2008 Product Development Survey
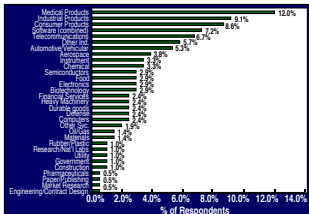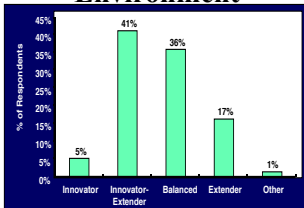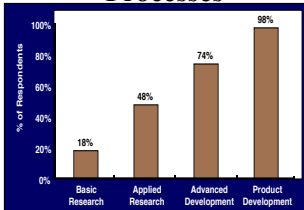# Findings & Conclusions

Sample of Findings
Respondent Profile: Industries Represented
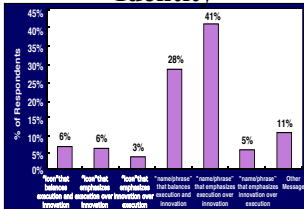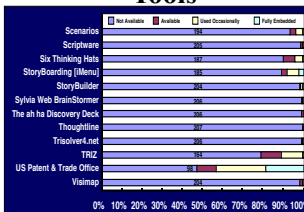

Innovation Environment

Innovation Processes

Innovation Identity

Innovation Tools

R&D Metrics Used In Industry

Tangible Innovation Techniques & Top Corporate Product Development Metrics

GGI's 2008 Product Development Metrics Survey is **primary research** that focuses on selected practical and tangible innovation practices, processes, and generally available tools to facilitate corporate creativity and innovativeness, including the practices of executive management in nurturing corporate innovation. The research also explored the most frequently used corporation-level measures for RD&E and includes a comparative analysis of the 2008 results to the results from GGI's four prior surveys of 2004, 2002, 2000 and 1998 enabling one to assess how measures have changed over the past decade.

This study was conducted between August 2007 and January 2008. The survey questionnaire was distributed via a physical mailing containing the questionnaire and email distributions with a link to download the questionnaire. Net total pieces distributed was 6314. There were 209 valid surveys received for a response rate of 3.1%, giving statistically robust results. Margin of error calculations are shown throughout the reports, where applicable. Three reports were produced. The Highlights Report has in-depth text of Observations and Analysis along with Key Findings; the Summary Report adds extensive Graphics while retaining all prose and bullet point text of the Highlights Report; the Results Report includes the entire Summary Report and adds five comparative cross-sections of the survey population: Large vs. Small Companies, Many vs. Few Employees, High Tech vs. Low Tech, Public vs. Private, and Process vs. Discrete Operations.

Innovation
Environment, Processes, Identity, Tools, & Metrics

These reports deliver Great Value to you and your company……

• Gain insights as to how companies posture themselves to be innovative, and to balance innovation with execution. Understand how training and investment do or do not align with stated direction and values.

• Understand the range of Basic Research, Applied Research, Advanced Development, and Product Development practices; and the differentiated versus commonized processes that are used to facilitate those activities.

• Learn how industry is using or not using 67 of 250 generally available tools and techniques specifically invented to foster corporate creativity and innovation-invention.

• Review the **top ranked metrics** used by the 209 companies that responded to this survey to **measure** the **overall performance of their R&D organization**. Compare 2008 results with those from past surveys in 2004, 2002, 2000 and 1998.

Benchmark your company against top North American companies.

Learn and adopt the leading practices to measure and help improve your product development performance, and……

Cull out your opportunities to generate greater innovation and performance.

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2008 Product Development Survey
Findings & Conclusions

Every two years since 1998, Goldense Group, Inc. [GGI] surveys industry on **product development practices and metrics topics of current interest**. Questionnaires are sent to a wide distribution of top-level product development professionals in industries ranging from industrial and medical products to aerospace, defense, electronics, software, and chemicals, in North America, Europe and Asia.

GGI's 2008 Product Development Metrics Survey is **primary research that focuses on five areas** where there is significant industry activity. Respondents completed a 10-page questionnaire covering their demographic information and the following five areas: (1) the overall innovation environment of a company, (2) the innovation processes used by companies, (3) the degree of innovativeness in the company's internal and external culture and branding, (4) the usage of 67 generally available tools believed to foster creativity and innovation, and (5) the current rankings of top corporate metrics used in RD&E with comparisons to the metrics usage from our past surveys in 2002, 2000 and 1998.

This research was conducted by distributing the questionnaires by a combination of e-mails and mailers, with a small number of handouts. Net total pieces distributed were 6314. There were **209 valid surveys received for a response rate of 3.1%**, giving statistically robust results. **Margin of error calculations are shown on graphs where applicable**. The 2008 survey was completed by respondents from August 2007 through January 2008 and was **published in May 2008**. Responses are held in the strictest confidence to encourage honest and full reporting of sensitive information.

Results of this ground breaking primary research are offered in **three reports having increasingly detailed views of survey** observations, analysis and key findings, with insights into new developments and trends. These reports are a text only **Highlights Report (MR41)**, a text plus a graphing of each question **Summary Report (MR42)**, and the **Results Report (MR44)** which is the full Summary Report plus five additional cross-sectional "cuts" of the 209 survey population.

DESCRIPTION OF THE 2007-2008 SURVEY QUESTIONNAIRE

GGI's 2007-2008 Metrics Survey contains six sections, each comprised of a number of questions.   The purpose of Section A is to be able to categorize the respondents into logical analysis groups. The remaining five sections are the focus of the 2007-2008 research.

Section A: Respondent Profile: The basic questions asked are title and functions performed of the person completing the survey, the type/scope of the reporting organization within the company, the company's industry or service, and places in the world the company does sales, R&D and manufacturing. Also asked are questions that categorize each company within the population of companies that responded to this survey. This provides the ability to do "cuts" of the entire survey population data into segments, such as public vs. private, smaller vs. larger sales, more vs. fewer employees, high tech vs. low tech, and process vs. repetitive/ discrete vs. job shop companies.

Section B: Innovation Environment: This section focuses on employee perceptions of the innovation environment in their workplace. Four areas are investigated: Strategy, Relative Emphasis, Relative Training, and Relative Investment. First, the respondent is asked for their perception of current business strategy that ranges from a new-to-the-world innovator to a company that specializes in being late to market with a better value equation. The last three questions seek relative responses over time to investigate perceived changes in Emphasis, Training, and Investment.

Section C: Innovation Processes: This section investigates the range of innovative activities performed by the company, ranging from exploratory Research to more the certain Product Development activities. Having identified the current range of innovation activities, respondents are then asked to categorize the degree of process documentation associated with the range of practiced innovation activities. Identification of the number of separately documented innovation processes is the outcome of this section.

Section D: Innovation Identity: This section investigates the means that companies use to give an "identity" to their product development process. Four areas are investigated: Message, Nomenclature, Branding, and Practices. The respondent is first asked for their perception as to whether the identity given to their product development process emphasizes creativity over execution, or vice-versa, or balances the two. Next, the respondent is asked if the identity of the process has changed in the past five years and how it changed. Third, the degree to which the company attempts to brand the product development process is investigated. Finally, the degree of formalization of innovative practices and activities is queried. Is innovation in the background, or are attempts to innovate required?

Section E: Innovation Tools: This section investigates the innovation tools and/or software that companies use during product development processes. GGI has identified 250 Innovation Tools through a secondary research process of which we believe approximately 67 are readily available to be accessed. These tools cover a wide range, spanning "self help," "group help," "structuring information," "sharing," "increasing domain knowledge," and other applications. Respondents are asked to identify which of these 67 tools are currently available to employees, and to what extent they are used. *GGI has no implied, actual, or any form of business interest or relationship with any tool providers listed.*

Section F: R&D Metrics Used In Industry: This section investigates the metrics companies use to measure their R&D process and overall business results. The same single question is asked as in GGI's 2004, 2002, 2000, and 1998 surveys. Identify the R&D metrics that are "in use" at your company. The four qualifications for "in use" are that they are measured at least annually, be visible to all members of top management as active/ongoing tools, numerous people in the organization have easy access to the results, and that there is consistency in the method used to calculate these metrics from year to year.

2008 Biennial Survey Of Industry
Published Reports For Product Development Practitioners

2008 RESEARCH REPORTS AVAILABLE

				*Hard Copy	*Corporate License
MR41: 2008 Metrics Survey **Highlights**[	[Text]	72 pages		$ 360.00	$ 360.00
MR42: 2008 Metrics Survey **Summary**	[Text & Graphics]	120 pages		$ 600.00	$ 600.00
MR44: 2008 Metrics Survey **Results**	[Text & Graphics]	TBD pages		*This Report Is Not Available Yet*	

MR44 includes five cross-sections of the survey population: Public vs. Private, Hi Tech vs. Lo Tech, Many vs. Few Employees, Large vs. Small Revenues, and Job Shop vs. Discrete vs. Repetitive vs. Process Operations.

* Hardcopy & Electronic Versions are available at GGI's website in The Wisdom iStore at www.goldensegroupinc.com.

THE WISDOM iSTORE

AUTHORS

Bradford L. Goldense, NPDP, CMfgE, CPIM, CCP, is Founder and CEO of Goldense Group, Inc. [GGI], a seventeen-year old Needham Massachusetts consulting and education firm concentrating in advanced business and technology management practices for line management functions. Mr. Goldense has consulted to over 200 of the Fortune 1000 and has worked on productivity improvement and automation projects in over 400 manufacturing locations in North and South America, Europe, and the Middle East. Abbott Laboratories, Bayer, S.C. Johnson, Ford, General Motors, John Deere, Phillips, Carrier, Molex, United Technologies, Bose, and Shure are representative among GGI's clients. Mr. Goldense is an internationally recognized expert on both rapid product development and R&D metrics. Brad has been an invited guest on Alexander Haig's World Business Review, and has appeared on PBS The Business & Technology Network, and on CNBC, and has authored or been quoted in over 150 articles in industry trade press. Brad is the past Worldwide President of the Society of Concurrent Product Development [SCPD], and a past member of the Board of Directors for the American Society of Engineering Management [ASME].

Ervin A. Kule Ervin A. Kule has ten years of experience spanning research and financial analysis and administrative management, to client relations and business development. He has worked in Europe and America for financial and service industries. Before joining GGI, Ervin was the General Manager for Maliotis Cutural Center in Brookline MA. There he produced and coordinated conferences, seminars and other events for industries including pharmaceutical, biotechnology, and telecommunications. Mr. Kule worked across many management tiers including founders of companies, Directors, CEOs, VPs, and top-level managers. In Greece, Ervin was the cofounder and a partner for five years of a real estate company. Prior to that he worked as an international financial analyst for an investment company affiliated with Citibank. Mr. Kule holds a BA from the University of Athens. He came to the US with a scholarship to study eastern versus western religious philosophies at Holy Cross and graduated with a Masters in Theology. Mr. Kule has largely completed the requirements for a Masters In Business Administration from the University of Athens Graduate Economics and Business School.

Paul A. Szulewski, PMP, Paul A. Szulewski has held technical and management positions in R&D, software and hardware engineering, and manufacturing operations for over 30 years. He specializes in project planning, measurement, assessment, compliance, process definition, and process improvement. He has pioneered research in software metrics, and evaluation methods for products, processes, documentation, and organizations. Prior industry positions include: Senior Manager for Product Quality for the Defense Business Unit Operations Group at Mercury Computer Systems for 8 years; Member of the Technical Staff - Software Engineering at the Charles Stark Draper Laboratory for nearly 20 years; and software developer – operating systems with Sanders Associates (now BAE Systems) for 5 years. Paul holds a BS degree in Mathematics from the University of Massachusetts, and a MS degree in Electrical and Computer Engineering from Oregon State University. Paul is a certified Project Management Professional (PMP), a certified ISO 9001-2000 Lead Auditor, and a founding member of the National Software Council (NSC), now known as the Center for National Software Studies (CNSS). Paul has been a reviewer for the IEEE Software Journal.

NPD INSIGHT

The Product Development Metrics Survey reports for 2008 describe the range and differences in practices across a number of aspects of "tangible" innovation processes, practices, and tools; and ranks the metrics used to measure R&D in 2008 with comparisons to prior research conducted by GGI over the past decade.

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