



GGI 2002 Product Development Metrics Survey Description

*North American Practices In
Pipeline Loading, Resource
Allocation, Cross-Functional
Balancing, & The Tools Involved*

*This Promotional Piece
Contains The
Front Cover
And A
Description
Of The
“2002 GGI Product
Development Metrics
Survey.”*

**Prepared
March 28, 2002**

Goldense Group, Inc. 1346 South Street
Goldense Group, Inc. P. O. Box 350
www.goldensgroupinc.com

Needham, MA 02492
Dedham, MA 02027

Phone 781-444-5400
Fax 781-444-5475

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 2

Table of Contents: **Description**

<i>TABLE OF CONTENTS</i>	<i>PAGE</i>
SURVEY DESCRIPTION	3
SURVEY DEMOGRAPHICS	5
REPORTS PUBLISHED BY GGI	8
• Comparison Of The Three Reports	
• MR 21 Highlights	
• MR 22 Summary	
• MR 24 Results	
SELECTED EXAMPLES OF KEY FINDINGS	13



Survey Description

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 4

Survey Description

Focus

Resource & Capacity Management Practices & Metrics

Topic Areas

The questionnaire was designed to secure the following information in five areas:

- The respondent's profile (location in the company structure, title, etc.)
- Loading The RD&E Capacity Pipeline
- Providing Capacity For RD&E Activities
- Balancing Cross-Functional Resources
- Using Systems, Tools, & Metrics To Manage Capacity
- RD&E Metrics Used In Industry

Response Rate

Approximately 9,677 questionnaires were distributed and 84 were returned for a response rate of 0.9%.

Respondent Profile

Over 50% of the responding companies came from the automotive, chemical, electronics, or industrial and medical products industries.

61% of respondent companies had sales revenues less than \$250 million and had less than 1000 employees.

93% of the respondents sell, develop and manufacture in North America.

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 5

Survey Description - GGI Survey Announcement

GGI RapidNews Volume 3 Issue 5, June 7, 2002

2002 RD&E Survey - Resource & Capacity Management: This is one of the few occasions when we send an attachment with RapidNews. Every other year, on even-numbered years, GGI conducts a survey on Product Development Metrics. Attached is GGI's 2002 Product Development Metrics Survey covering R&D, RD&E, and Product Development. Because of the attachment, we have shortened the length of RapidNews this month.

We would appreciate your time to take a moment and look at our biennial survey. Even if you elect not to complete the survey, the knowledge captured by the phrasing of the questions may be useful to you. We would certainly appreciate your participation however and we will make it worth your time. Completed surveys are due back to GGI by August 12, 2002.

Resource & Capacity Management is one of the hottest subjects in R&D and Product Development today. GGI explores 5 Subjects relating to Resource & Capacity Management.

1. Loading The RD&E Capacity Pipeline: The methods companies use to select projects and establish backlog and priorities.
2. Providing Capacity For RD&E Activities: The approaches companies take to determine outsourcing requirements and the allocation of resources to sustaining activities.
3. Balancing Cross-Functional Resources: The resource ratios companies use between functional disciplines within RD&E, and the ratios between RD&E and cross-functional disciplines.
4. Using Systems, Tools, & Metrics To Manage Capacity: The behind-the-scenes infrastructure companies have put in place to enable resource and capacity planning and management.
5. RD&E Metrics Used In Industry: The metrics and measures companies use to plan, track, and manage resource and capacity allocation activities.

Those who fully complete the questionnaire within the allotted time will receive a free copy of the survey results in November 2002. The version you will receive will analyze the survey population as a whole, contain analysis and graphics, and will average 40-50 pages in length as we have done in prior years. The content of this report will make it worth your time. What you will receive will be far more than simple highlights or a few page executive summary. Be assured, all company information is held strictly confidential.

Finally, the attachment you have received is a .pdf document. We have found most people like to print it, complete it, and fax or mail it. The survey is available in many file formats, including an interactive MSOffice 2000, 97, or 6.0/95 and others. All 6 survey file format choices may be found at <http://www.goldensegroupinc.com/biannual.shtml>.



Survey Demographics

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 7

Survey Demographics

12-Pages	Study conducted using fairly large questionnaire
10,535	4853 mailer, 5227 e-mail pieces and 455 website downloads circulated in total
858	288 mailer and 570 e-mail pieces returned undeliverable
9,677	Net pieces circulated
84	Total responses
83	Analyzable records -- 1 duplicate response eliminated
0.9%	Response rate
Self Selected Sample	Statistical term for this advanced group of companies practicing R&D metrics and measurement



Reports Published By GGI

Goldense Group, Inc. 1346 South Street
Goldense Group, Inc. P. O. Box 350
www.goldensgroupinc.com

Needham, MA 02492
Dedham, MA 02027

Phone 781-444-5400
Fax 781-444-5475

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 9

Reports Published By GGI: Comparison Of The Three Reports

STRUCTURE OF GGI'S REPORTS		THE THREE REPORTS		
		MR 21	MR 22	MR 24
COMPOSITE	<i>Survey Population Is Analyzed As A Whole</i>	text	text	text
KEY FINDINGS				
SECTIONS	A. Respondent Profile B. Loading The RD&E Capacity Pipeline C. Providing Capacity For RD&E Activities D. Balancing Cross-Functional Resources E. Using Systems, Tools, & Metrics To Manage Capacity F. R&D Metrics Used In Industry	text	text & graphic	text & graphic
SEGMENT	<i>Survey Population Is Segmented And Compared</i>			text
KEY FINDINGS				
SECTIONS	Public vs. Private Companies Smaller vs. Larger Companies Process vs. Repetitive/Discrete vs. Job Shop Operations Higher Technology vs. Lower Technology Companies More vs. Fewer Employees			text & graphic

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 10

Reports Published By GGI: Table of Contents - MR21 "Highlights"

This document contains **privileged and/or confidential information** and is intended only for the use of the addressee. Any reproduction of this document without the express written consent of Goldense Group, Inc. is prohibited.

Copyright © 2003
Goldense Group, Inc.
All Rights Reserved.

ISBN 1-932468-06-4

**GGI's
MARKET RESEARCH
PRODUCTS
ARE EASY TO
FOLLOW.**

**EACH SECTION
HAS THE SAME
STRUCTURE.**

TABLE OF CONTENTS	PAGE
I. KEY FINDINGS	3
II. COMPOSITE RESULTS	<i>Survey Population Is Analyzed As A Whole</i>
	<i>Each Section Is Organized</i>
A. Respondent Profile	8
B. Loading The RD&E Capacity Pipeline	The Survey Question 18
C. Providing Capacity For RD&E Activities	Observations 27
D. Balancing Cross-Functional Resources	Analysis 32
E. Using Systems, Tools & Metrics To Manage Capacity	46
F. R&D Metrics Used In Industry	55
Authors	64

Goldense Group, Inc. 1346 South Street Needham, MA 02492
Goldense Group, Inc. P. O. Box 350 Dedham, MA 02027
www.goldensgroupinc.com

Phone 781-444-5400
Fax 781-444-5475

Copyright ©2000-2002 Goldense Group, Inc. All Rights Reserved.

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 11

Reports Published By GGI: Table of Contents - MR 22 "Summary"

This document contains **privileged and/or confidential information** and is intended only for the use of the addressee. Any reproduction of this document without the express written consent of Goldense Group, Inc. is prohibited.

Copyright © 2003
Goldense Group, Inc.
All Rights Reserved.

ISBN 1-932468-07-2

**GGI's
MARKET RESEARCH
PRODUCTS
ARE EASY TO
FOLLOW.**

**EACH SECTION
HAS THE SAME
STRUCTURE.**

<i>TABLE OF CONTENTS</i>	<i>PAGE</i>
I. KEY FINDINGS	3
II. COMPOSITE RESULTS	<i>Survey Population Is Analyzed As A Whole</i>
	<i>Each Section Is Organized</i>
A. Respondent Profile	8
B. Loading The RD&E Capacity Pipeline	The Survey Question 26
C. Providing Capacity For RD&E Activities	Observations 47
D. Balancing Cross-Functional Resources	Analysis 56
E. Using Systems, Tools & Metrics To Manage Capacity	Presentation Slides 85
F. R&D Metrics Used In Industry	102
Authors	115

Goldense Group, Inc. 1346 South Street Needham, MA 02492
Goldense Group, Inc. P. O. Box 350 Dedham, MA 02027
www.goldensgroupinc.com

Phone 781-444-5400
Fax 781-444-5475

Copyright ©2000-2002 Goldense Group, Inc. All Rights Reserved.

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 12

Reports Published By GGI: Table of Contents - MR 24 "Results"

This document contains **privileged and/or confidential information** and is intended only for the use of the addressee. Any reproduction of this document without the express written consent of Goldense Group, Inc. is prohibited.

Copyright © 2003
Goldense Group, Inc.
All Rights Reserved.

ISBN 1-932468-08-0

**GGI's
MARKET RESEARCH
PRODUCTS
ARE EASY TO
FOLLOW.**

**EACH SECTION
HAS THE SAME
STRUCTURE.**

<i>TABLE OF CONTENTS</i>	<i>PAGE</i>
I. KEY FINDINGS	3
II. COMPOSITE RESULTS <i>Survey Population Is Analyzed As A Whole</i>	
	<i>Each Section Is Organized</i>
A. Respondent Profile	13
B. Loading The RD&E Capacity Pipeline	31
C. Providing Capacity For RD&E Activities	The Survey Question Observations 52
D. Balancing Cross-Functional Resources	Analysis 61
E. Using Systems, Tools & Metrics To Manage Capacity	Presentation Slides 90
F. R&D Metrics Used In Industry	107
III. SEGMENT RESULTS <i>Survey Population Is Segmented And Compared</i>	
Public vs. Private Companies	Capacity Pipeline Loading 120
Smaller vs. Larger Companies	Providing Capacity for RD&E 142
Process vs. Repetitive/Discrete vs. Job Shop Operations	Cross-Functional Resources 162
Higher Technology vs. Lower Technology Companies	Managing Capacity 178
More vs. Fewer Employees	R&D Metrics Used 202
Authors	222

Goldense Group, Inc. 1346 South Street Needham, MA 02492
Goldense Group, Inc. P. O. Box 350 Dedham, MA 02027
www.goldensgroupinc.com

Phone 781-444-5400
Fax 781-444-5475

Copyright ©2000-2002 Goldense Group, Inc. All Rights Reserved.



Selected Examples Of Key Findings

GGI 2002 PRODUCT DEVELOPMENT METRICS SURVEY

2002GGI - DESCRIPTION v4 - 14

Selected Examples Of Key Findings



A significant majority of respondent companies are now following a rigorous project/product selection process. 80% of the firms used a 2-Step or 2.5-Step methodology.

Almost everyone is contracting out some of its engineering work. 90% of the respondents report that practice, but of that total 82% outsource less than 16% of the workload.

On average, development professionals in technical disciplines spend two-thirds of their time on new product development and one-third on sustaining engineering. Cross-functional development professionals spend one-third of their time on new product development and two-thirds on sustaining engineering.

The most common system used to manage capacity is still the spreadsheet as reported by 29% of respondents, with no underlying project management system. Stand-alone tools are still the most common.

END