All NPD projects were developed as quickly and efficiently as expected..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| All NPD projects were launched on schedule..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Product development cycle time (i.e. from idea to launch) was significantly shortened over the last 3 years..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

Please use the following scale to answer the next question:
Neither Agree nor Disagree

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-------------------|---|---|---|---|---|----------------|
| | Strongly Disagree | | | | | | Strongly Agree |
| IX. Industry Turbulence | | | | | | | |
| The industry in which our organization competes: | | | | | | | |
| Is vulnerable to substitute products..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Define the typical number of years of the product life cycle in your industry..... | years: _____ | | | | | | |
| Changes rapidly in terms of technology..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Has many regulatory issues associated with products in our industry..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| Is unpredictable in terms of stability of demand for products in our organization..... | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

X. Organization demographics (Information obtained in this section will remain confidential)

Industry or SIC Category _____

Annual Sales Revenue (Approx): _____ Number of Employees (Approx) _____

Percentage of R& D as proportion of sales _____ %

Approximately what percentage of your new products that entered development and had significant amounts of money spent on them over the last 3 years were: (your answers must add up to 100%)

Launched and were commercial success

Launched and were commercial failures (did not achieve acceptable minimum commercial objectives)

Killed or cancelled prior to launch

| |
|------|
| |
| |
| |
| 100% |

Must add to 100%

Total new product development efforts

What percentage of the total NPD spending per year, averaged over the last 3 years, includes (your answers must add up to 100%):

All front end activities

All product development activities (starting with the development and ending with the launch stage.)

| |
|------|
| |
| |
| 100% |

Must add to 100%

Total NPD efforts of the organization

Percentage of your business annual sales revenue derived from products introduced in the last 3 years. _____

Percentage of your business annual profit derived from products introduced in the last 3 years. _____

In order to provide you the opportunity to view the results from this study and compare your company to other companies, we need some contact information:

Name: _____ Position: _____

Phone Number: _____ E-mail: _____

Function _____ i.e. Marketing, R&D, General Mgt, etc.)

Years with the company: _____ Years of hands-on experience with FEI, R&D or New Product Development Activities: _____

THANK YOU FOR YOUR PARTICIPATION.

If you are an IRI member you may fax (703 647-2581) the survey to Brian Hess, Associate Manager IRI Networks.

Or you may fax it directly to Peter Koen (201 221-7788), the Principal Investigator, at Stevens Institute of Technology.

In either case confidentiality of the data will be ABSOLUTELY maintained.