



2008 Product Development Metrics Survey Innovation Processes, Tools, & Top Corporate Metrics Practices

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INTRODUCTION

We believe it will be worth your while to complete this Innovation Processes, Tools, & Top Corporate Metrics survey aimed at discovering industry's utilization of innovation methods and techniques; and to request a copy of the results that will be sent to all survey participants who make an honest effort to complete this survey questionnaire.

We have been careful to design a questionnaire that should not cause interested participants to need to receive approval from their company in order to participate. There are no questions in this research that require any the disclosure of any financial or confidential information.

The participants in our Biennial Survey receive a forty-plus page results document complete with graphics. Our 1998, 2000, 2002 and 2004 participants were completely satisfied with the document they received and sent us only accolades for our research work. We will again provide the results to those who credibly complete responses to all questions within our required timeframes. We appreciate your commitment of time and rigorousness in the completion of this survey. We will absolutely keep responses confidential!

THE RESEARCH PERIOD WAS AUGUST 1, 2007 TO MARCH 3, 2008

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This survey covers five areas relating to Innovation processes, tools, and metrics where there is currently significant industry activity. The sixth section, the first section of the survey, allows us to categorize your response. The results of this survey will be of significant interest to managers and decision makers.

- A. Respondent Profile**
- B. Innovation Environment**
- C. Innovation Processes**
- D. Innovation Identity**
- E. Innovation Tools**
- F. Top Corporate Metrics Used In Industry R&D Practices**

SECTION A RESPONDENT PROFILE

The purpose of this section is to correctly categorize your company within the population of companies that respond to this survey. Persons who wish to compare their response to the overall results, usually want to do so with other companies of similar size and type. We are trying to achieve the end result that most people seek. Please do your best to characterize your response. The format for Section A is the exact same format as the 1998, 2000, 2002 and 2004 GGI surveys which were well received.

This is the address to which the survey results will be mailed.

A1. Person completing survey: Name: _____
 Title: _____
 Company Name: _____
 Address: _____

Phone: _____ Fax: _____ E-Mail: _____

Would you like a copy of the survey results? Yes or No



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A2. Is this a public or private company?

A3. For what type/scope of company or organization are the responses to the questions in this survey?

[Check One Box That Best Applies]

- | | |
|--|---|
| <input type="checkbox"/> Parent Corporation [A P/L Unit] | <input type="checkbox"/> Functional Org/Dept. [Cost Center] |
| <input type="checkbox"/> Strategic Business Unit/HQ [A P/L Unit] | <input type="checkbox"/> Manufacturing Plant [Cost Center] |
| <input type="checkbox"/> Division/Business Unit/Grp [A P/L Unit] | <input type="checkbox"/> Other: _____ |

A4. Identify the company's primary industry or service: [Check One Box That Best Applies]

<input type="checkbox"/> Aerospace	<input type="checkbox"/> Education	<input type="checkbox"/> Oil/Gas
<input type="checkbox"/> Automotive/Vehicular	<input type="checkbox"/> Electronics	<input type="checkbox"/> Paper/Publishing
<input type="checkbox"/> Biotechnology	<input type="checkbox"/> Engineering/Contract Design	<input type="checkbox"/> Pharmaceuticals
<input type="checkbox"/> Chemical	<input type="checkbox"/> Food	<input type="checkbox"/> Research/Nat'l Labs
<input type="checkbox"/> College/Univ. R&D	<input type="checkbox"/> Heavy Machinery	<input type="checkbox"/> Rubber/Plastic
<input type="checkbox"/> Computers	<input type="checkbox"/> Industrial products	<input type="checkbox"/> Semiconductors
<input type="checkbox"/> Construction	<input type="checkbox"/> Instrument	<input type="checkbox"/> Stone/Clay/Concrete
<input type="checkbox"/> Consumer Products	<input type="checkbox"/> Materials	<input type="checkbox"/> Telecommunications
<input type="checkbox"/> Defense	<input type="checkbox"/> Medical Products	<input type="checkbox"/> Textiles
<input type="checkbox"/> Durable goods	<input type="checkbox"/> Metals/Mining	<input type="checkbox"/> Other Ind. _____
<input type="checkbox"/> Software-Web	<input type="checkbox"/> Software-Digital	<input type="checkbox"/> Software-Embedded
<input type="checkbox"/> Consulting	<input type="checkbox"/> Market Research	<input type="checkbox"/> Financial Services
<input type="checkbox"/> Government	<input type="checkbox"/> Utility	<input type="checkbox"/> Other Svc. _____

A5. Sales revenue over the last full year: [Check One Box That Best Applies]

- | | | | | |
|---------------------------------|------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|
| <input type="checkbox"/> <\$25M | <input type="checkbox"/> \$25-100M | <input type="checkbox"/> \$100-250M | <input type="checkbox"/> \$250-500M | <input type="checkbox"/> \$500M-1B |
| <input type="checkbox"/> \$1-5B | <input type="checkbox"/> >\$5B | | | |

A6. Number of full-time employees: [Check One Box That Best Applies]

- | | | | |
|--|--|------------------------------------|--------------------------------------|
| <input type="checkbox"/> 1-500 | <input type="checkbox"/> 500-1000 | <input type="checkbox"/> 1000-5000 | <input type="checkbox"/> 5000-10,000 |
| <input type="checkbox"/> 10,000-25,000 | <input type="checkbox"/> 25,000-50,000 | <input type="checkbox"/> 50,000+ | |

A7. Please indicate the types of manufacturing and/or production facilities that comprise your operations or software environment: [Check All Boxes That Apply]

- Process Mfg Repetitive Mfg Discrete Mfg Job Shop/Customized Mfg

A8. Places the company does business:

[Check All Boxes That Apply]

	North America	Europe	Asia	Rest of World
Sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
R&D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mfg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A9. What function do you personally perform in the company? [Check One Box That Best Applies]

- | | | | | | |
|----------------------------------|---|----------------------------------|--|---|---|
| <input type="checkbox"/> Mgt | <input type="checkbox"/> Sales | <input type="checkbox"/> Mktg | <input type="checkbox"/> R&D/Eng | <input type="checkbox"/> Mfg-Production | <input type="checkbox"/> Mfg-Purchasing/Materials |
| <input type="checkbox"/> Quality | <input type="checkbox"/> Environ./Safety/Regulatory | <input type="checkbox"/> Finance | <input type="checkbox"/> Information Systems | <input type="checkbox"/> HR | |



SECTION B INNOVATION ENVIRONMENT

B1. Perceived Strategy: What is your company’s fundamental approach to new product creation today? Please reply for what you currently do. Please do not reply as to what your company might do in the future or has done in the past, today’s environment is the focus of this research. [Check One Box Only]

- a. Innovator We focus on being first to market with “new to” platform products. We then go on to develop the next “new to” platform product. We do not generally redesign, refeature, and extend platforms we launch.
- b. Innovator-Extender We focus on being first to market with “new to” platforms periodically. We then create derivatives and adaptations of the platform for some time. We generally redesign, refeature, and extend platforms we launch.
- c. Balanced We focus on having a balance of blockbuster to incremental products. We launch platform products periodically, but a typical year is a mix. We are viewed by the marketplace as offering a range of new products.
- d. Extender We don’t focus on being first to market with “new to” platform products. We are usually later to enter markets, but offer better value and support. We typically service our products to maximize product life cycle duration.
- e. Other _____

B2. Perceived Emphasis: Please complete the following sentence. Product innovation will likely be _____ important at my company in the next five years than it was in the 1990s. [Check One Box Only]

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Much | | | | | Much |
| Less | Less | Same | More | More | |
| <input type="checkbox"/> |

B3. Perceived Training: Please complete the following sentence. Since 2000, the “innovation course content” of company training curriculums for R&D and product developer training is _____. [Check One Box Only]

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Much | | | | | Much |
| Less | Less | Same | More | More | |
| <input type="checkbox"/> |

B4. Perceived Investment: Please complete the following sentence. Since 2000, the “investment in processes, tools, techniques, systems, and other hard and soft innovation assets” at my company is _____. [Check One Box Only]

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Much | | | | | Much |
| Less | Less | Same | More | More | |
| <input type="checkbox"/> |



SECTION C INNOVATION PROCESSES

C1. Types & Areas: Without disclosing any indication of emphasis or percentages of R&D investment and without regard as to whether the company accomplishes the type of R&D internally/organically or externally/open or both, please indicate the type(s) of R&D in which your company engages. [Check All That Apply]

- a. Basic Research Largely undirected investment aimed at pure discovery.
- b. Applied Research Application directed discovery aimed at finding methods/solutions.
- c. Advanced Development Application directed invention aimed at new methods/solutions.
- d. Product Development Application directed invention aimed at improved methods/solutions.

C2. Research & Advanced Development Processes: Excluding “Product Development Processes,” please indicate the type(s) of R&D for which your company maintains a “documented process” or “documented guidelines.” [Check All That Apply]

- a. Basic Research Company maintains separate documented process or documented guidelines.
- b. Applied Research Company maintains separate documented process or documented guidelines.
- c. Advanced Development Company maintains separate documented process or documented guidelines.
- d. Combination Research & Advanced Company maintains separate documented process or documented guidelines spanning Research & Advanced Development that is a separate process from Product Development.
- e. Multiple Research & Advanced Company maintains more than one documented process or documented guidelines spanning Research & Advanced Development that are separate processes from Product Development.
- f. Other _____

C3. Product Development Processes: Not considering “Basic Research,” “Applied Research,” or “Advanced Development” in your reply, please indicate the number of documented processes or variants of an overall documented process that your company utilizes for “Product Development.” [Check One Box Only]

- a. No Process There is no common process, product development just happens.
- b. Single Process All inventive activities are accomplished through a single management process framework.
- c. Two Processes More complex products utilize a robust process and less complex products use a scaled-down process.
- d. Three Processes More complex products utilize a robust process, medium complexity products utilize a slightly less complex process, and the least complex products utilize a scaled-down process.
- e. Four Plus Processes Analogous to the “Three Processes” description above, my company discerns four or more categorizations of product development complexity and utilizes a specific process for each.



SECTION D INNOVATION IDENTITY

D1. Process Identity Message: Companies usually give an “identity” to their product development process in the form of a “name” or “phrase” or “acronym” by which it is referenced. The name or phrase may be reduced to an acronym for expediency, or there may only be an acronym or icon. The characterization of the message sent by the identity of the process at my company is best described as _____. [Check One Box Only]

- a. an “icon” in the form of an acronym or noun that represents the process as an abstract/brand that balances execution and innovation
- b. an “icon” in the form of an acronym or noun that represents the process as an abstract/brand that emphasizes execution over innovation
- c. an “icon” in the form of an acronym or noun that represents the process as an abstract/brand that emphasizes innovation over execution
- d. a “name or phrase and possible acronym thereof” that represents the process that balances execution and innovation
- e. a “name or phrase and acronym thereof” that represents the process that emphasizes execution over innovation
- f. a “name or phrase and acronym thereof” that represents the process that balances innovation over execution
- g. Other: _____

D2a. Process Identity Nomenclature: Does the identity of your product development process contain the word _____? [Check One Box Only]

- a. “Invention,” or a derivative of it such as “Inventive”
- b. “Innovation,” or a derivative of it such as “Innovative”
- c. “Creation,” or a derivative of it such as “Creative”
- d. “Ideation,” or a derivative of it such as “Ideate”
- e. “a synonym” to Invention, Innovation, Creation, or Ideation [Please write it: _____]
- f. No, none of these words or synonyms are in the name of the process.

D2b1. Process Identity Nomenclature Changes: Has the identity of your product development process changed since 2002 or thereafter? [Yes = or No =] **D2b2. If Answer Was Yes, Did the change in the identity add the words “Invention,” “Innovation,” “Creation,” “Ideation,” or “an equivalent message synonym?”** [Yes = or No =].

D3. Process Identity Branding: Some companies choose to brand their product development processes and actively promote them externally to the eyes of the public and the marketplace? To what degree has your company branded its product development process? [Check One Box Only]

- a. The process is a registered trademark or servicemark and is funded and advertised externally.
- b. The process is a registered trademark or servicemark and is actively made visible externally.
- c. The process is a registered trademark or servicemark and is passively made visible externally.
- d. The process is actively made visible externally.
- e. The process is passively made visible externally.
- f. The process is actively made visible internally, but not externally so much.
- g. The process is passively made visible internally.



D4. Process Identity Practices: All companies espouse innovation at some level and frequency in product development. Individuals are creative and/or attempt to innovate by themselves in just about all activities. The question here is regarding specific techniques, tools, meetings, group sessions, thinking sessions, or systems that exist in a formal way and/or are required during the execution of product development activities and/or projects. [Check One Box Only]

- a. Formal innovation activities are required cross-functionally in the product development process.
- b. Formal innovation activities are required functionally in the product development process.
- c. Nothing required, but cross-functional activities for the purpose of innovation occur regularly.
- d. Nothing required, but functional activities for the purpose of innovation occur regularly.
- e. Nothing required, but individuals invoke available tools for the purpose of innovation regularly.
- f. Nothing required, but there are techniques/tools available via the company and some use them.
- g. Nothing required, but cross-functions utilize techniques/tools in books and on web.
- h. Nothing required, but functions utilize techniques/tools in books and on web.
- i. Nothing required, but individuals utilize techniques/tools in books and on web.
- j. Nothing required, people do read and surf the web for skill enhancement they employ daily.
- k. Nothing required, haven't seen anyone reading, surfing, or practicing innovation. It happens.

SECTION E INNOVATION TOOLS

E1. Usage Of Innovation Tools In Company: GGI is aware of approximately 250 Innovation Tools. These tools cover a wide range spanning “self help,” “group help,” “structuring information,” “sharing,” “increasing domain knowledge,” and other applications. Some of these tools are limited in their distribution and some tools are wider in their usage. In the table below, are 67 “innovation tools” that are “generally available” to businesses. Are any of the tools below “currently available to employees?” If so, are they “used on occasion,” or “fully embedded in our approach” during product management, product design, product development, or project management activities at your company? *GGI has no implied, actual, or any form of business interest or relationship with any tool providers listed below.* [Check One Box For Each Tool ..or.. Leave Blank If Line Item Is Not Available Through Your Company]

Tool Name	Available For Use	Used Occasionally	Fully Embedded
Access Your Sub-Conscious -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assoc'n Via Abstractions Topics of Candidate Solns -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axon Idea Processor -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blue Ocean Strategy -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BrainBank -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BrainEKP -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BrainMine -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BrainStorm -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brainstorming 1.0.1 -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brainstorming Toolbox -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BrightIdea.com -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compendium -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concept Draw -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creative Thinker (Formerly Idons-for-Thinking) - - - -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creative Whack Pack -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creator Studio -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CREAX Innovation Suite -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crowdsourcing/Crowdcasting -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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Tool Name Continued	Available For Use	Used Occasionally	Fully Embedded
Curio -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decision Explorer -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dramatica -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Empathic Design -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goldfire Innovator -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GroupSystems -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GrouputerNet -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IBank -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Idea Central -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Idea Management -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Idea Manager -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovation Workbench -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspiration -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jenni -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KJ Method -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lead User Analysis -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MaxThink -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meditation -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft PowerPoint -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft Word (Outlining) -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft Word (Thesaurus) -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MindManager -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MINDMAP -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MindMapper -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MORE -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OmniGraffle -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Osborns List -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paramind -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pin Cards -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plots Unlimited -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scenarios -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scriptware -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Thinking Hats -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storyboarding [iMenu, Others] -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
StoryBuilder -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sylvia Web BrainStormer -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ah ha Discovery Deck -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thoughtline -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trisolver4.net -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRIZ [ARIZ, Ideal Final Result, Others] -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
US Patent & Trade Office Website/Other -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visimap -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visual Concept -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visual Outliner -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weird Rules -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wiki [Any Type] -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WordPerfect (Thesaurus) -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yoga -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zaltman Metaphor Elicitation Technique – ZMET -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



SECTION F RD&E METRICS USED IN INDUSTRY

Section F consists of one single question. GGI asked this question in the 1998, 2000, 2002, and 2004 surveys. The results jumped off the page. It turned out that there are very few metrics that are commonly and widely used by R&D organizations. Nearly identical responses appeared all four times. The results of this 2007 survey will be contrasted to the 1998, 2000, 2002, and 2004 findings so first time participants in the 2004 survey will get the benefits of all four surveys. Survey participants wishing for more information should refer to the first baseline: February 2000 issue of CFO Magazine published by The Economist.

We are researching only aggregate “Corporate-Level” measures of R&D innovation and performance. Selected “lower level” metrics that occur in projects and functions and individual levels can be Corporate-Level if they are averaged or rolled-up across the organization such that they become aggregate measures of overall performance. Productivity measures [output/input] and averages [such as “average time-to-market”] are good examples of Corporate-Level metrics based on aggregate performance of lower-levels.

F1. Which of the following R&D metrics are "in use" at the company?: To qualify as “in use,” these metrics should: (1) be measured at least on an annual basis; (2) be visible to *all* members of the top management group as active ongoing tools; (3) be stored in a manner that numerous people in the organization could find them easily; and (4) have some reliability in that the method used to calculate them is consistent from year to year. Please be strict in applying this definition of “in use” when responding to the measures listed for consideration below. [Check All Boxes That Apply]

Revenue Measures

Current-year % sales due to new products released in the past N-years
 [aka: New Product Sales]

If used, what is N = year(s) (i.e., past 1, 2, 3, 4, 5 years)

- Current-year % sales due to total Non Recurring Engineering Billings
- Current-year % sales due to total technology sales
- Current-year % sales due to total technology licensing and/or royalty income
- Average First-Year Sales of new products
- Average First Two Years of Sales of new products
- Average First Three Years of Sales of new products
- Average First Four Years of Sales of new products
- Average First Five Years of Sales of new products

Profit Measures

Current-year % profits due to new products released in the past N-years
 [aka: New Product Profits]

If used, what is N = year(s) (i.e., past 1, 2, 3, 4, 5 years)

- Current-year % profits due to total Non Recurring Engineering Billings
- Current-year % profits due to total technology sales
- Current-year % profits due to total technology licensing and/or royalty income
- Average First-Year Profits of new products
- Average First Two Years of Profits of new products
- Average First Three Years of Profits of new products
- Average First Four Years of Profits of new products
- Average First Five Years of Profits of new products



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Throughput Measures [Assumes “Per Time Period,” Usually Per Quarter or Year]

- # of idea/concept screened/reviewed
- # of products in definition/planning/estimation stages
- # of products/projects approved but not started [inactive backlog]
- # of products/projects in active development [active backlog]
- # of new products released
- # of existing products actively supported/sustained
- # of products retired/obsoleted
- % of new ideas/concepts approved/rejected
- % of new products/projects approved/rejected
- % of new approved products/projects launched/stopped
- % of new approved products/projects successful/failures
- % of new launched products/projects successful/failures
- Average Time-To-Market

Capacity Measures

- R&D capacity target level [person-months or equivalent]
- % Over/under R&D capacity plan target level
- Total R&D Headcount
- % Increase/decrease in R&D headcount
- % Resources/investment dedicated to new product development
- % Resources/investment dedicated to sustaining existing products
- Staffing Ratios: Internal-To-Engineering staffing ratios [Any Type]
- Cross-Functional staffing ratios [Any Type]
- Average # production products supported per engineer or developer or scientist
- Average # active projects/ products per engineer or developer or scientist

Productivity Measures [Assumes “Per Time Period,” Usually Per Quarter or Year]

- ROI - Return On Innovation [Calculated using any method/procedure.]
- RDEI - Research & Development Effectiveness Index [Developed by PRTM]
- NPV Efficiency – New Product Sales NPV/Spending
- ROIE – Return On Infrastructure Employed
- RVG – Relative Value Of Growth
- Average Project ROI - Return On Investment or Average Project Payback
- Average Project NPV or Average Project IRR
- Average Project NPV Efficiency – Project Sales NPV/Project Cost
- Average sales per engineer or developer or scientist
- Average profits per engineer or developer or scientist
- Average products produced per engineer or developer or scientist
- Average parts produced per engineer or developer or scientist



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- Average drawings produced per engineer or developer or scientist
- Average lines of code produced per engineer or developer or scientist

- Average new products released per engineer or developer or scientist
- Average new product sales per engineer or developer or scientist
- Average new product profits per engineer or developer or scientist

- Average number prototypes built [per new product]
- Average first pass design success [per new product]

Product Portfolio Measures

- Value of Product Portfolio [Any Aggregate Measure]
- Value of Portfolio in Pipeline
- Value of Portfolio in Backlog [Not Yet In Pipeline]
- Risk of Product Portfolio [Any Aggregate Measure]
- Risk of Portfolio in Pipeline
- Risk of Portfolio in Backlog Not Yet In Pipeline]
- # “New To X” Products [X = The World, The Industry, The Market]
- Revenue \$ “New To X” Products [X = The World, The Industry, The Market]
- Profit \$ “New To X” Products [X = The World, The Industry, The Market]
- % Portfolio “New To X” [X = The World, The Industry, The Market]

Intellectual Property Portfolio Measures [Assumes “Per Time Period,” Usually Per Quarter or Year]

- Total patents filed/pending/awarded/rejected
- Average patents per development professional
- Total value of patents filed/pending/awarded

- Total Trademarks/Serviceemarks filed/pending/awarded [Any Combination]
- Total value of Trademarks/Serviceemarks filed/pending/awarded
- Total Copyrights filed/pending/awarded [Any Combination]
- Total value of Copyrights filed/pending/awarded

- Total licenses granted and/or acquired
- Total value of licenses granted and/or acquired

- Total grants received
- Total value of grant revenues received

- Total industry standards planned/pending/achieved

Investment Measures

- R&D spending as a % of sales
- [Managed as a composite number across the organization.]*
- Research spending as a % of sales
- [Research spending reported separate from Development.]*
- Process R&D spending as a % of sales
- [Process R&D spending reported separate from R&D.]*

- Average development cost per project/product
- Average capital cost per project/product
- Average cash expense cost per project/product



THE RESEARCH PERIOD WAS AUGUST 1, 2007 TO MARCH 3, 2008

! THE RESEARCH PERIOD IS NOW CLOSED !

PLEASE DIRECT QUESTIONS TO

**Mr. Ervin A. Kule
Manager, Market Research
Goldense Group, Inc.
1346 South Street
Needham, MA 02492**

781-444-5400 ext. 202

PLEASE SEND ELECTRONIC FILES BY EMAIL TO

eak@goldensegroupinc.com

PLEASE FAX ANY DOCUMENTS TO

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THE GGI MARKET RESEARCH TEAM IS ALSO AVAILABLE TO HELP

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!! THANK YOU FOR PARTICIPATING !!

**IN THE
2008 INNOVATION
PROCESSES, TOOLS, & TOP CORPORATE METRICS
SURVEY**

!! THANK YOU !!