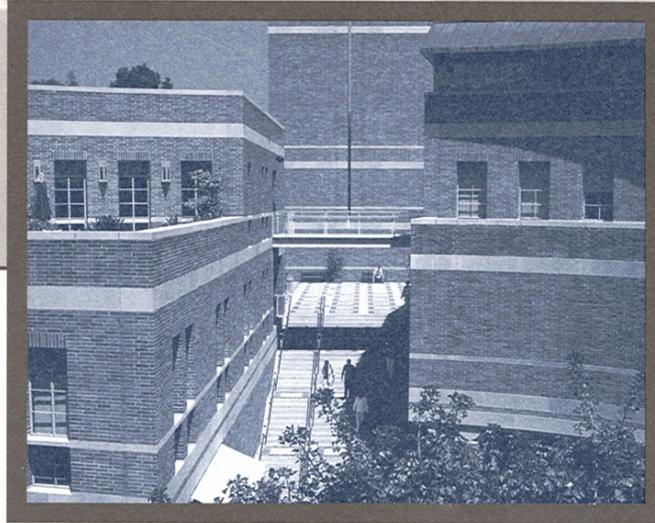


**UCLAAnderson**  
School of Management



**IT RESEARCH AND ANALYSIS SERVICES:  
SURVEYING THEIR USE AND USEFULNESS**

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## **IT Research and Analysis Services: Surveying their Use and Usefulness**

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May 1, 2002

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## ABSTRACT

How do firms keep abreast of new waves of innovations with information technology (IT), such as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), and Web Services, that sweep across their industries? Seeking help, many now subscribe to services provided by IT research and analysis (R&A) firms such as Gartner Group and Forrester Research. But how do these subscribers make use of IT R&A services, and in what contexts are the services most useful? Additionally, why do some firms choose not to subscribe to these services? In this paper we report on a small-scale survey undertaken in the fall of 2001, which addresses these questions. We find that for those using IT R&A services, the usefulness of these services is greater in the earlier stages of their own innovation with IT. We also find that subscribers may be differentiated into proactive, reactive, and situational users. Proactive users find their IT R&A services consistently more useful and the benefits most clearly worth the cost. Non-subscribers report that they cannot justify the expenditure. Whether they are misjudging the benefits they might receive is an open question.

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## INTRODUCTION

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How do firms that must innovate with new applications of information technology (IT) inform themselves about changes in their technological environments? How do they keep abreast of new waves of innovations that sweep across their industries, presenting them with both opportunities and challenges? What enables firms to comprehend innovations such as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), and Web Services and to determine whether and when to adopt and implement them? Clearly, firms that would innovate must expend some effort and resources on their IT environmental scanning. More than simple awareness of new IT is needed, as one manager has noted:

“It’s easy to have a modest awareness or understanding of what’s going on. But to have an in-depth, detailed understanding and to know what’s important for your business involves more than just skimming press releases and articles” (Dennis Benner, CIO at Fluor Corp, Aliso Viejo, CA – quoted in Violino, 1999).

In a world where information is increasingly available over the Internet, some might feel that it should be relatively easy for companies to get the information needed for such an “in-depth, detailed understanding”. This is not the case, however. First, the relevant information is not necessarily easy to locate and distinguish from the irrelevant information. Second, the relevant information often requires interpretation. This itself is no small task - “The volume of work that needs to be done is too much for us to handle” (Mike O’Dell, IS Director at Wacker Silicones Corp. - quoted in Violino, 1999).

It is in this context that IT Research and Analysis (R&A) firms have arisen and grown to provide IT market research information and knowledgeable advice to subscribers. The IT R&A business started around 1977, when Gideon Gartner founded the Gartner Group, still today the leading provider. Gartner currently positions itself as offering a “source of strategic information technology advice” (Gartner 2000 Annual Report). Gartner and its competitors thus search for and gather the relevant, detailed information on changes in IT and on new uses of IT, and on competing vendors in the IT marketplace. Through analysis, they then attempt to turn this information into knowledgeable advice that will be useful to their customers.<sup>1</sup>

How useful then are IT R&A services to those firms that buy them? And how are these services actually used? In this paper, we report the results of a small-scale survey that sought to address these questions. With regard to usefulness, in the context of our own research interests (Swanson and Ramiller, 1997; Swanson, 2001), we were particularly interested to know how the firms’ innovation processes might be supported. Are IT R&A services useful in comprehending new IT and its applications? Are they useful in the adoption process? Do they

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<sup>1</sup> IT R&A firms may be positioned relative to the broader market research industry. Much of traditional market research focuses on consumers and is marketed to the providers of consumer products and services. IT R&A firms, in contrast, address IT primarily in the business-to-business marketplace and market their services primarily to business customers of IT products and services.

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support the implementation process? With regard to use, we were curious to know whether firms organized themselves to be proactive users of the services received, or whether their use tended to be reactive or situational. What approach do firms take in seeking to make use of IT R&A services? Lastly, does the usefulness of IT R&A services vary according to the use approach taken?

## **UNDERTAKING A SURVEY**

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With these questions in mind, in the summer of 2001 we initiated a survey to assess why and how a company uses IT R&A services, or not. We used our contacts with local members of the Information Systems Associates Program at UCLA, as well as alumni of the Anderson Graduate School of Management at UCLA, to identify and solicit participation from CIOs and other IT managers of California-based companies. We did not use a random sampling process, but sought simply to obtain a heterogeneous sample of California enterprises.

Responses were received from the CIO or other executive responsible for the purchase of IT R&A services. Respondents were broken into two categories: those using IT R&A services, and those that are not. For those using IT R&A services, we asked them to report on the reasons they find these services useful, as well as certain characteristics of their process of use. For those not using IT R&A services, we asked a number of questions to provide insight into the reasons for their non-use.

The questionnaire itself was primarily Web-based in its administration, and was structured into four parts. The first three parts addressed those using IT R&A services, with Part One asking questions about the usefulness of the services, Part Two asking questions about characteristic use of the services, and Part Three asking questions about the IT R&A service provider and specific services used, as well as the amount of the IT budget spent on those services. Part Four of the questionnaire was directed to those not using IT R&A services.

The questionnaire was pre-tested on a small sample of firms to assure clarity and ease of completion, as well as to ensure that the Internet-based online survey technique was operating effectively. Once the effectiveness of the instrument and data gathering technique was established, the questionnaire was distributed via email to our contacts at the remaining firms identified.<sup>2</sup> A total of 371 firms were solicited, and 88 responses were received, for a response rate of 24%.

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<sup>2</sup> The email solicitation included the questionnaire as an attachment, but also provided a link to the Web site from which the survey could be completed online. The vast majority of our respondents completed the questionnaire online.

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## FINDINGS

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Among our 88 respondents, 65 (74%) reported that they were users of IT R&A services and 23 (26%) indicated that they were non-users.<sup>3</sup> We report first our findings from the IT R&A service users. To provide background for these findings, we include a sketch of the major service providers, which, in addition to Gartner, include Forrester Research, Meta Group, Giga Group, and International Data Corporation (IDC). From Table 1, we see that in terms of both client base and revenue generated from that base, Gartner is now over five times the size of its closest competitor, Forrester Research.

Firm	2000 Revenues \$ million	Forecasted 2001 Revenues \$ million	Clients	Analysts
Gartner	859	950	10,000	700
Forrester	157	165	1,952	207
Meta	119	119	3,000	213
Giga	68	71	1,300	106
IDC	N/a	N/a	N/a	600

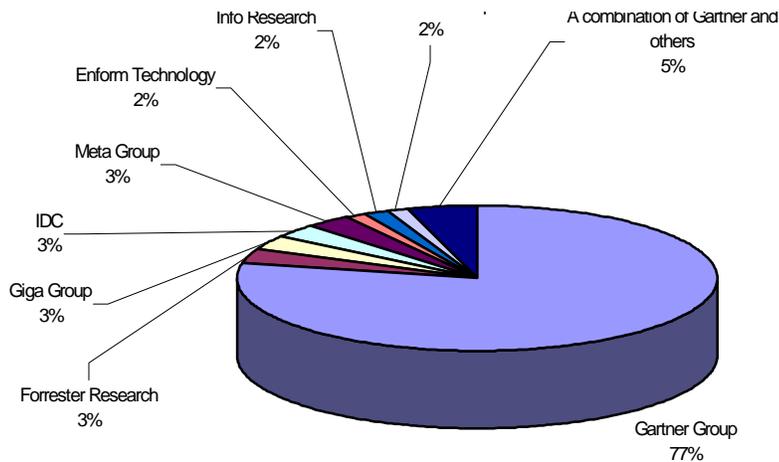
**Table 1: Major IT R&A firms** (Source: annual reports)

## Services Used

In our survey, we asked our respondents which IT R&A service providers they were using. Consistent with its dominant position in the industry, we found that the Gartner Group was by far the choice of our respondents.

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<sup>3</sup> These proportions are not necessarily representative of the broader population. Given our survey approach, non-users are probably under-represented.



**Chart 1: IT R&A firms used**

Each of the larger firms has four principal modes of providing service to clients: 1) research reports, written documents containing the research and analysis, 2) direct analyst interaction with the client, usually over the telephone, 3) events held by the firms for attendance by clients, and 4) specific consulting projects where a client hires the IT research and analysis firm to address a particular topic.

In our survey, we asked which of these four service offerings, or any others, the respondent was using. Multiple responses were allowed. We find that 97% of our respondents use research reports, clearly the primary form of receiving research and analysis. Attending events (74%) and talking directly with analysts (69%) were the next most prevalent mode of interaction.<sup>4</sup> A sizeable minority (42%) of our respondents reported that they hired IT R&A firms for specific consulting projects.

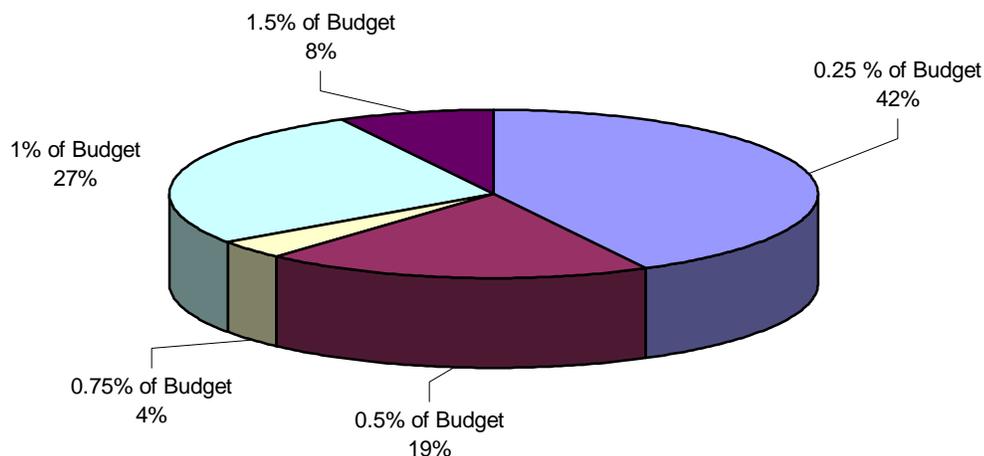
Significantly, the larger firms have been turning to consulting as a way not only to distinguish themselves from their competitors, but also as a way to generate new revenue. As Table 2 shows, the top three firms each generate approximately a quarter of their annual revenue from consulting.

<sup>4</sup> Paul (2001) suggests that the value of IT R&A services is not so much in the research reports provided, but in the one-on-one relationship which can be established with a knowledgeable analyst. The purchase of the reports serves as the “price of admission” for the latter.

Firm	Research	Consulting	Other
Gartner	60%	25%	15%
Forrester Research	76%	24%	-
Meta Group	72%	28%	-
Giga	90%	10%	-
IDC	95%	5%	-

**Table 2: Services of major IT R&A firms** (Source: annual reports)

One recent survey of 200 CIOs conducted by *CIO* and *Darwin* indicated that the average company responding spent over \$500,000 on IT R&A firms (Paul, 2001), while another reports that companies spend “6% of their IT budget on research and analysis services” (Outsell 2000). We asked our own survey respondents the amount of their IT budget spent on IT R&A firms. Somewhat surprisingly, we find that a significant number (42%) spend only ¼ of one percent of their budget on such services. Few (8%) spend more than one percent.<sup>5</sup> These lower numbers may reflect in part the economic downturn occurring at the time of the survey, when spending on IT itself was being reduced, particularly for non-core IT services such as research and analysis (see, e.g., Konicki, 2001). Still, these differences are striking.



**Chart 2: Spending on IT R&A services**

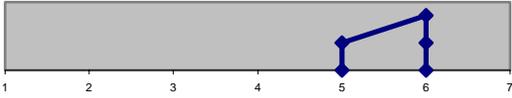
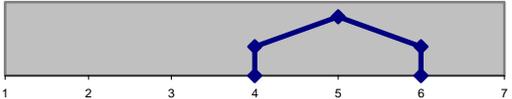
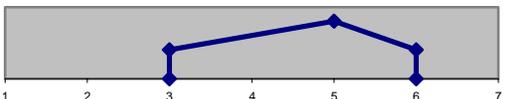
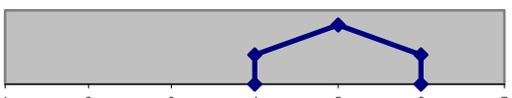
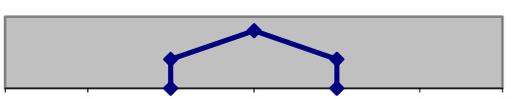
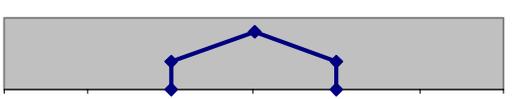
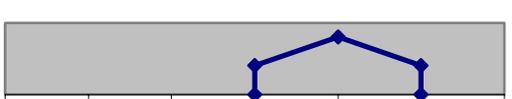
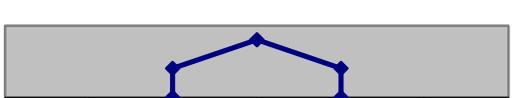
<sup>5</sup> These percentages reflect only 26 responses among the 65 users of IT R&A services. However, we have no reason to believe that the non-respondents might differ in their budgetary spending.

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## Usefulness of IT R&A Services

Part I of our survey addressed the usefulness of IT R&A services to those firms using them. We presented our respondents with a series of nine statements and asked them to agree or disagree with each on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). The nine items were chosen to probe the usefulness of IT R&A services for innovating with IT. Three of the items (Q1, Q3, Q5) probed usefulness for innovation comprehension; three (Q4, Q7, Q8) probed usefulness for adoption; two (Q2, Q6) probed usefulness for implementation; and one (Q9) probed usefulness for ongoing assimilation. Results are shown in Table 3 below.

From Table 3, we see that our respondents find IT R&A services most useful for innovation comprehension: monitoring trends, learning about new IT innovations, and identifying emergent IT standards. With regard to adoption, our respondents find the services useful for formulating and choosing a new IT strategy, but somewhat less useful for deciding upon new IT investments and determining readiness to adopt new IT. With regard to implementation, they find the services useful for choosing among alternative vendors, but less useful for providing IT implementation guidance. They find the services still less useful for assimilation: supporting existing IT projects. Thus, on the whole, consistent with our expectations, our respondents find IT R&A services most useful for the earlier aspects of innovating with IT.

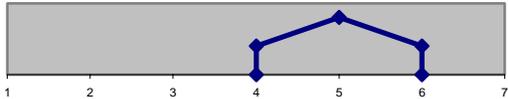
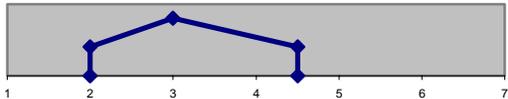
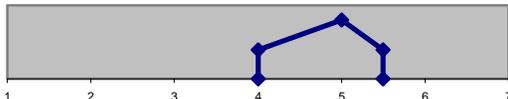
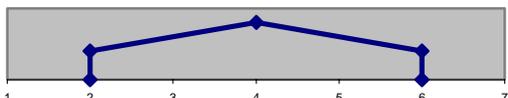
We find our IT research and analysis services useful for:	Mean	Std. Deviation	Quartile distribution
Q1: Monitoring trends	5.52	1.29	
Q3: Learning about new IT innovations	4.92	1.48	
Q5: Identifying emergent IT standards	4.74	1.57	
Q7: Formulating and choosing a new IT strategy	4.66	1.50	
Q4: Deciding upon new IT investments	4.38	1.34	
Q8: Determining our readiness to adopt new IT	4.00	1.38	
Q2: Choosing among alternative vendors	4.98	1.43	
Q6: Providing IT implementation guidance	3.69	1.41	
Q9: Supporting existing IT projects	3.72	1.52	

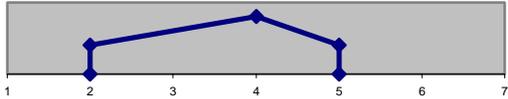
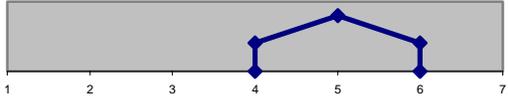
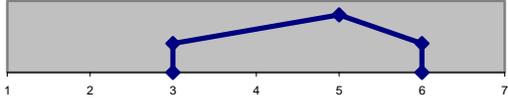
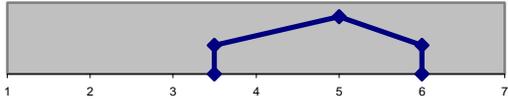
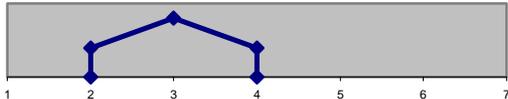
**Table 3: Usefulness of IT R&A Services**

## Use of IT R&A Services

Part II of the survey asked recipients to characterize their use of IT R&A services. As we did with usefulness, we presented respondents with a series of nine statements and asked them to agree or disagree with each on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). In constructing the nine items, we were guided by literature suggesting that environmental scanning by firms differs in its level of sophistication. Scanning may be: 1. *primitive* – where no specific effort is put forth, 2. *situational* – where there is an awareness of the need, but there is no formal system in place to perform the task, 3. *reactive* – where there are unplanned, unstructured activities in support of the task, and 4. *proactive* – where there are rigorous, intensive practices to perform the task (Jain 1984). We chose eight items to span these differences in sophistication. We included an additional item (Q6) that addressed the net benefit of using IT R&A services.

The results, shown in Table 4, indicate that our respondents are relatively diverse in their use of IT R&A services. Still, there is some agreement that usage tends to be ad hoc and sporadic (Q1) and involves skimming of reports more than in-depth studies (Q3). Evidently, this usage is not wholly superficial, however, as there is also agreement that use of IT R&A services provides a clear benefit worth the cost (Q6). This suggests that even cursory use of IT R&A services may be considered valuable enough to warrant the expenditure.

Our use of IT Research and Analysis services:	Mean	Std. Deviation	Quartile distribution
Q1: Tends to be ad hoc and sporadic	4.78	1.55	
Q2: Occurs as part of an established planning process	3.28	1.47	
Q3: Involves skimming of reports more than in-depth studies	4.54	1.30	
Q4: Is focused among some of our staff as part of their jobs	3.83	1.88	

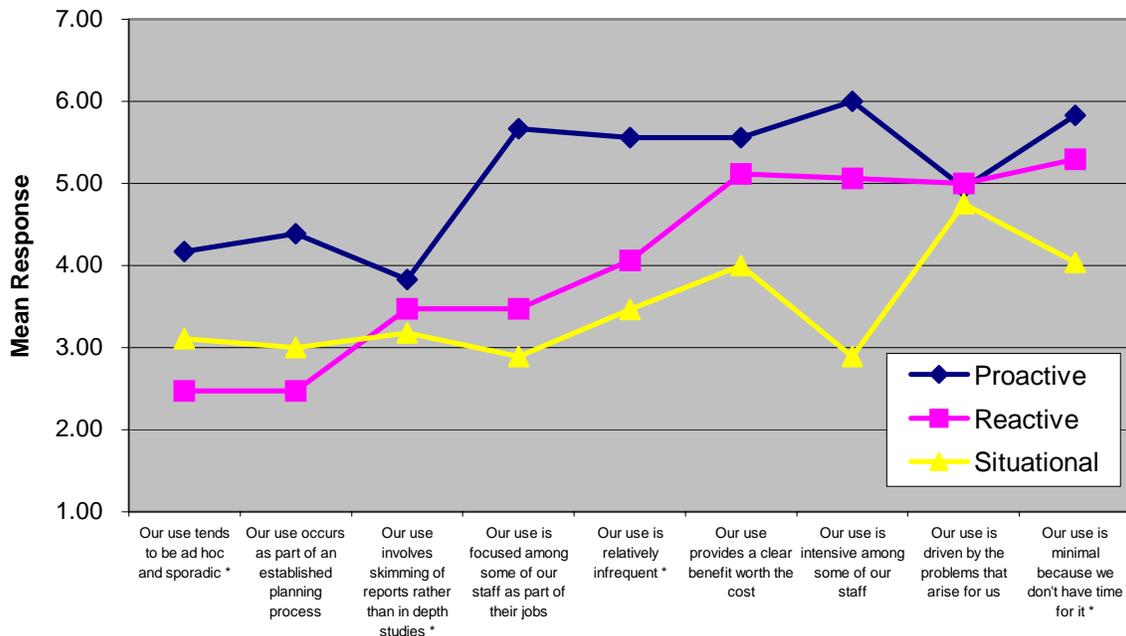
Our use of IT Research and Analysis services:	Mean	Std. Deviation	Quartile distribution
Q5: Is relatively infrequent	3.83	1.56	
Q6: Provides a clear benefit worth the cost	4.73	1.31	
Q7: Is intensive among some of our staff	4.34	1.73	
Q8: Is driven by the problems that arise for us	4.83	1.65	
Q9: Is minimal because we don't have the time for it	3.17	1.61	

**Table 4: Use of IT R&A Services**

## Patterns of Use and Usefulness

We next looked for patterns of use and usefulness. Recalling that firms should differ in the sophistication of their use of IT R&A services, as described above, we first undertook a cluster analysis of our respondents. We looked to classify them into three clusters corresponding roughly to situational, reactive, and proactive use (primitive use was considered not represented among our respondents).

Clustering was performed using three separate techniques, Ward, Within-group linkage, and Between-group linkage, as different methods have been shown to have different outcomes (Aldenderfer, 1984). Two methods (Ward and Within-group) showed substantial correlation, providing evidence that a 3-cluster solution is appropriate. Chart 3 shows the mean responses on each *use* item for each of the three clusters using the Ward method of clustering. From a Tukey posthoc analysis, the three clusters showed significant differences among them on 7 of the 9 items. We interpreted these differences as consistent with clusters corresponding to situational use (28 respondents), reactive use (17 respondents), and proactive use (18 respondents).<sup>6</sup>



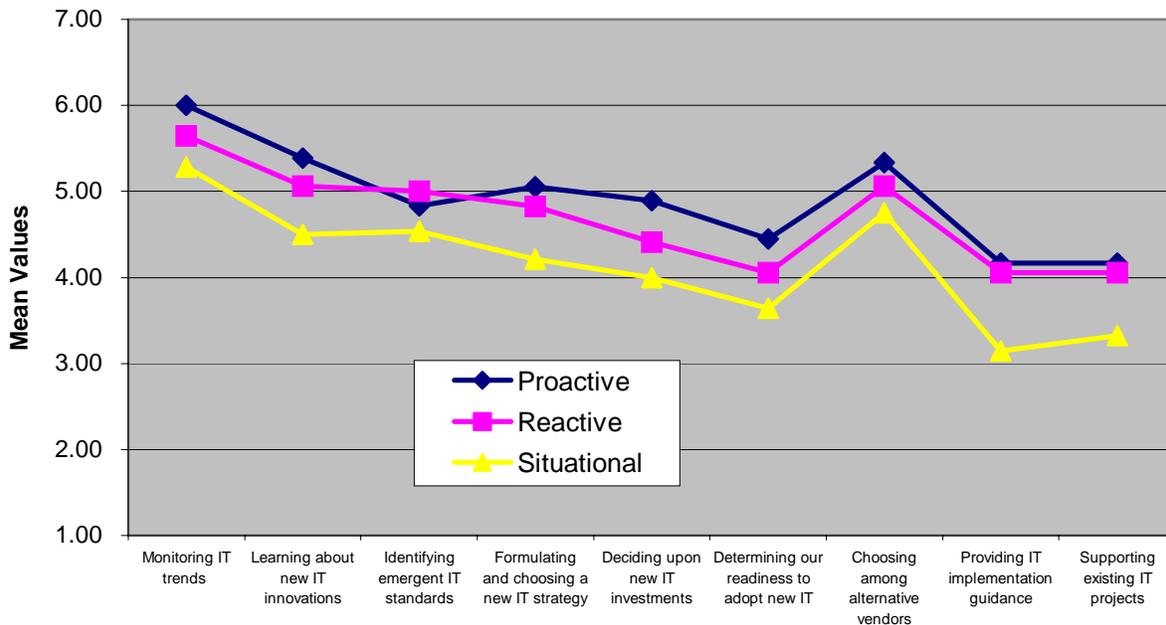
(items with a \* are reverse coded)

**Chart 3: Clusters of use**

<sup>6</sup> Two respondents using IT R&A services are not included in this analysis, as they did not respond to all of the use questions.

From Chart 3, we see that “proactive” companies report that their use of IT R&A services is intensive among certain staff, and that use is more likely to occur as part of an established planning process. In contrast, “situational”-use companies report that their use is relatively less frequent and not intensive among certain staff, and that benefits are less clearly worth the cost. The third cluster, “reactive” companies, lies somewhere between the proactive and situational, as might be expected. When compared to proactive companies, these firms report use as being more ad hoc and sporadic, and as occurring less as a part of an established planning process. They nevertheless report that use provides a clear benefit worth the cost.

Using the same three clusters, we next examined the mean responses to our questions on usefulness of IT R&A services. Our conjecture was that usefulness might differ according to use cluster. Chart 4 presents the results. The pattern is seen to be much the same for each cluster. The overall downward slope reflects the left-to-right ordering of the nine usefulness items according to their presumed association with stages of the innovation process as described above. Across the stages, there are no apparent differences in the overall pattern between clusters. IT R&A services are consistently more useful in the earlier stages of innovation<sup>7</sup>.



**Chart 4: Usefulness by use cluster**

However, from Chart 4, IT R&A services also appear at first glance to be consistently more useful across the stages for proactive users than for situational users, with reactive users in between. We examined these apparent differences statistically, employing both paired-samples

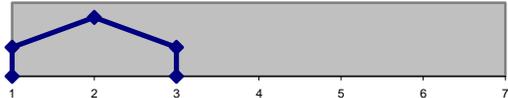
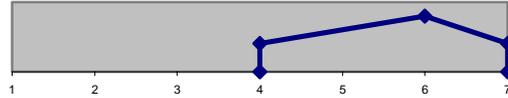
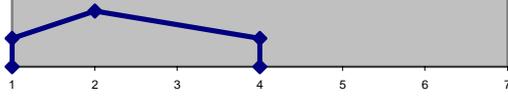
<sup>7</sup> For each of the three groups, an independent samples t-test finds a significant difference in means between the items at the left and right ends of this chart, reflecting the downward slope.

t-tests, and repeated measures ANOVA. The paired-samples t-tests found the differences to be significant<sup>8</sup>, and the repeated measures ANOVA found that the proactive users were significantly different from the other users<sup>9</sup>. Thus, we find that proactive use of IT R&A services is on the whole associated with greater usefulness of these services to the client.

## Non-users

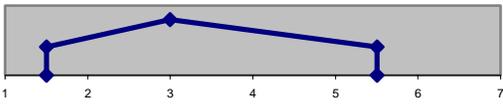
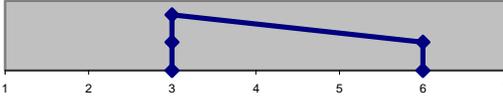
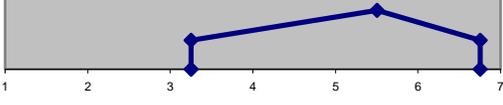
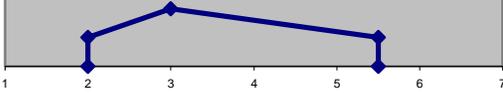
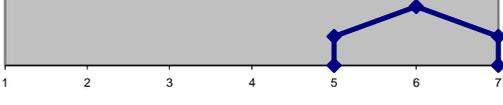
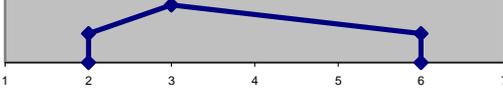
Our survey also addressed non-users of IT R&A services, a minority (23, 26%) of our respondents. We asked a series of nine questions designed to tap into the reasons for such non-use. We presented our respondents with a series of nine statements and asked them to agree or disagree with each on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). Table 5 summarizes the results. Of note is that our respondents concur in their disagreement with the statement that “new IT is not so important to our industry” (Q1) and with the statement that “we don’t do much IT planning” (Q3). This appears to eliminate one simple explanation for non-use: that the firms have no need for such services.

Answers to three other questions offer insight into the reasons for non-use. Non-user respondents most strongly agreed that they can’t justify such services (Q8), and also had substantial agreement that the price for these services is too high (Q2). Further, a significant fraction felt that they could get the same information from other sources (Q6).

We don’t engage an IT Research and Analysis firm because:	Mean	Std. Deviation	Quartile distribution
Q1: New IT is not so important to our industry	2.45	1.76	
Q2: The price for these services is too high	5.33	1.68	
Q3: We don't do much IT planning	2.43	1.69	

<sup>8</sup> We employed a “case-control” approach. Each of three tests compared nine cases representing one cluster against nine cases representing another “control” cluster. Each test confirmed a significant difference.

<sup>9</sup> The repeated measures ANOVA showed that proactive users were statistically different from both reactive and situational users (alpha = 0.5), and that reactive users were different from situational users (alpha = 0.1).

We don't engage an IT Research and Analysis firm because:	Mean	Std. Deviation	Quartile distribution
Q4: We lack the staff resources to make use of these services	3.48	2.02	
Q5: Our IT environment is relatively stable	3.95	1.77	
Q6: We can get the same information from other sources	5.15	1.63	
Q7: We would not learn much new from these services	3.76	1.95	
Q8: We can't justify such services	5.76	1.22	
Q9: We prefer to do our own independent IT research and analysis	4.05	1.93	

**Table 5: Non-users of IT R&A Services**

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## CONCLUSION

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To summarize, we find from our survey that users of IT R&A services find them primarily useful for the earlier stages of their own innovation with IT. This should not be surprising, inasmuch as the important information for innovating is likely to be external to the firm in the earlier stages, and internal to the firm in later stages, when local context is necessarily increasingly engaged.

With regard to use, we find that service users may be differentiated into proactive, reactive, and situational clusters. Notably, situational users constitute the largest cluster and find the benefits least clearly worth the cost. Proactive users find their IT R&A services consistently more useful and the benefits most clearly worth the cost.

Might situational users find their IT R&A services to be more useful if they became more proactive? Or are they situational users because the services somehow have less usefulness for them? Future research might include case studies which probe the present findings more deeply. It might be helpful, in particular, to study a case of proactive use that illuminates “best practice” in the use of IT R&A services.

Non-users of IT R&A services report that they cannot justify the expenditure. Whether they are misjudging the benefits they might receive, we do not know. For some, there may simply be a cost threshold that they are not in a position to surmount. Again, additional research is needed to determine how informed non-users are about the relative costs and benefits of IT R&A services.

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