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Welcome to the Survey Report on The Reality of Project Management Practice: Phase two of an ongoing study

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Two researchers of the University of Quebec at Montreal conducted the study in which you were invited to participate. The aim was to generate better knowledge about project management practices in the real world by painting a true picture of the use and perceived value of project management tools and techniques. This study was the second phase of an ongoing research project supported by the PMI Research Department and the Business School of the University of Quebec at Montreal (UQAM).

The goal of this inquiry is to derive a better understanding of project management as it is actually practiced. While *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*—Third Edition identifies a large number of tools and techniques, it does not identify the following:

- **Which tools in the *PMBOK® Guide* are the most used?**
- **Which tools are the most valuable in the eyes of project management practitioners?**

The first iteration of the study, conducted in 2004 by Drs. Besner and Hobbs, established a baseline from which future changes will be discerned. The survey has been revised and updated to investigate project management as it is practiced today. Periodic repetition of the survey will help determine which tools and techniques are gaining or losing favor, and what new tools and techniques are emerging.

The report about phase one is available here: www.pmi.org/PDF/pp_besnerhobbs.pdf

If you have questions or wish to comment,
please communicate with besner.claude@uqam.ca or hobbs.brian@uqam.ca

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This program, of which both of the authors are past directors, is accredited by PMI's Global Accreditation Center University of Quebec at Montreal

Thank you to those that participated in the survey

The Survey

- Objective: to gather information on the real use and usefulness of well-know project management tools and techniques
- Survey conducted during the years 2006 and 2007

Comparing Results from Phase one and two:

The following references are published results of the survey's phase one. These results provide a very good indication of actual project management practice. Phase two results are coherent with phase one. Analysis confirmed that no significant evolution in practice patterns occurred during the short period between the study's first two phases.

Besner, C. and Hobbs, B., 2008. Project Management Practice, Generic or Contextual: A Reality Check. Paper submitted to the *Project Management Journal*, (accepted for publication).

Besner, C. and Hobbs, B., 2007. A Contextual Assessment of Project Management Practice: variation by knowledge area, project type and phase, *Project Perspectives Annual Publication of International Project Management Association*.

Besner, C. and Hobbs, B., 2006. The Project Management Tools and Techniques: the Portrait of Current Professional Practice, *Project Management Journal*, 37(3).

Phase two was the occasion to add depth to our investigation. Based on the analysis of the results of phase one, small changes were made to the questionnaire. Some tools were added to the list and some tools that are used only very rarely were removed. In addition, several questions were added to the section on organizational context and project characteristics. The greater number of respondents in total will allow further analysis of very specific context sub-samples.

The Respondents

- Approximately 1750 individuals answered the questionnaire either in phase one or two.
- The results presented here are based on the analysis of 734 responses from phase two.
- Approximately two thirds of the sample examined here is composed of North American practitioners. The other third is spread across the globe:
 - Canada 36%
 - USA 30%
 - Other 34% (from 70 different countries)

The support of PMI's Research Department in soliciting PMPs accounts for the high proportion of respondents from the USA. The higher proportion of Canadians can be explained by the origin of the authors, who widely solicited their fellow Canadians and the support provided by both the Montreal and Southern Ontario chapters of PMI.

- The sample is drawn from practitioners working on several types of projects as shown below:
 - Information Technology 45%
 - Business & Financial Services 18%
 - Engineering & Construction 12%
 - Telecommunications 6%
 - Industrial Processes 2%
 - Others 17%

This distribution by project types is not out of line with the distribution of project management practitioners in general and with the distribution of PMI membership.

- Respondents reported working in different organizational roles and also reported having significant experience in project management as shown below:

- Program Director 29% with an average of 5.7 years of experience
- Project managers 47 % with an average of 7.9 years of experience
- Team members 8 % with an average of 8.7 years of experience
- Other 16 % with an average of 7.3 years of experience

It is important that respondents be experienced in project management because they are reporting on project management as it is actually practiced. The sample is well distributed across many variables describing both organizational contexts and project characteristics, which greatly facilitates the comparative analysis upon which the results are based.

Some Characteristics of their Organizations and their Projects

See Appendix A

For Each Tool or Technique two Questions were Asked

1. Extent of usage
 2. Potential contribution of more or better use to project performance
- A 5-point scale from none to very extensive was used to measure both usage and potential improvement

The Tools and Techniques that were Studied

- 91 well-know project management tools and techniques
- Specific tools and techniques, not general processes
- 13 different usages of PM software

Appendix

- Appendix B: alphabetical list of tools
- Appendix C: definitions

The Overall Results

The eight most widely used tools in phase two are exactly the same as those identified in phase one, three years ago. This result is therefore extremely robust. Robustness is also verified against context, since the top ten are almost identical in each subsample considered here: innovative and non-innovative; high and low performers. The identification of the same basic set of tools and techniques and the practices associated with these tools validates the idea of a generic project management field of practice as embodied by the bodies of knowledge including the PMBOK Guide (PMI, 2004). The content of the basic project management toolbox has thus been confirmed.

The table below shows the ten most used tools and techniques. The last two tools of the list are tools that were not part of the phase one questionnaire, namely: contract documents and assigned project sponsor.

| | |
|-----------------------------------|-----------------------------|
| 1 Progress report | 6 Requirements analysis |
| 2 Kick-off meeting | 7 Milestone planning |
| 3 Gantt chart | 8 Scope statement |
| 4 PM software for task scheduling | 9 Contract documents |
| 5 Change request | 10 Assigned project sponsor |

These results provide confidence that phase two results are valid and coherent with phase one for which face validity was thoroughly verified.

Appendix

- Appendix D: general results
- Appendix E: detailed data on usage levels

Commonalities in Usage Levels

- The sample divided quite evenly on several demographic and contextual variables allowing comparisons between groups
- On all group comparisons, the lists of most often and least often used tools were almost invariably the same
- Interpretation: a common pattern of practice across project types and contexts

Variations in Usage Levels

- Significant differences in usage levels for some tools in some group comparisons
- Anova-tests were used for comparisons of average usage levels between groups
- Significantly higher usage levels of almost all tools is found in:
 - More mature organizations
 - Larger projects
 - More innovative projects
 - Higher performing organizations
- Tools with the greatest differences in level of use between innovative and non-innovative projects

| | |
|--------------------------------|---------------------------------------|
| 1 Concurrent engineering | 6 Team development plan |
| 2 Requirements analysis | 7 Stakeholder analysis |
| 3 Configuration review | 8 Monitoring critical success factors |
| 4 Work breakdown structure | 9 Quality plan |
| 5 Database for cost estimating | 10 Updated business case at gates |

Caution

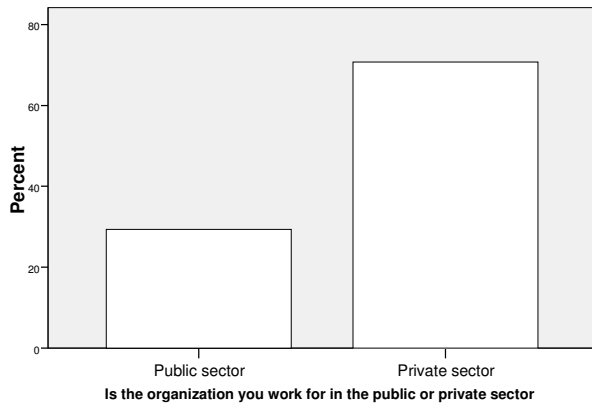
- One must avoid confusion between the identification of the more extensively used tools and the identification of tools for which significant differences in usage levels have been identified.
 - Example: The Progress Report is the most frequently used tool on all project types, but no significant difference in usage level was found between innovative and non-innovative projects.
 - Results reported here are for differences in usage levels
- Tools with the greatest differences in level of use between high and low performers

| Innovative sub-sample | Non-innovative sub-sample |
|------------------------------------------|---------------------------------------|
| 1 Database for cost estimating | 1 Quality plan |
| 2 Stakeholder analysis | 2 Database for cost estimating |
| 3 Database of historical data | 3 Team development plan |
| 4 Database of lessons learned | 4 Monitoring critical success factors |
| 5 Database of risks | 5 Earned value |
| 6 Team development plan | 6 Client acceptance form |
| 7 Work authorization | 7 Change request |
| 8 Value analysis | 8 Customer satisfaction surveys |
| 9 Medium-term post evaluation of success | 9 Responsibility assignment matrix |
| 10 Project mission statement | 10 Milestone planning |

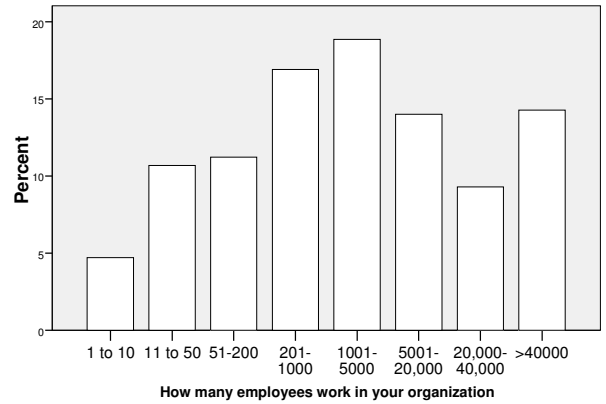
Appendix A

Some Characteristics of the Organizations and Projects of the respondents

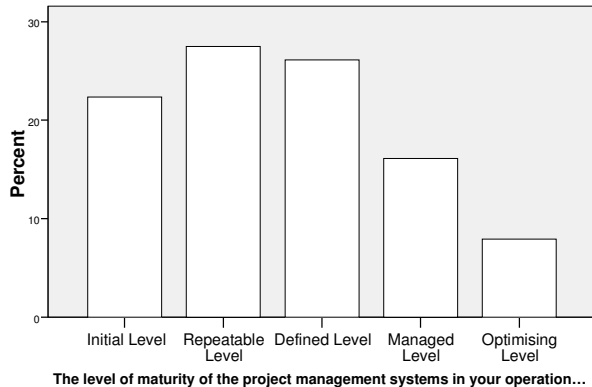
Is the organization you work for in the public or private sector



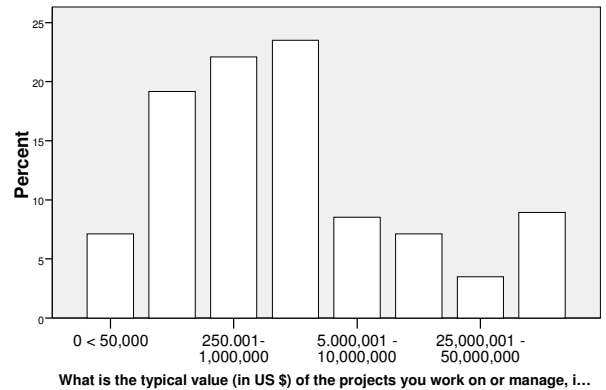
How many employees work in your organization



The level of maturity of the project management systems in your operational area



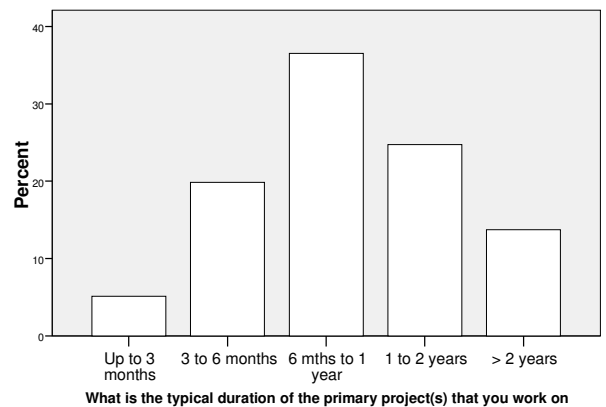
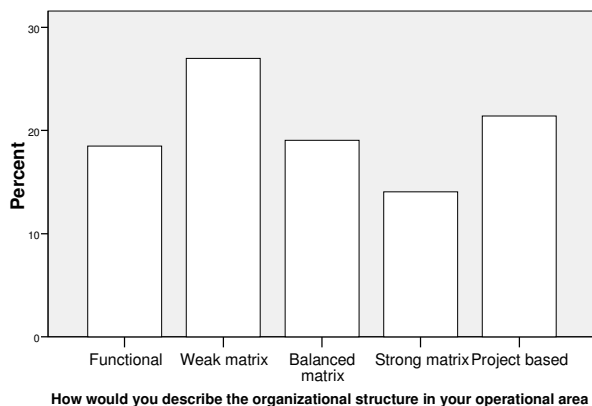
What is the typical value (in US \$) of the projects you work on or manage, in your primary project role



The level of maturity of the project management systems in your operation...

What is the typical duration of the primary project(s) that you work on

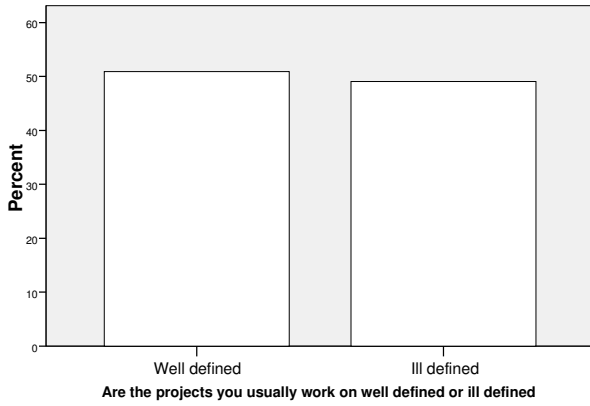
How would you describe the organizational structure in your operational area



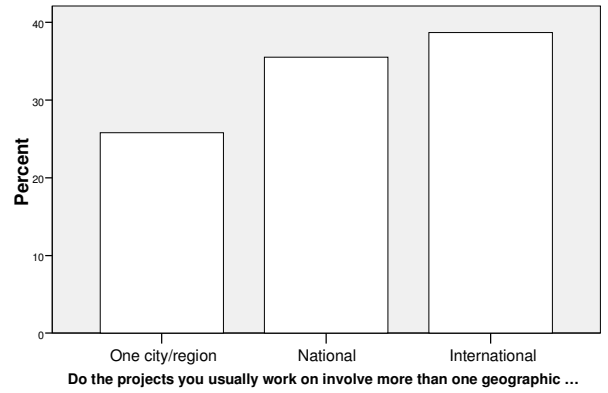
How would you describe the organizational structure in your operational area

What is the typical duration of the primary project(s) that you work on

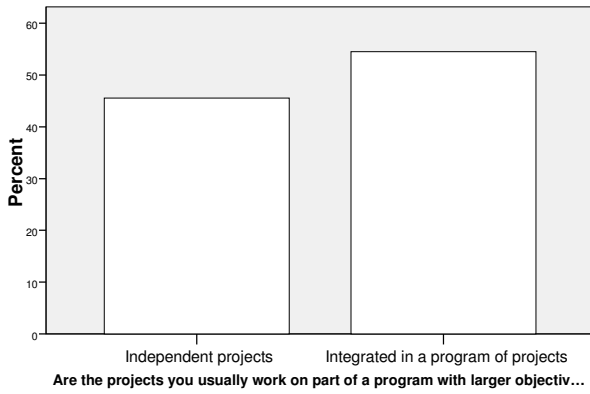
Are the projects you usually work on well defined or ill defined



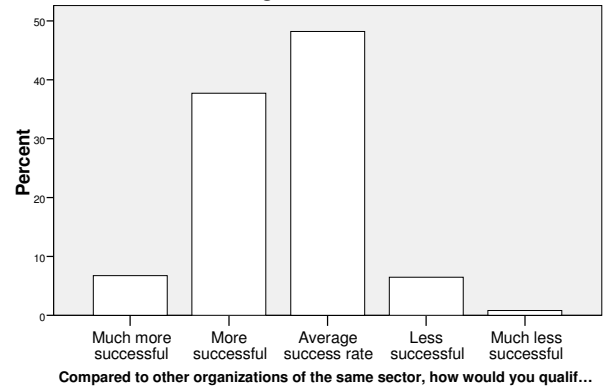
Do the projects you usually work on involve more than one geographic region



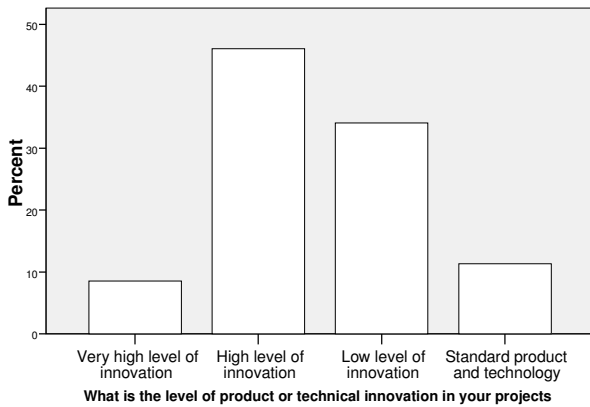
Are the projects you usually work on part of a program with larger objectives or independent projects



Compared to other organizations of the same sector, how would you qualify the rate of project success in your organization



What is the level of product or technical innovation in your projects



Appendix B

The 91 PM tools in alphabetical order

| | | |
|-------------------------------------|------------------------------------------------|----------------------------------|
| Assigned project sponsor | Fixed-price contract | Program master plan |
| Assignment of risk ownership | Gain-share contract | Progress report |
| Baseline plan | Gantt chart | Project charter |
| Bid documents | Graphic presentation of portfolio | Project closure documents |
| Bid/ seller evaluation | Graphic presentation of risk information | Project mission statement |
| Business case | Kick-off meeting | Project portfolio analysis |
| Business opportunity/ problem def. | Lesson learned/ post-mortem | Project priority ranking |
| Change control board | Management reserve | Project procedures manual |
| Change request | Medium-term post evaluation of success | Project scorecard/ dashboard |
| Client acceptance form | Milestone planning | Project war room |
| Communication plan | Monitoring critical success factors | Project Website |
| Concurrent engineering | Multi-criteria project selection | Quality plan |
| Configuration review | Needs analysis | Ranking of risks |
| Contingency plans | Network diagram | Re-baselining |
| Contract documents | Non-financial business benefits metrics | Recovery schedule |
| Contract penalties | Organizational capacity analysis | Requirements analysis |
| Contractual commitment data | PM community of practice | Responsibility assignment matrix |
| Cost/benefit analysis | PM software for issue management | Risk management documents |
| Cost-plus contract | PM software for monitoring of cost | ROI, VAN, IRR or payback |
| Critical chain method & analysis | PM software for monitoring of schedule | Scope statement |
| Critical path method & analysis | PM software for multi-project res. managmnt | Self directed work teams |
| Customer satisfaction surveys | PM software for multi-project scheduling | Stage gate reviews |
| Database for cost estimating | PM software for project portfolio analysis | Stakeholder analysis |
| Database of historical data | PM software for resource leveling | Team building event |
| Database of lessons learned | PM software for resource scheduling | Team development plan |
| Database of risks | PM software for scenario analysis | Timesheets linked to activities |
| Earned value | PM software for task scheduling | Trend report |
| Fast tracking/ rapid implementation | PM software Internet access | Updated business case at gates |
| Feasibility study | PM software linked with ERP | Value analysis |
| Financial business benefits metrics | Probabilistic duration estimate(PERT Analysis) | Work authorization |
| | | Work breakdown structure |

Appendix C

Definitions of Tools and Techniques

A definition of each of the tools and techniques is provided below. The primary sources of definitions were the *PMBOK® Guide* and Max Wideman's *Comprehensive Glossary of Project Management Terms*. These definitions were adapted and completed by the authors.

Wideman, M. 2006, *Comprehensive Glossary of Project Management Terms*

<http://www.pmforum.org/library/glossary/index.htm> - Index Section, consulted March, 2006.

Sorted by Alphabetic Order

| Name of the tool or technique | Definition |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assigned project sponsor | The assignment of a person who espouses the project and secures for it necessary support and resources. He/she represents the funder's interests. |
| Assignment of risk ownership | The situation when a member of the project personnel is given the ultimate responsibility of some project risks. |
| Baseline plan | The initial approved plan to which deviations will be compared as the project proceeds. |
| Bid documents | A set of documents issued for purposes of soliciting bids in the course of the acquisition process. (PMBOK Guide) |
| Bid/seller evaluation | Formal review and analysis of response to determine supplier's ability to perform the work as requested. |
| Business case | A document to establish the merits and desirability of the project and business justification for further project definition. |
| Business opportunity/problem definition | Initial work on defining the business opportunity (potential for improving the business value) or defining the problem to be solved. |
| Change control board | A formally constituted group of stakeholders responsible for approving or rejecting changes to the project baselines. |
| Change request | Form to log, assess and agree on, before a change to the project can be made. |
| Client acceptance form | Form to be signed by the person or organization for whom a project is implemented |
| Communication plan | A statement of project stakeholders' communication and information needs. |
| Concurrent Engineering | The use of multi-functional teams who work in unison from the initial concept until completion of the product. This process is sometimes called multi-functional or integrated product development teams. |
| Configuration review | A check to ensure that all deliverable items on a project conform with one another and to the current specification. |
| Contingency plans | A plan that identifies alternative strategies to be used to ensure project success if specified risk events occur. (PMBOK Guide) |
| Contract Documents | The set of documents which form the contract. |

| | |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contract penalties | Sums to be forfeited to which the organization has agreed to be subjected in case of non-fulfillment of requirements. Typically for late delivery or non-performance. |
| Contractual commitment data | An organized body of information on all obligations or commitments that pledge actions of project participants or payment of goods or services. |
| Cost plus contract | A form of contract in which the costs incurred in performing the work is reimbursed plus a lump sum or percentage fee; hence, cost-plus. |
| Cost/benefit analysis | The analysis of the potential costs and benefits of a project which allows comparison of the returns from alternative forms of investment. |
| Critical chain method & analysis | Analysis of the task network to determine the longest path considering task constraints combined with resources constraints and the management of that path. |
| Critical path method & analysis | A network analysis technique used to predict project duration by analyzing which sequence of activities (which path) has the least amount of scheduling flexibility (the least amount of float). (PMBOK Guide) |
| Customer satisfaction surveys | Surveys used to evaluate customer satisfaction. |
| Database for cost estimating | An organized body of related information for cost estimating |
| Database of historical data | An organized body of historical data |
| Database of lessons learned | An organized body of information on lessons learned, for the purpose of improving future performance. |
| Database of risks | An organized body of information on risks |
| Earned value | A measure of the value of work performed so far. Earned value uses original estimates and progress-to-date to show whether the actual costs incurred are on budget and whether the tasks are ahead or behind the baseline plan. |
| Fast tracking / rapid implementation | Compressing the project schedule by doing some or all of certain activities in parallel that would normally be done in sequence (such as design and construction). |
| Feasibility study | The methods and techniques used to examine technical and cost data to determine the economic potential and the practicality of project applications. (adapted from PMBOK Guide) |
| Financial business benefits metrics | A financial evaluation measure of the enhanced efficiency, economy and effectiveness of the business operations associated with the project deliverables. |
| Fixed price contract | A contract where the buyer pays a set amount to the seller regardless of that seller's cost to complete the work. |
| Gain-share contract | Contractual arrangements under which two or more parties share the benefits of an asset, i.e. the project deliverable. |
| Gantt chart | A graphic display of schedule-related information. Activities or other project elements are listed, dates are shown across the top, and activity durations are shown as date-placed horizontal bars. (PMBOK Guide) |
| Graphic presentation of portfolio | Graphical methods to represent project portfolio information, for example “Bubble Diagram” |

| | |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Graphic presentation of risk information | Graphical methods to represent risk information. |
| Kick-off meeting | A workshop type meeting in which the principle stakeholders and participants in the project are briefed on the goals and objectives of the project, how it will be organized, etc. |
| Lesson learned/post-mortem | A tool to learn from the process of performing the project. Lessons learned may be identified at any point. Also considered a project record. (PMBOK Guide) |
| Management reserve | An amount of the owner's total allocated budget withheld under the owner's management control, rather than assigned as part of the project's scope under the control of the project manager. |
| Medium-term post evaluation of success | A project performance evaluation measuring the success of the project some time after its completion. |
| Milestone planning | A summary-level schedule that identifies the major milestones, which are significant events in the project, usually completion of a major deliverable. (PMBOK Guide) |
| Monitoring critical success factors | Monitoring those measurable factors that when present in the projects environment are most conducive to the achievement of a successful project. Examples include: Project objectives aligned with corporate mission; Top management support; A culture of open communication, etc. |
| Multi-criteria project selection | Table or matrix to help make project selection considering many criteria: Strategic alignment, risk, cost, short and/or long term benefits, etc. |
| Needs analysis | A study focused specifically on the clients needs. It is usually a very early part of the project life cycle. |
| Network diagram | (Task network) Any schematic display of the logical relationships of project activities. Often referred to as a PERT or PDM or CPM chart. (PMBOK Guide) |
| Non financial business benefits metrics | A non financial evaluation measure of the enhanced efficiency, economy and effectiveness of the business operations associated with the project deliverables. |
| Organizational capacity analysis | Tool for planning, tracking and reporting the alignment between total project commitments and organizational capacity |
| PM community of practice | Project Management affinity group. An informal network or forum where tips are exchanged and ideas generated [Thomas A. Stewart]. |
| PM software for issue management | Use of a project management software for issue management |
| PM software for monitoring of cost | Use of project management software for monitoring of cost |
| PM software for monitoring of schedule | Use of project management software for monitoring of schedule |
| PM software for multi-project resource management | Use of project management software for multi-project resource management. |

| | |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PM software for multi-project scheduling | Use of project management software for multi-project scheduling. |
| PM software for project portfolio analysis | Use of project management software for project portfolio analysis |
| PM software for resources leveling | Use of project management software for resources leveling. |
| PM software for resources scheduling | Use of project management software for resources scheduling. |
| PM software for scenario analysis | Use of project management software for scenario analysis |
| PM software for task scheduling | Use of project management software for task scheduling. |
| PM software Internet access | Use of project management software to access project information using the Internet network. |
| PM software linked with ERP | Use of project management software in link with an Enterprise Resource Planning information system (like SAP, PeopleSoft, Baan, JD Edwards, etc.) |
| Probabilistic duration estimate (PERT Analysis) | Method using durations that are computed by a weighted average of optimistic, pessimistic, and most likely duration estimates. (PMBOK Guide) |
| Progress report | Report on the partial completion of a project, or a measure of same. Also, the act of entering progress information for a project. |
| Project charter | A formal document providing authority to a project manager to conduct a project. |
| Project closure documents | The formal end of the project that requires project board approval, and that is normally given at the project closure control point. |
| Project mission statement | Brief summary, approximately one or two sentences, that sums up the background, purposes and benefits of the project. |
| Project portfolio analysis | Strategic analysis of a group of projects that are being worked on at the same time. |
| Project priority ranking | A system designed to aid management in selecting from competing projects under conditions of limited resources. |
| Project procedures manual | A collected set of the management and administrative procedures needed for the project. |
| Project scorecard/dashboard | Presenting and scoring a project with performance indicator of different angles: financial, client, internal processes, learning and growth, etc. |
| Project war room | A central location where vital project information is displayed for all to see. Sometimes referred to as a War Room. |
| Project Web site | The information concerning the project is made available via a website. |
| Program master plan | A portfolio of projects selected and planned in a coordinated way so as to achieve a set of defined objectives. |
| Quality plan | A document setting out the specific quality practices, resources and sequence of activities relevant to a particular product, service, contract or project. |

| | |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ranking of risks | Indicate the overall risk position by comparing the risk scores. (PMBOK Guide) |
| Re-baselining | Development of a revised baseline plan. Re-baselining should only be undertaken with justification and the proper approvals. |
| Recovery schedule | A special schedule showing special efforts to recover time lost compared to the master schedule. |
| Requirements analysis | An analysis of the measurable conditions and/or capabilities to which the project must conform. |
| Responsibility assignment matrix | A structure that relates the project organization structure to the work breakdown structure to help ensure that each element of the project's scope of work is assigned to a responsible individual. (PMBOK Guide) |
| Risk management documents | Documents to record various information relative to risk identification or risk mitigation measure, etc. |
| ROI, NPV, IRR or Payback | Techniques to evaluate the financial performance of project. Return On Investment, Net Present Value, Internal Rate of Return or Payback period. |
| Scope statement | A documented description of the project's outputs or deliverables. (PMBOK Guide) |
| Self directed work teams | Teams whose members are sufficiently motivated and capable, and knowledgeable of their project objectives, that they are able to perform under self-supervision, or with minimal management supervision. |
| Stage gate reviews | Reviews of the project at which a go/no-go decision on the continuation of the project into the succeeding phase is taken. |
| Stakeholders analysis | Tool to help identification of stakeholders and the analysis of the needs of the various stakeholders. (PMBOK Guide) |
| Team building event | An event organized to influence a group of diverse individuals to work together effectively such that their team will accomplish more than the sum of their individual efforts could otherwise achieve. (adapted from PMBOK Guide) |
| Team development plan | A description of a training program for project team members for enhancing their skills and working together as a project team. |
| Timesheets linked to project activities | Uniform system of task by task time tracking for work accomplished on the project. |
| Trend Report | Report with indicators of variations of project control parameters against planned objectives. |
| Updated business case at gates | Update to the business case during the project life. |
| Value analysis | An activity devoted to optimizing cost performance. It identifies the required functions of an item, establish values for those functions and provide the functions at the lowest overall cost without loss of performance. |
| Work authorization | A form to authorize work before it is performed on the project. |
| Work Breakdown Structure | A deliverable-oriented grouping of project elements that organizes and defines the total work scope of the project. Each descending level represents an increasingly detailed definition of the project work. (PMBOK Guide) |

Appendix D

Tools and Techniques Ordered by Usage and Potential to Improve Success

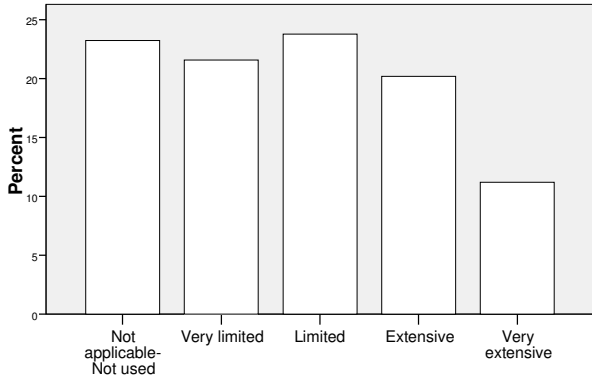
| Rank | Ordered by level of usage | Ordered by level of potential |
|------|------------------------------------------------|---------------------------------------------------|
| 1 | Progress report | Database of lessons learned |
| 2 | Kick-off meeting | Lesson learned/ post-mortem |
| 3 | Gantt chart | Database for cost estimating |
| 4 | PM software for task scheduling | Database of historical data |
| 5 | Change request | Database of risks |
| 6 | Requirements analysis | Organizational capacity analysis |
| 7 | Milestone planning | Monitoring critical success factors |
| 8 | Scope statement | Risk management documents |
| 9 | Contract documents | Assignment of risk ownership |
| 10 | Assigned project sponsor | Communication plan |
| 11 | Work breakdown structure | Contingency plans |
| 12 | Business opportunity/ problem definition | Ranking of risks |
| 13 | Needs analysis | PM software for multi-project resource management |
| 14 | Baseline plan | PM software for multi-project scheduling |
| 15 | Business case | Requirements analysis |
| 16 | PM software for monitoring of schedule | PM software for resource scheduling |
| 17 | Project closure documents | Team building event |
| 18 | Responsibility assignment matrix | Responsibility assignment matrix |
| 19 | Project charter | PM software for task scheduling |
| 20 | Client acceptance form | Scope statement |
| ... | ... | ... |
| ... | ... | ... |
| ... | ... | ... |
| 70 | Team development plan | Contract documents |
| 71 | Contract penalties | Re-baselining |
| 72 | Database of historical data | Recovery schedule |
| 73 | Cost-plus contract | Project mission statement |
| 74 | PM community of practice | Configuration review |
| 75 | PM software Internet access | Project war room |
| 76 | Project war room | PM software Internet access |
| 77 | Database for cost estimating | Fast tracking/ rapid implementation |
| 78 | Graphic presentation of risk information | Concurrent engineering |
| 79 | Recovery schedule | Contractual commitment data |
| 80 | Non-financial business benefits metrics | Bid/ seller evaluation |
| 81 | Value analysis | Work authorization |
| 82 | PM software for issue management | Graphic presentation of portfolio |
| 83 | Graphic presentation of portfolio | Bid documents |
| 84 | Database of lessons learned | PM software linked with ERP |
| 85 | Database of risks | Critical chain method & analysis |
| 86 | Probabilistic duration estimate(PERT Analysis) | Network diagram |
| 87 | PM software for project portfolio analysis | Fixed-price contract |
| 88 | Critical chain method & analysis | Contract penalties |
| 89 | PM software linked with ERP | Probabilistic duration estimate(PERT Analysis) |
| 90 | PM software for scenario analysis | Cost-plus contract |
| 91 | Gain-share contract | Gain-share contract |

Appendix E

Tools usage levels

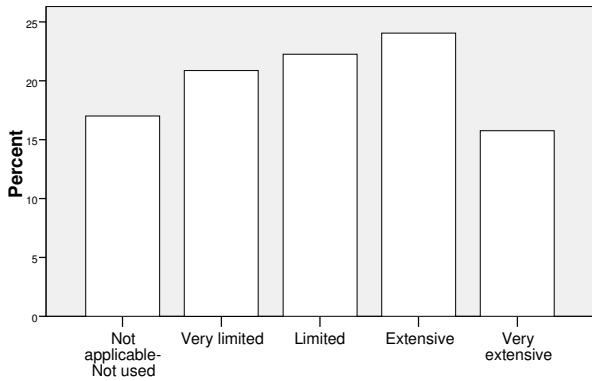
In the order in which it was presented to the respondents

Use*Project mission statement



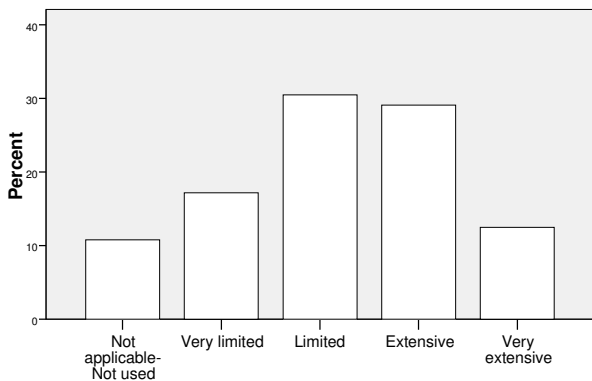
Use*Project mission statement

Use*Project charter



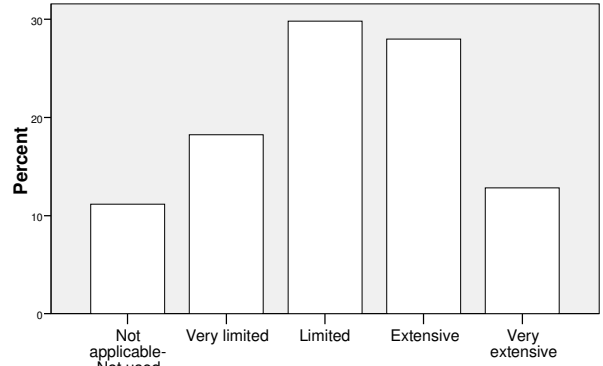
Use*Project charter

Use*Business opportunity/problem definition



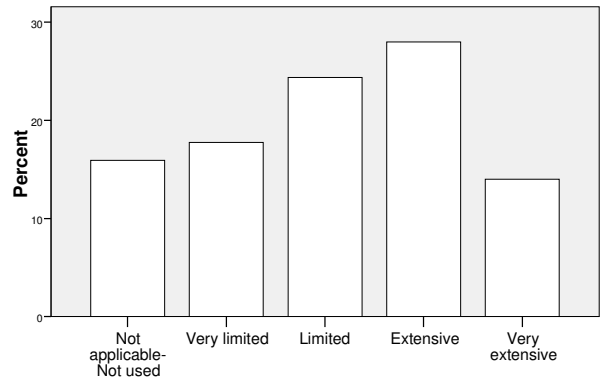
Use*Business opportunity/problem definition

Use*Needs analysis



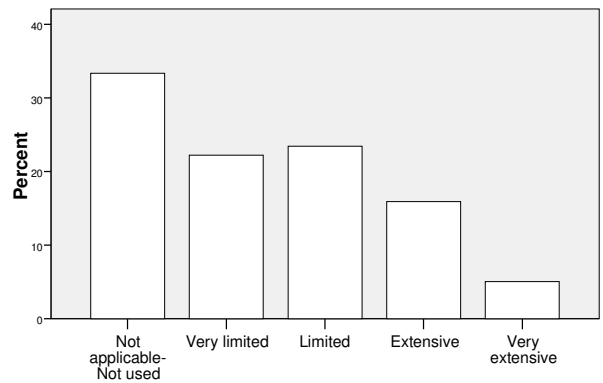
Use*Needs analysis

Use*Business case



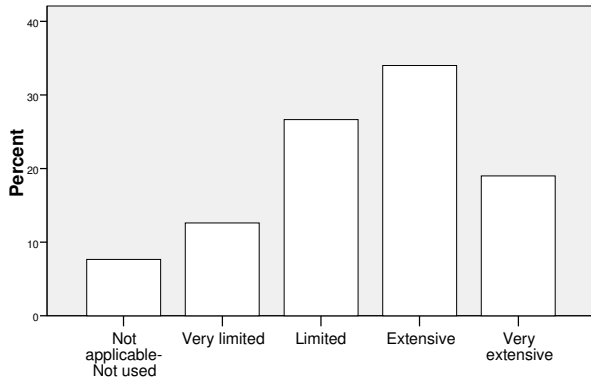
Use*Business case

Use*Updated business case at gates



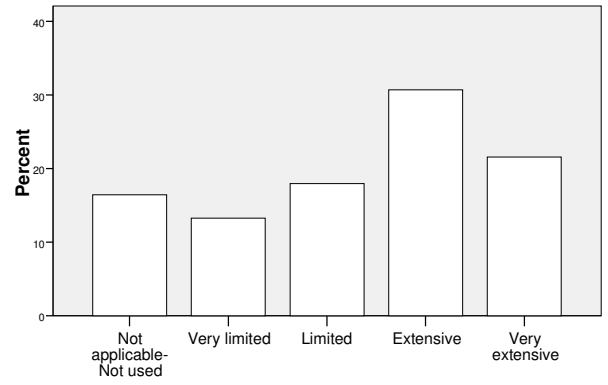
Use*Updated business case at gates

Use*Requirements analysis



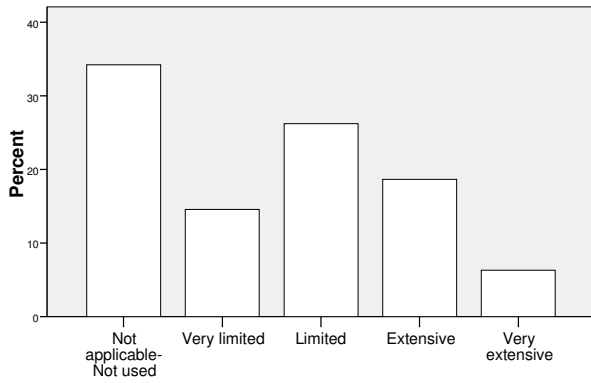
Use*Requirements analysis

Use*Assigned project sponsor



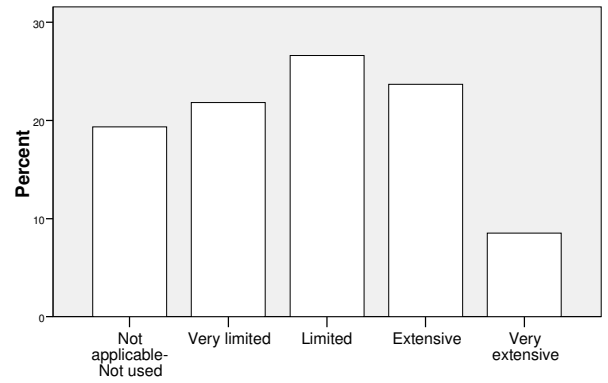
Use*Assigned project sponsor

Use*Concurrent engineering



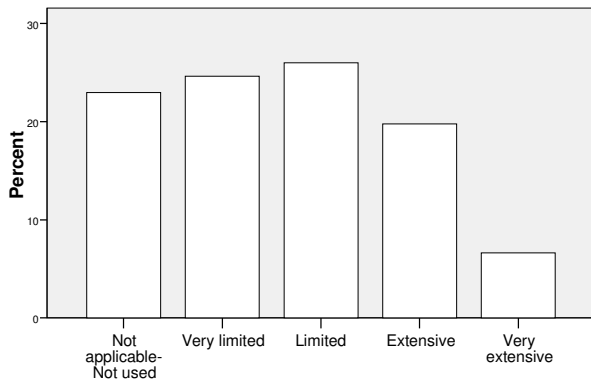
Use*Concurrent engineering

Use*Cost/benefit analysis



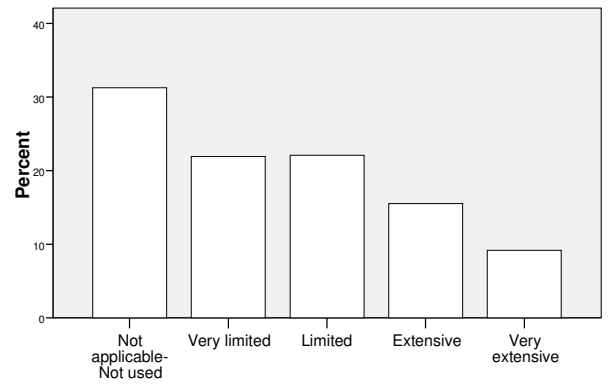
Use*Cost/benefit analysis

Use*Stakeholder analysis



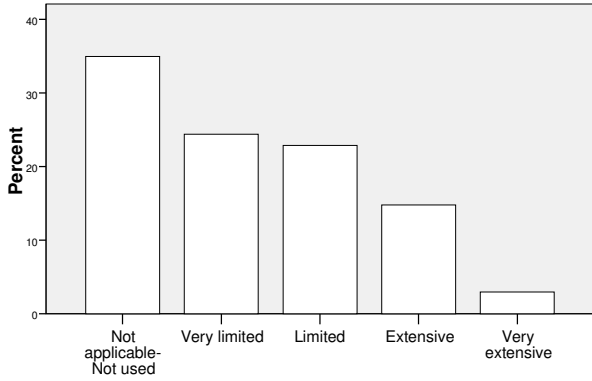
Use*Stakeholder analysis

Use*ROI, VAN, IRR or payback



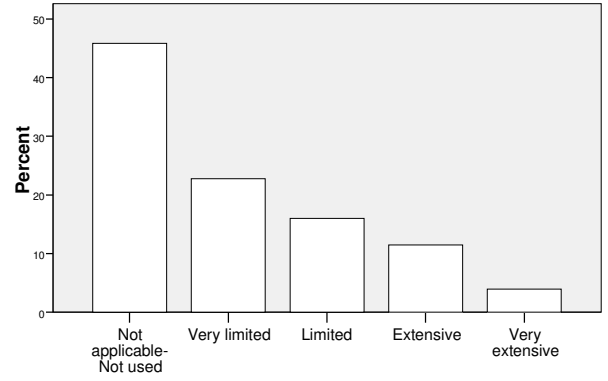
Use*ROI, VAN, IRR or payback

Use*Multi-criteria project selection



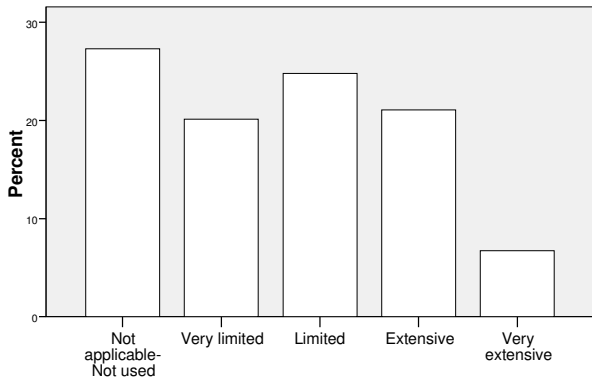
Use*Multi-criteria project selection

Use*Graphic presentation of portfolio



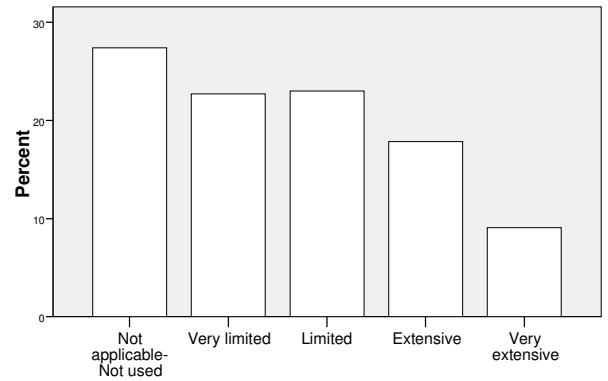
Use*Graphic presentation of portfolio

Use*Program master plan



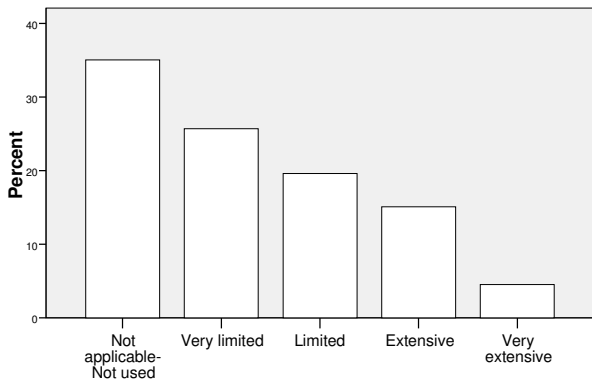
Use*Program master plan

Use*Project priority ranking



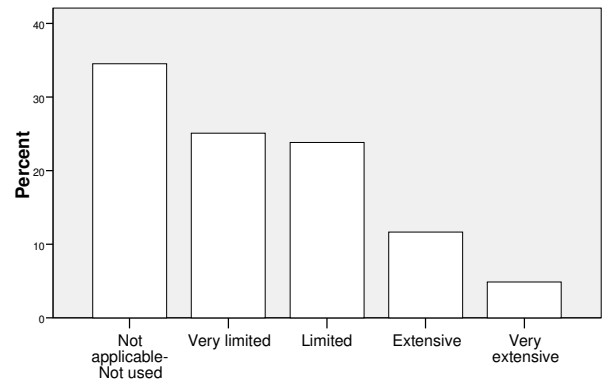
Use*Project priority ranking

Use*Project portfolio analysis



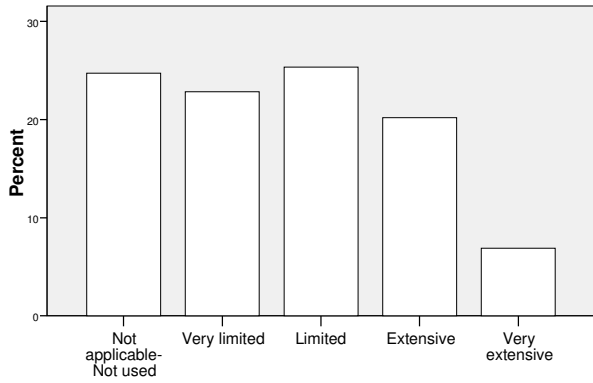
Use*Project portfolio analysis

Use*Organizational capacity analysis



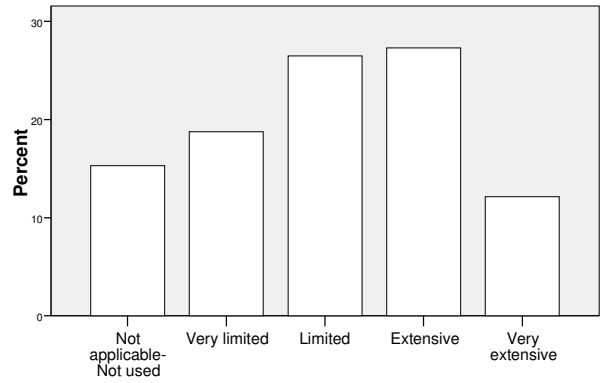
Use*Organizational capacity analysis

Use*Feasibility study



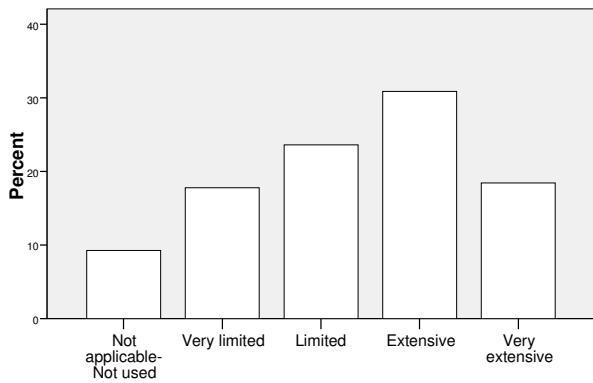
Use*Feasibility study

Use*Responsibility assignment matrix



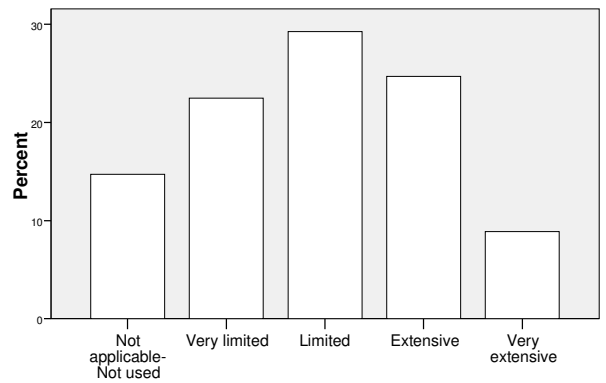
Use*Responsibility assignment matrix

Use*Scope statement



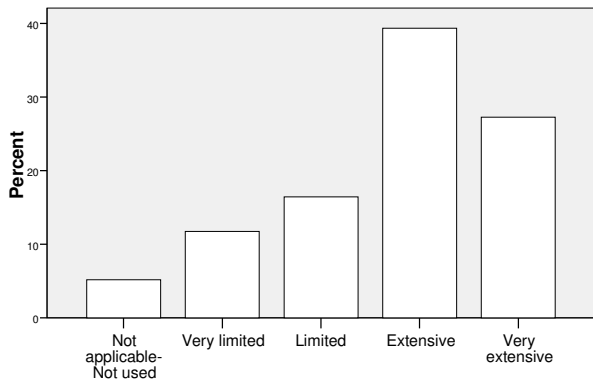
Use*Scope statement

Use*Communication plan



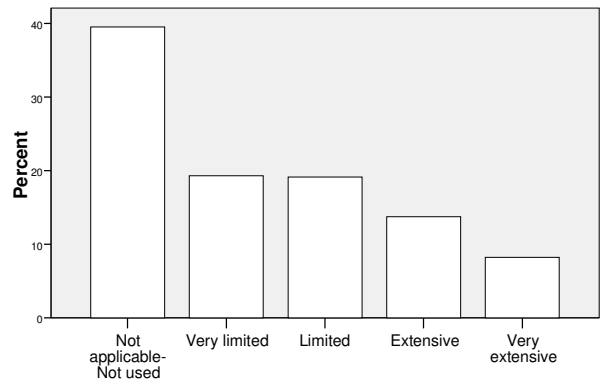
Use*Communication plan

Use*Kick-off meeting



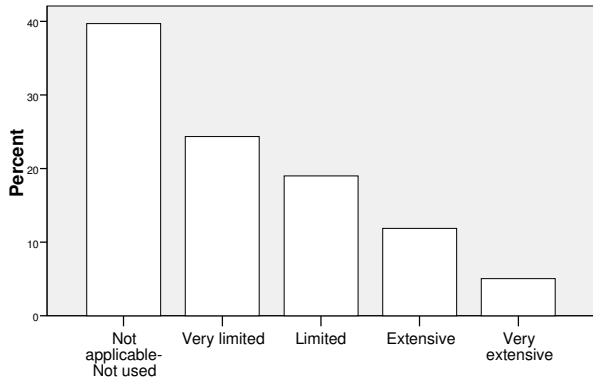
Use*Kick-off meeting

Use*Project Website



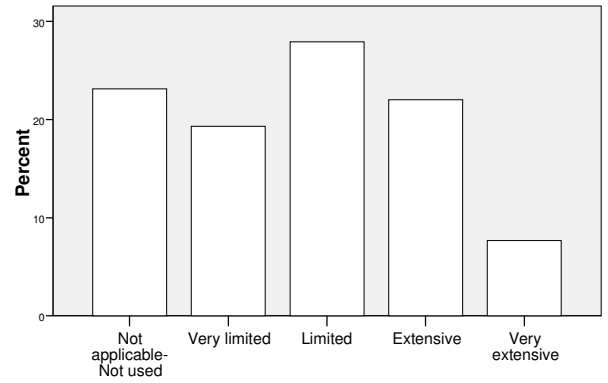
Use*Project Website

Use*PM community of practice



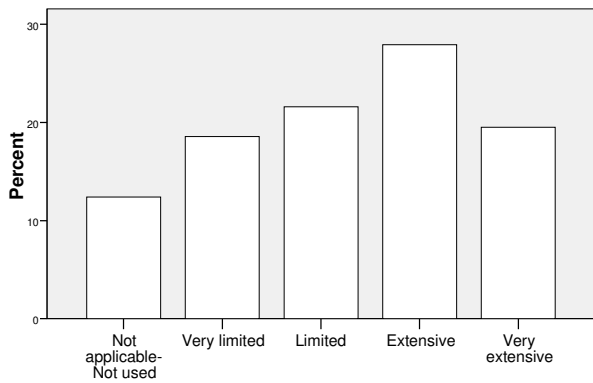
Use*PM community of practice

Use*Fast tracking / rapid implementation



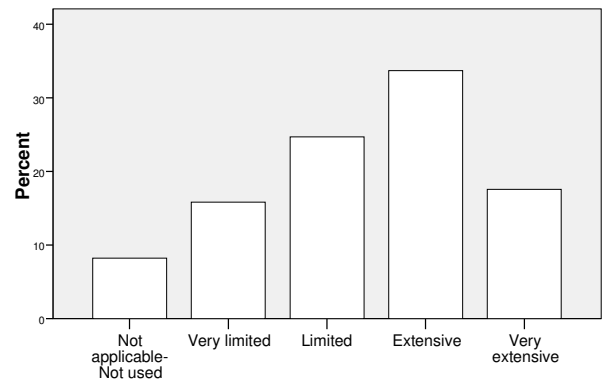
Use*Fast tracking / rapid implementation

Use*Work breakdown structure



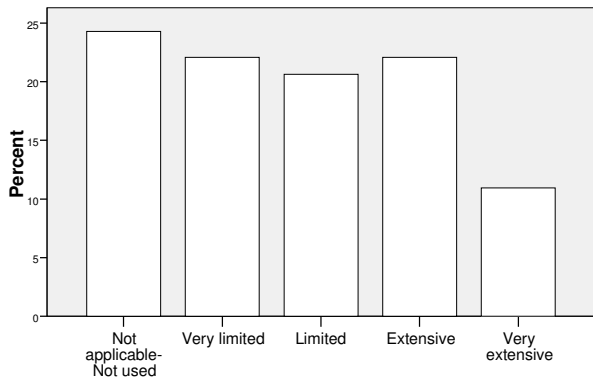
Use*Work breakdown structure

Use*Milestone planning



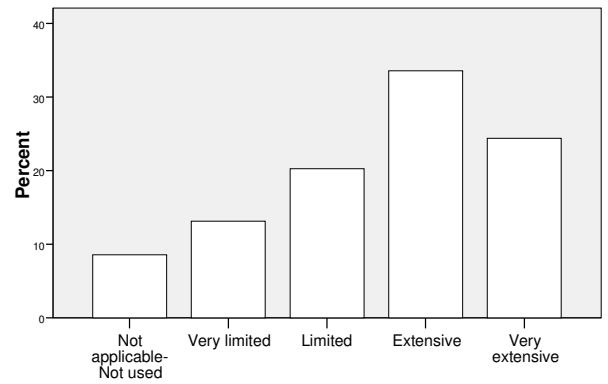
Use*Milestone planning

Use*Stage gate reviews



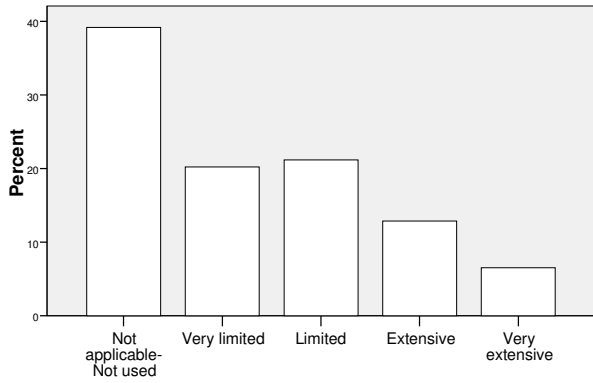
Use*Stage gate reviews

Use*Gantt chart

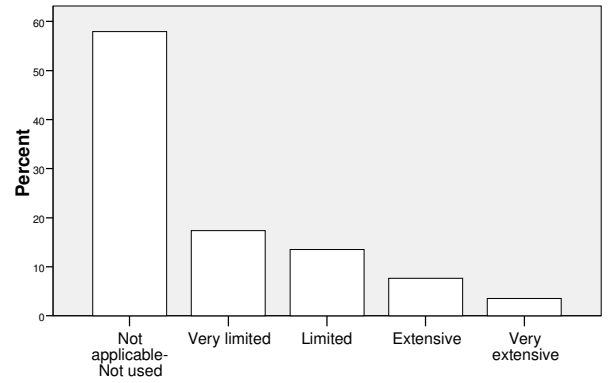


Use*Gantt chart

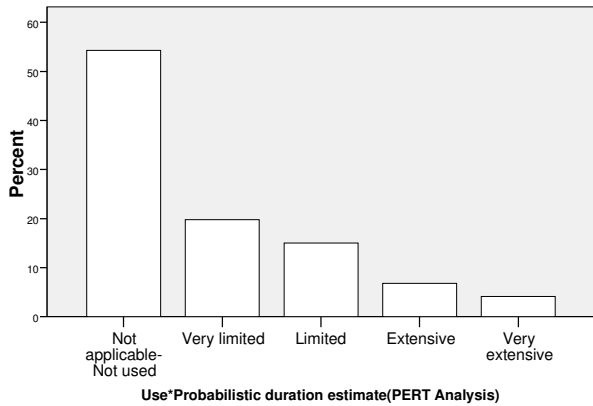
Use*Network diagram



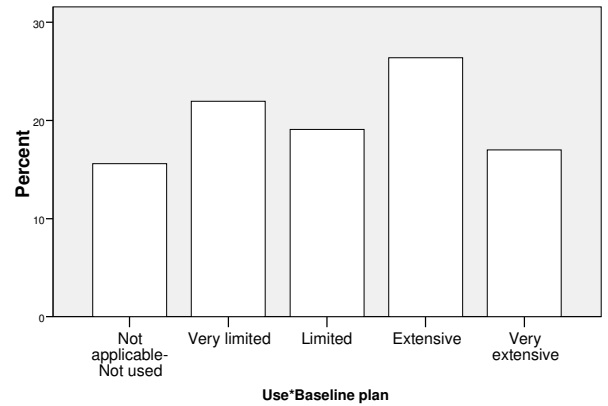
Use*Critical chain method & analysis



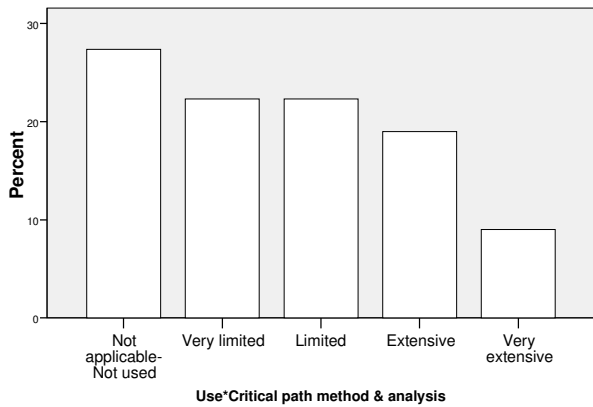
Use*Probabilistic duration estimate(PERT Analysis)



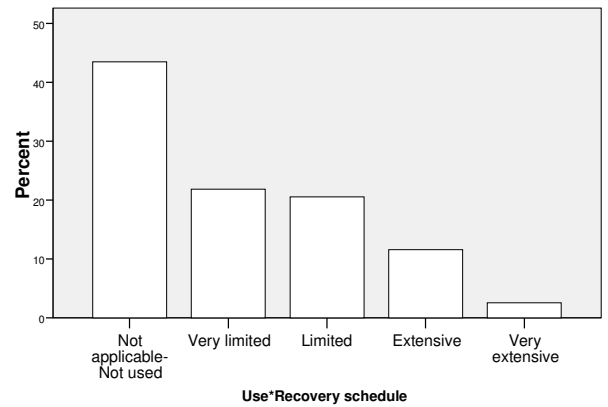
Use*Baseline plan



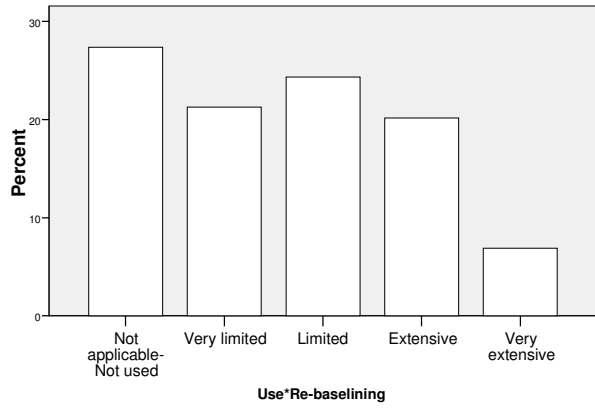
Use*Critical path method & analysis



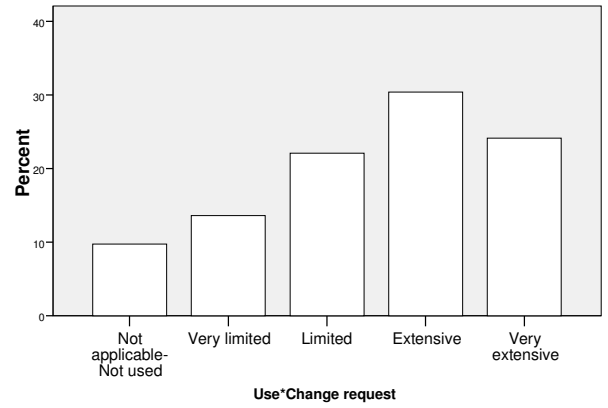
Use*Recovery schedule



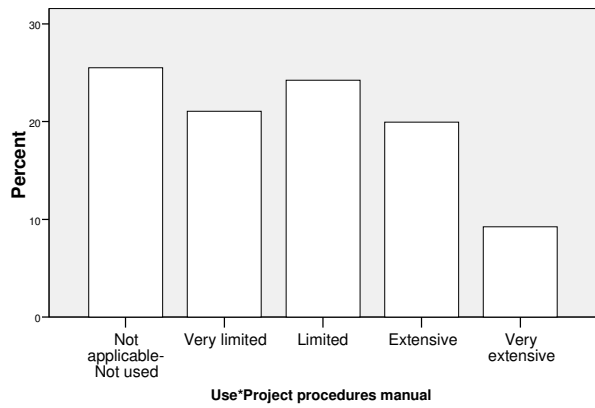
Use*Re-baselining



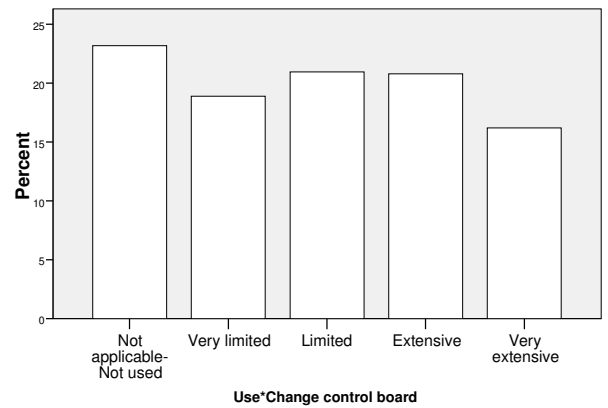
Use*Change request



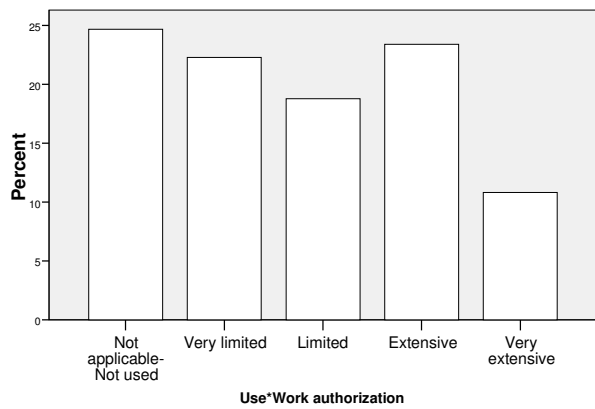
Use*Project procedures manual



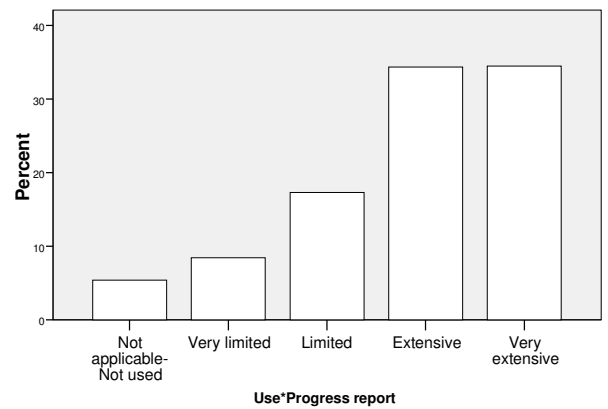
Use*Change control board



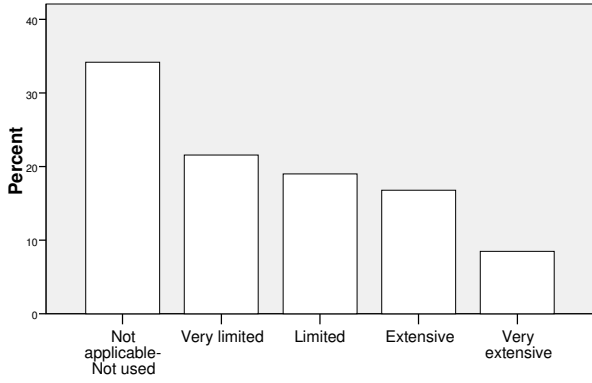
Use*Work authorization



Use*Progress report

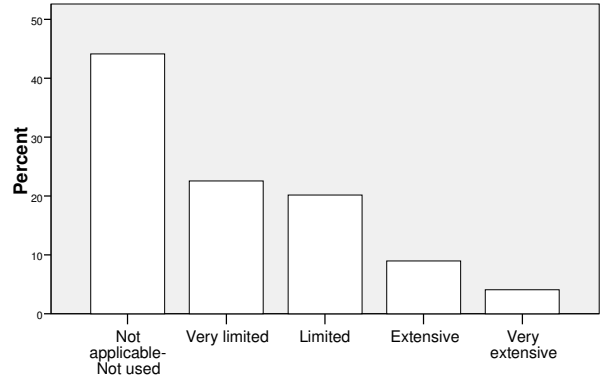


Use*Trend report



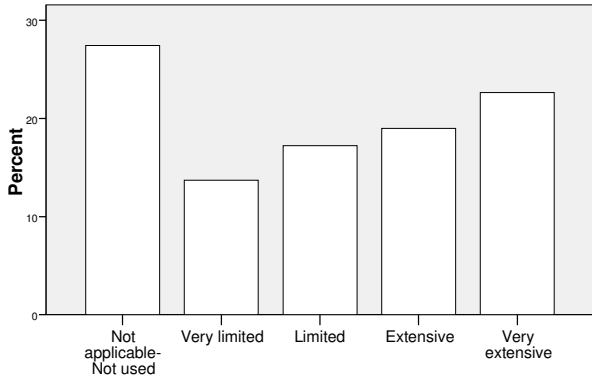
Use*Trend report

Use*Value analysis



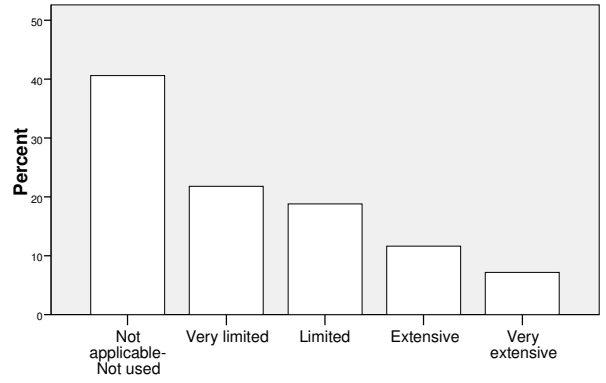
Use*Value analysis

Use*Timesheets linked to project activities



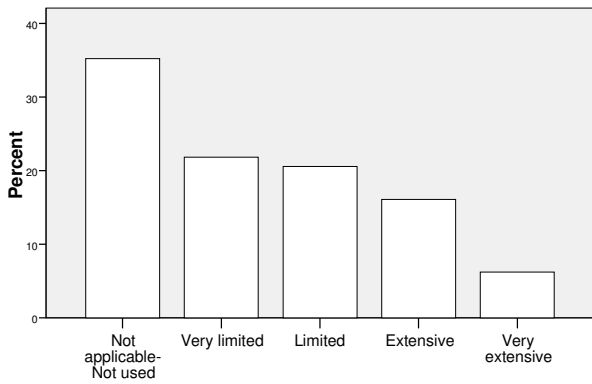
Use*Timesheets linked to project activities

Use*Earned value



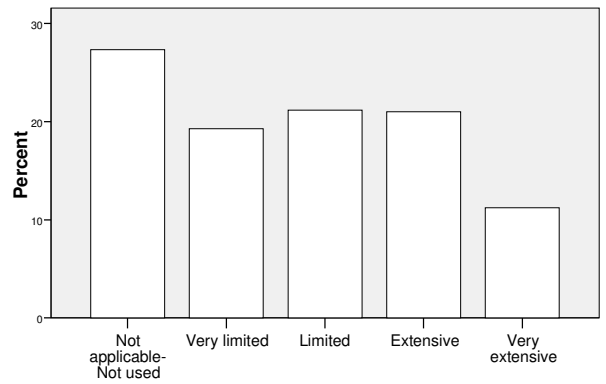
Use*Earned value

Use*Configuration review



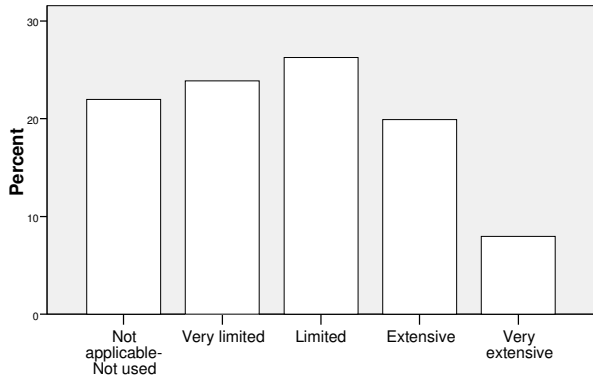
Use*Configuration review

Use*Project scorecard/dashboard



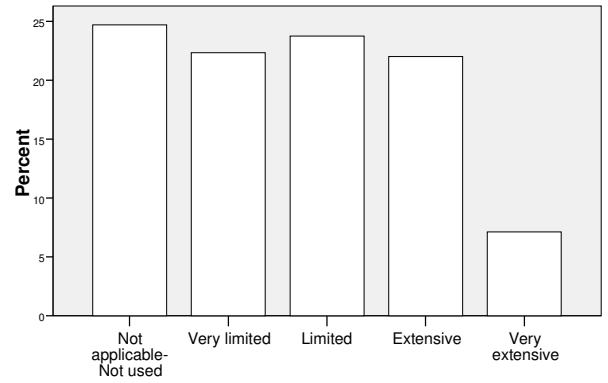
Use*Project scorecard/dashboard

Use*Monitoring critical success factors



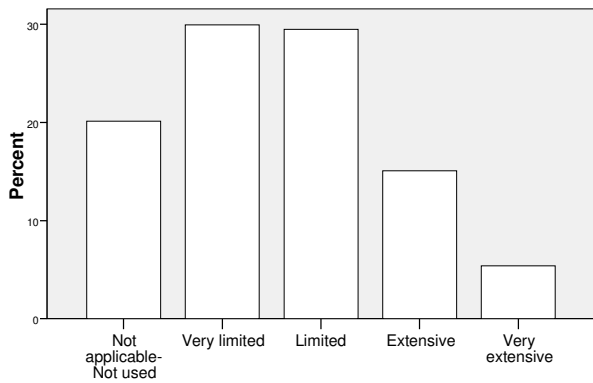
Use*Monitoring critical success factors

Use*Self directed work teams



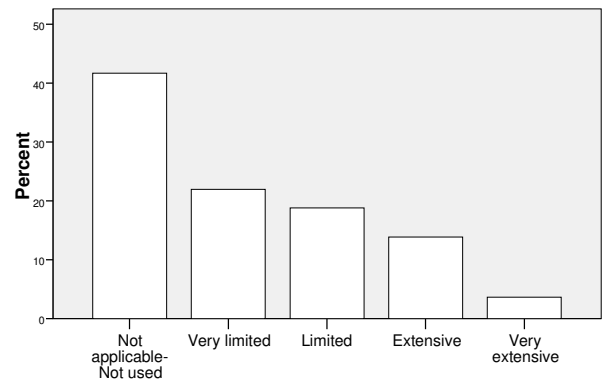
Use*Self directed work teams

Use*Team building event



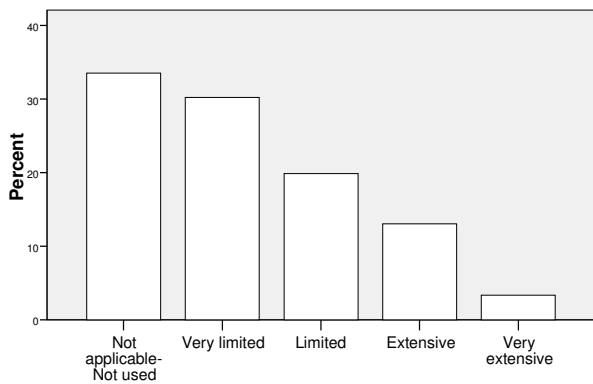
Use*Team building event

Use*Project war room



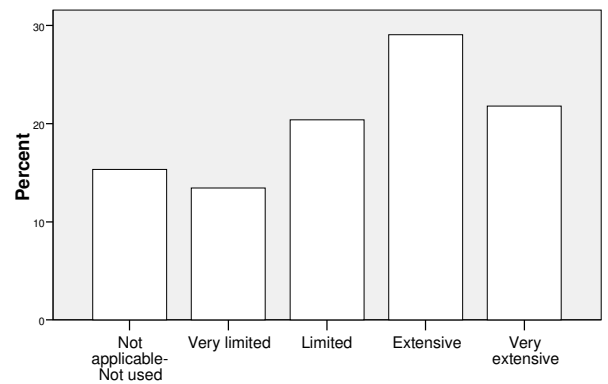
Use*Project war room

Use*Team development plan



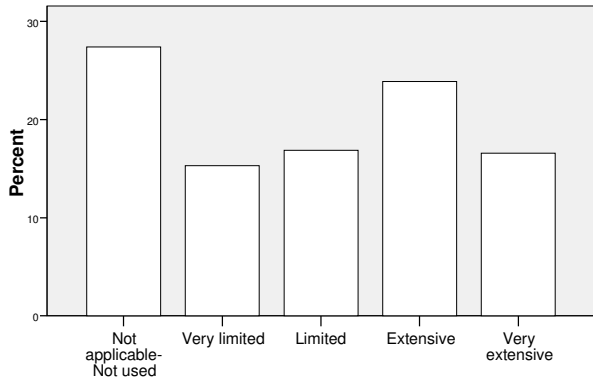
Use*Team development plan

Use*Contract documents

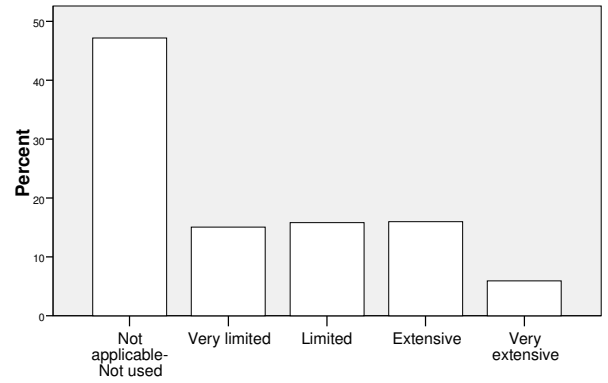


Use*Contract documents

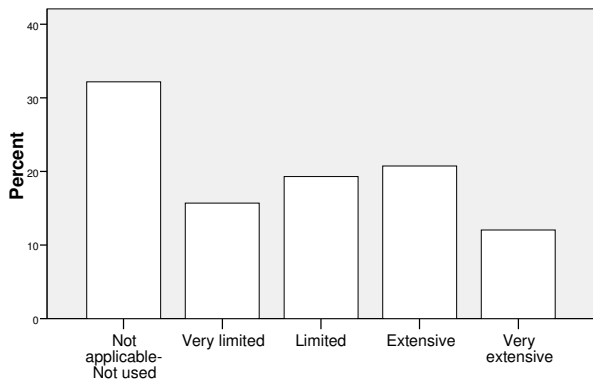
Use*Bid documents



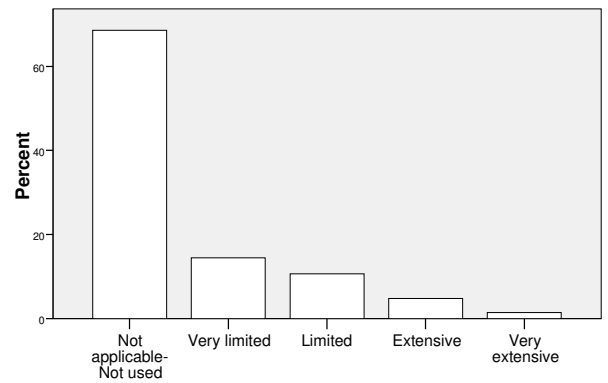
Use*Cost-plus contract



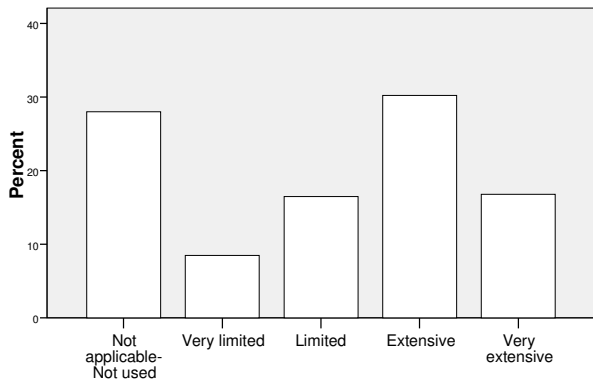
Use*Bid/seller evaluation



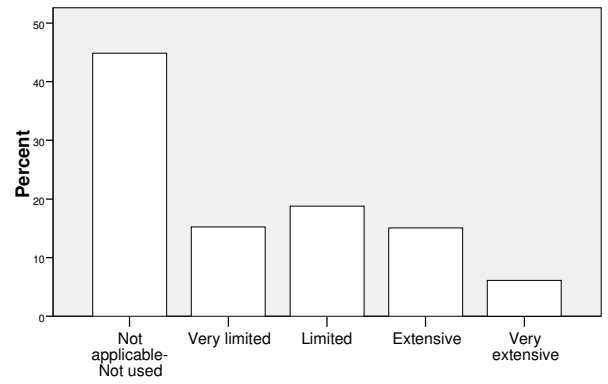
Use*Gain-share contract



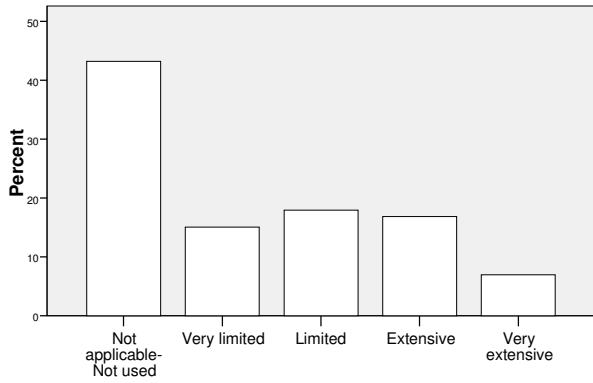
Use*Fixed-price contract



Use*Contract penalties

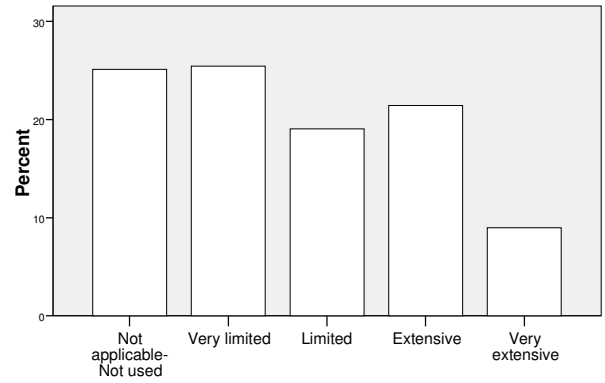


Use*Contractual commitment data



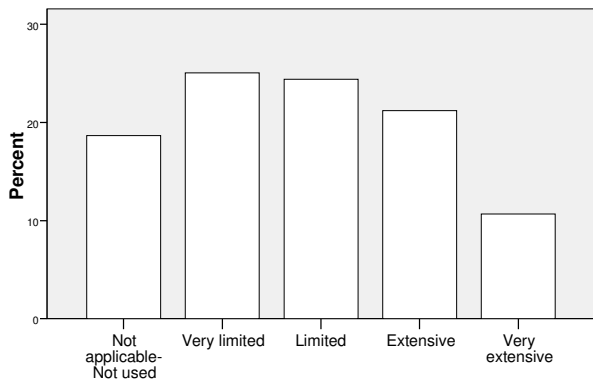
Use*Contractual commitment data

Use*Assignment of risk ownership



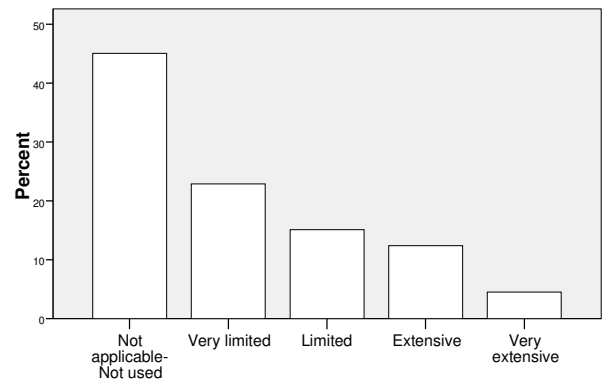
Use*Assignment of risk ownership

Use*Risk management documents



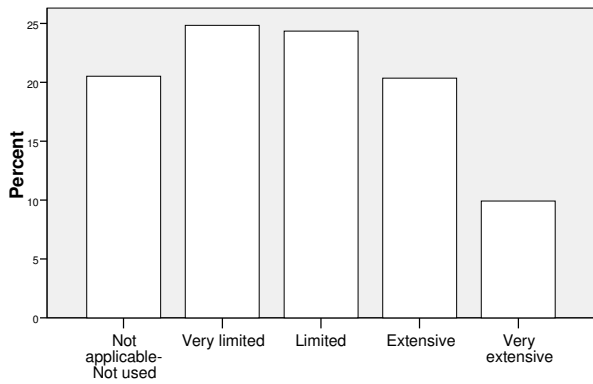
Use*Risk management documents

Use*Graphic presentation of risk information



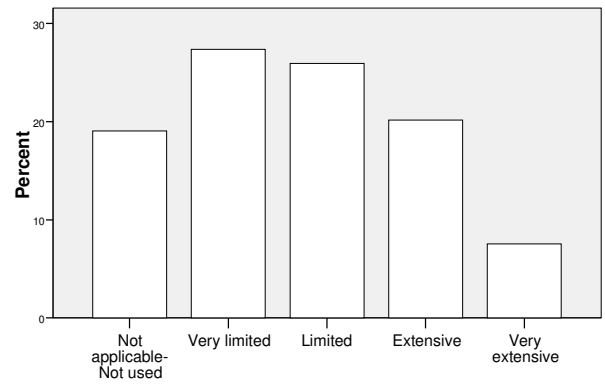
Use*Graphic presentation of risk information

Use*Ranking of risks



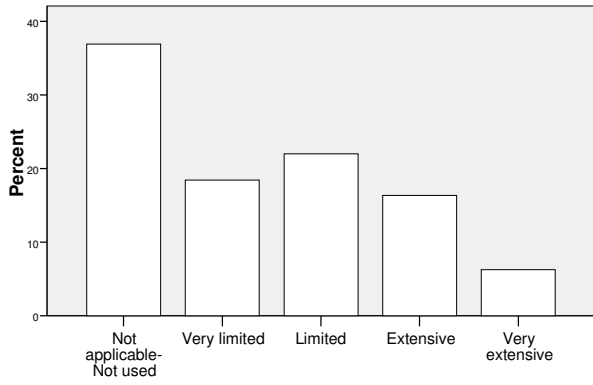
Use*Ranking of risks

Use*Contingency plans

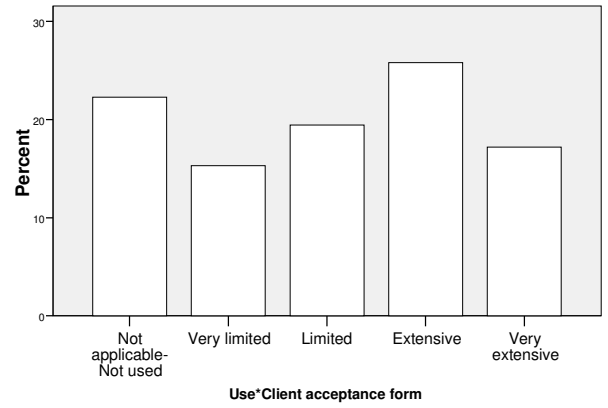


Use*Contingency plans

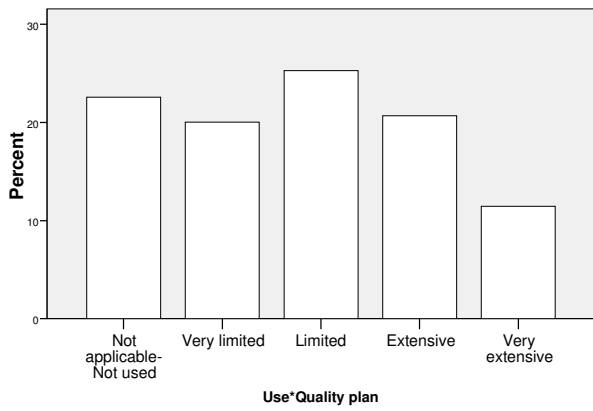
Use*Management reserve



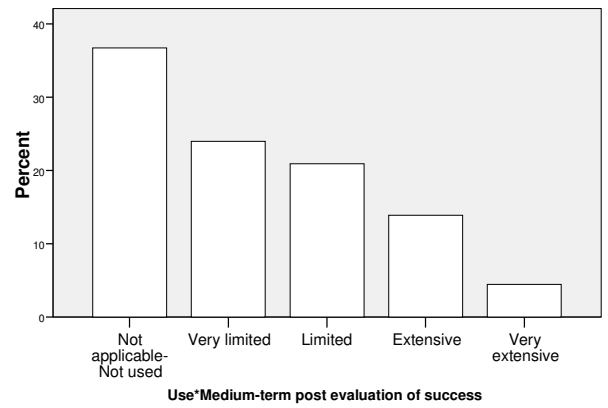
Use*Client acceptance form



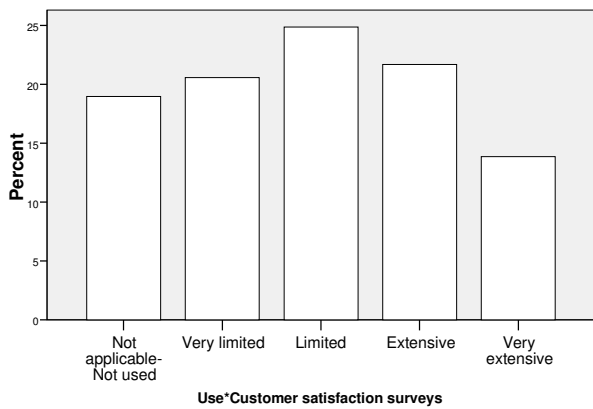
Use*Quality plan



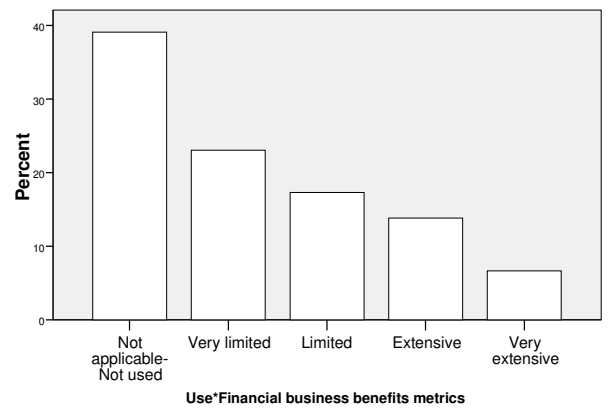
Use*Medium-term post evaluation of success



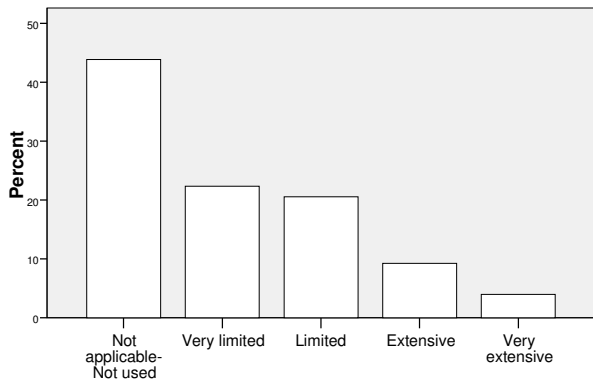
Use*Customer satisfaction surveys



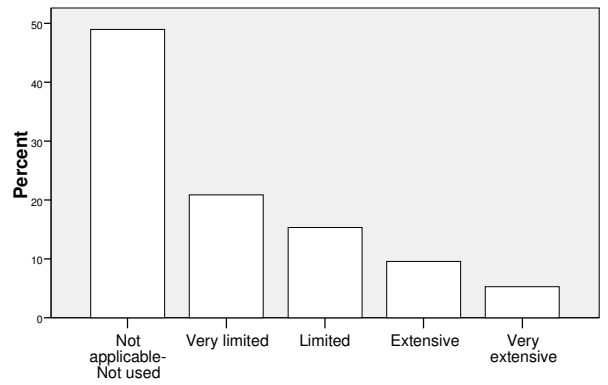
Use*Financial business benefits metrics



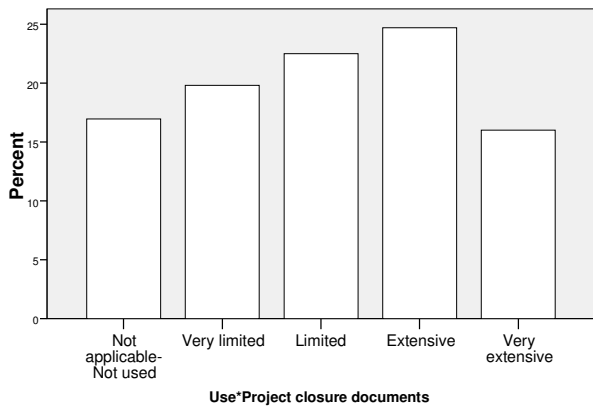
Use*Non-financial business benefits metrics



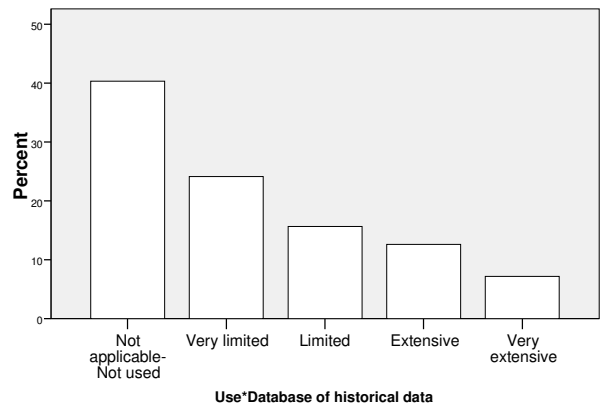
Use*Database of lessons learned



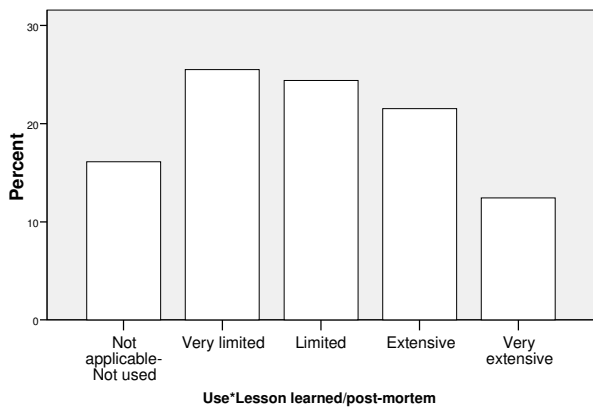
Use*Project closure documents



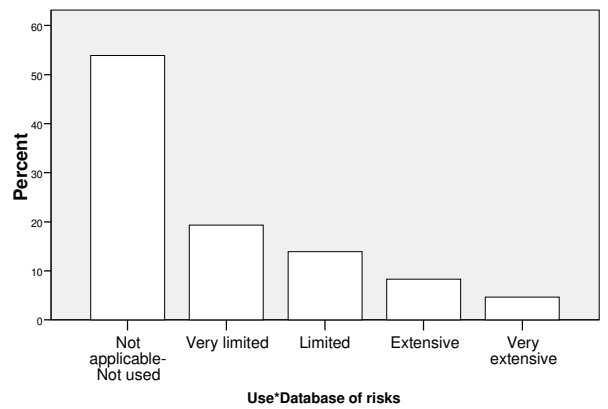
Use*Database of historical data



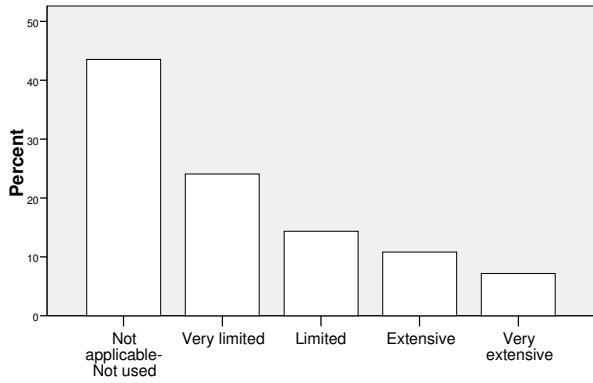
Use*Lesson learned/post-mortem



Use*Database of risks

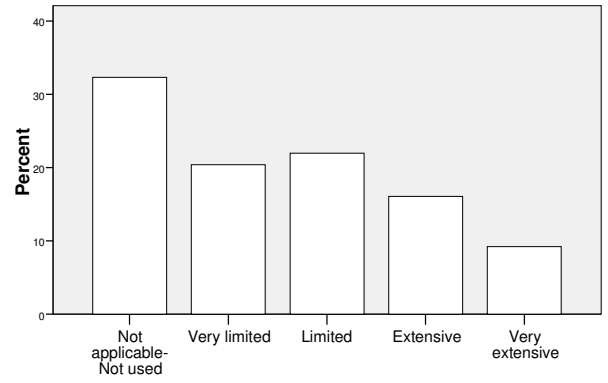


Use*Database for cost estimating



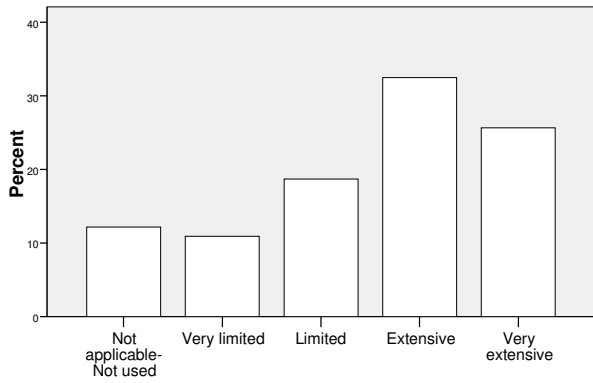
Use*Database for cost estimating

Use*PM software for resource leveling



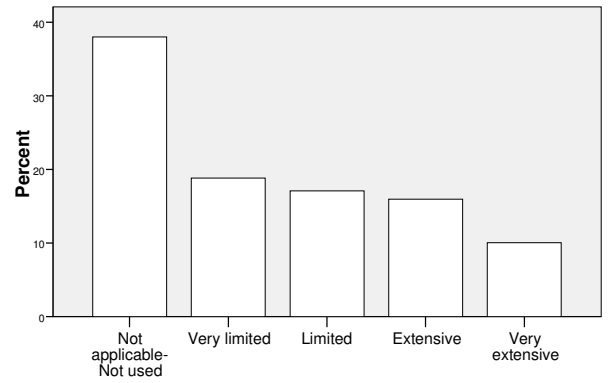
Use*PM software for resource leveling

Use*PM software for task scheduling



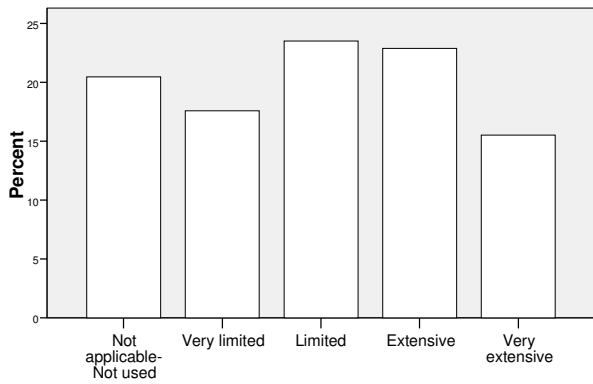
Use*PM software for task scheduling

Use*PM software for multi-project scheduling



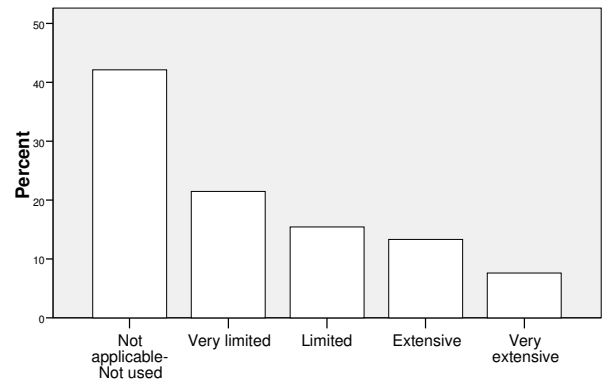
Use*PM software for multi-project scheduling

Use*PM software for resource scheduling



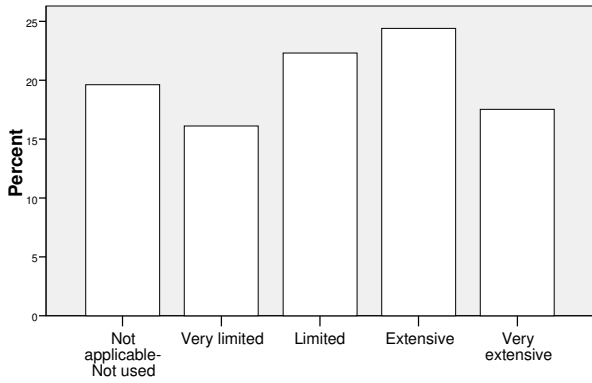
Use*PM software for resource scheduling

Use*PM software for multi-project resource management

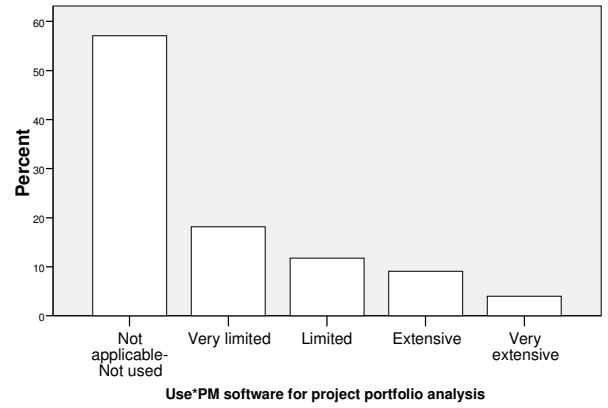


Use*PM software for multi-project resource management

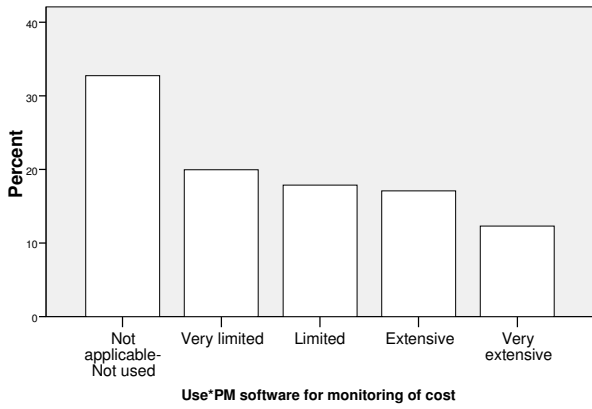
Use*PM software for monitoring of schedule



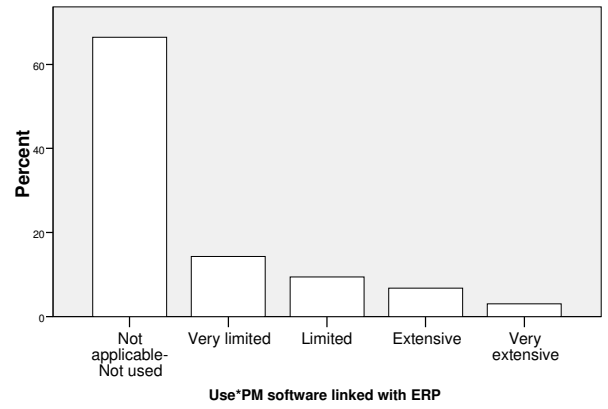
Use*PM software for project portfolio analysis



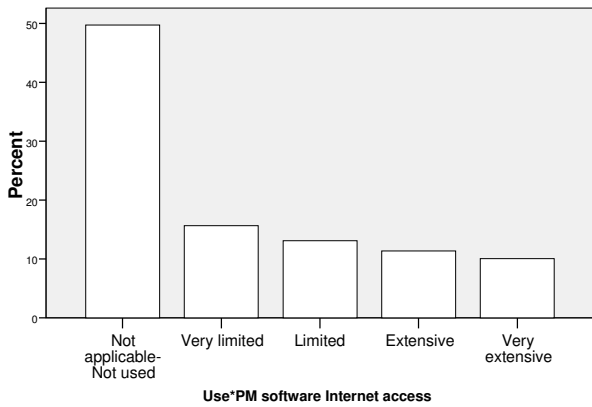
Use*PM software for monitoring of cost



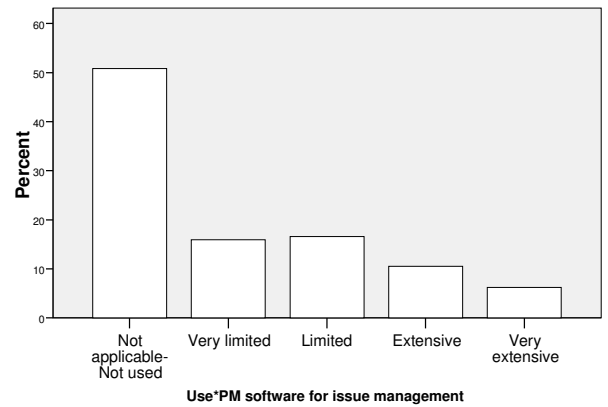
Use*PM software linked with ERP



Use*PM software Internet access



Use*PM software for issue management



Use*PM software for scenario analysis

