THE BOTTOM LINE: HOW PROJECT MANAGEMENT CAN HELP YOU MAKE MORE MONEY

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1. INTRODUCTION

In the business world, the term "bottom line" corresponds to the net profit line in financial statements. The term "bottom line" however, can also refer to the most important point, the key issue or the end result of a statement or document. In the real world, however, the "bottom line" often simply refers to making money. In the practice of project management, the bottom line can refer to any of the following questions:

- How can project management help save money?
- How can project management help increase revenues or profits?
- How can project management help the organization be more successful?
- How can project management help individuals make more money and be more successful?

This paper relates those questions to the bottom line of making money. In its most basic application, project management can reflect an old American proverb: "A dollar saved is a dollar earned!" When applied to programs, portfolios of programs and projects, or global enterprises, modern project management can lead to millions of dollars of extra income.

This paper is written for persons at four levels of an organization: the project manager; the program manager; the chief executive officer and the individual professional. An individual may also progress through each of those roles during his or her career, in which case the benefits of project management at different points in one's career can be shown. This paper is for executives in Russia and elsewhere who must consider the practical benefits of investing in project management, that is, those who want to make more money.

2. WHY IS MONEY IMPORTANT?

At first glance, this seems like a ridiculous question, for two main reasons: (1) As any CEO knows; profits and cash are needed to operate the business; replace plant, equipment and other resources used during operations; and to invest in the future products, services and growth; and (2) as any program or project manager knows, budgets have a habit of getting used up quickly; projects run out of money; changes in scope, schedule or costs require more funding; resources cost more than planned; projects are started without sufficient capital in order to win approvals, etc. etc.

The discussion of money as motivation for project management is important for another fundamental reason. For many years, various project management experts and organizations have been trying to convince executives, especially the CEOs of large organizations, of the benefits of project management. Various studies have been completed, including significant research sponsored by PMI, in which a range of benefits has been identified by organizations that implement formal project management.[1] A study by the Center for Business Practices in the USA in 2001 determined a wide range of benefits in areas related to financial measures, customer measures, project and process measures, and learning and growth measures. [2] Knutson introduced four "plateaus" for measuring return on investment (ROI), including several good formulas for calculating "Benefit to Cost Ratios", "ROI%", and "Net Benefits Ratio". [3]

These efforts have not been sufficient for gaining the attention of senior executives. The message has not been strong enough or direct enough. The fact of the matter is, GOOD PROJECT MANAGEMENT MAKES MONEY! For those of us in the project management profession, this becomes intuitive. For those who are not familiar with the many ways that modern project management can help save money, increase profits and increase value, they must be educated more directly and more forcefully.

3. MODERN PROJECT MANAGEMENT

History of Modern Project Management

Some history of modern project management is useful for understanding the background and substance of today's project management principles and concepts. The history of project management also lends credibility and relevance to the project management profession. Modern project management is generally accepted to have begun in the 1950s and 1960s with work in the defense, space and construction industries in the USA, Russia

and Western Europe. The development of the program evaluation and review technique (PERT), critical path method (CPM), and earned value-based cost/schedule control systems criteria (C/SCSC) led to a multitude of techniques, methodologies and software tools for scope, schedule and cost control on projects. New tools and techniques were developed during the 1970s and 1980s and the project management profession began to grow. During the 1990s, the project management field and profession expanded dramatically as organizations sought to accomplish their goals faster and more efficiently. Project management became recognized as one of the best ways for accomplishing corporate goals, developing new products and services, and implementing new technologies. The practice and profession of project management today have reached the mainstream in modern organizations.

There is not enough space in this paper to explore the history of project management in detail. Fran Webster provided a good summary of the early years of project management and project management concepts in Chapter One of Paul Dinsmore's AMA Handbook of Project Management [4]. David Cleland also provided a good summary discussion of the early years of project management in his strategic project management textbook [5]. There are many other good sources for this information.

Project Management Body of Knowledge

Any project manager, program manager or individual professional who wants to use project management to make more money should become familiar with the project management body of knowledge. PMI's PMBOK© Guide defines the Project Management Body of Knowledge as \"The sum of knowledge within the profession of project management. As with other professions – such as law, medicine and accounting – the body of knowledge rests with the practitioners and academics that apply and advance it." The PMBOK© Guide presents the project management body of knowledge in the context of nine practice areas of knowledge; project integration; project scope management; project time management; project cost management; project quality management; project communications; procurement and contracts management; human resources management; and project risk management. [6]

PMI's PMBOK© Guide has been challenged as incomplete. For example, Gareis identified five areas that should be included for a more complete understanding of the project management context: (i) design of project organizations; (ii) project-specific cultures; (iii) project boundaries; (iv) project complexity; and (v) project dynamics. [7]. Other interpretations of the project management body of knowledge have also been published or are under development in Japan, the UK and several other countries. An Earned Value Body of Knowledge has also been suggested as a more integrated approach to project management. [8]. Youker suggests that we must move to a new level, identify a taxonomy of project management, and develop extensions to the PM body of knowledge that define differences in requirements and approaches for different kinds of projects. [9]. In fact, a tremendous amount of knowledge, methodologies, techniques, applications and theories of project management have been developed over the last thirty years, primarily in the industrialized parts of the world, with further development of the PM body of knowledge to be anticipated. Some grasp of the depth and dimensions of the project management body of knowledge, which can be gained from research or professional project management associations, is useful for maximizing the benefits of using project management.

Project Management Standards

As in any field of professional practice, project management standards provide a benchmark for measuring results. PMI's PMBOK© Guide has been officially recognized as a standard in the USA by the American National Standards Institute (ANSI), as has the Earned Value Management System standard published by the National Defense Industrial Association (NDIA), the latter standard identified as ANSI standard # 748. Other project managements standards include ISO 10006 (Guidelines to Quality in Project Management), British Standard BS 6079, German national standard DIN 69 900 series, French national standard x-50-100 series, Association for Project Management Body of Knowledge (APM BOK, version 3.0, in the UK), AFITEP Criteres de matrice (issued by the Association Francophone du Management du Projet: Matrice d'evaluation en management de projet, edition Janvier 1996), PM-KANON (issued by PM Austria), IPMA Competence Baseline, Australian National Competency Standards for Project Management (sponsored by AIPM), Canadian Cost/Schedule Performance Management Standard, Japanese PMBOK, and Prince 2 in the UK. [10]. Work is underway by a Global Standards Working Group to develop a global PM body of knowledge. Program and project managers who wish to maximize the benefits of project management should become familiar with the PM standards that apply in the country or industry in which they are working. In order to make the most money, program managers should consider requiring all of their project managers and key project team members to obtain a project management certification.

Actual Practice of Project Management

The most experienced project and program managers do not always make the most money for their organizations. Project managers must learn from their own experience as well as from the experiences of others.

This is why "benchmarking" has become so important in the field of project management in recent years. One's own experience or performance level should be periodically compared to others in the same industry or for similar types of project. In addition, actual performance must be compared to theory (embodied in standards) in order to identify improvements that are still necessary. Numerous papers have been published on benchmarking [11, 12]. Another way to learn from others is to study project management "Best Practices" and "Lessons Learned". There has also been much useful research and many papers published on these topics in recent years. [13,14]. Finally, it can be useful to study project failures and mistakes. [15,16]. In order to be the most successful and to make the most money, project and program managers must understand how to implement project management, how to avoid mistakes, and how to be both practical and effective in their own organizational environment or situation.

Philosophy of Project Management

David Cleland discussed philosophy in his important 1994 textbook on strategic project management, in which he states, "A philosophy is also the system of motivating concepts and principles surrounding a field of study and practice." He also stated, "..the philosophy that we hold about project management influences almost all the decisions that we make and implement in the project management way of doing things."[17]. I agree. It is why we in the project management profession intuitively understand the benefits and value of project management. We have embraced project management as a philosophy of business. We think in terms of programs and projects, and best practices for managing those programs and projects. Those who embrace the philosophy of project management will have the greatest opportunity to maximize the benefits from project management, and therefore to make the most money.

4. IMPORTANT TRENDS IN PROJECT MANAGEMENT

Several trends in the world of project management have emerged in the last five years that support this paper.

Growth and Maturing of Project Management Discipline

During the last thirty years, a wide variety of project management techniques, methodologies, systems and tools have been developed. These tools initially addressed the "science" of scheduling and cost control, leading to the development of sophisticated software programs and tools. Those tools have continued to evolve, keeping pace with advances in computing technologies. Various "theories" and concepts evolved for defining, organizing, planning, reporting and controlling project scope, schedule, cost, quality, resources, and risks on projects. All aspects of contracts and procurement have been studied, with tools and techniques published. These have been well documented, and have provided organizations and professionals with many tools needed to help manage projects. During the last ten years, additional developments have occurred associated with the human aspects of managing projects, such as communications, motivation and team building, leadership and conflict management. A robust set of project management principles and methodologies is now available worldwide. There are now many books, software tools and other resources available. [18] Those tools have been used with different levels of success by different organizations. [19]

More Projects and Management-by-Projects

Project management methodologies have arisen because of projects. Over the last twenty years, society everywhere seems to have an increasing "project orientation". More projects are visible in all aspects of our lives. This is true in business, government, society at large and even in our personal lives. Projects are now common and visible in all industries and enterprises. In the public sector, nearly all activities financed with public funds turn into programs and projects. Projects can be huge, multi-national, billion dollar mega-projects involving thousands of persons and lasting for years; they can be small, single person, individual projects accomplished in a few days; or anything in between. Kallman recently went so far as to state "Everything's a Project", from "an ordinary Scandinavian perspective". [20] Dinsmore made the same statement in his seminal 1999 book on enterprise project management. [21] In industries and organizations where business is conducted under contracts performed for customers, projects and management-by-projects has grown as a logical and common practice. At the same time, more organizations have recognized the practical advantages of establishing projects, assigning project managers and project teams to those projects, then monitoring the completion of those projects using well defined and readily available reporting systems. In information technologies, telecommunications, software development and other technology-heavy industries and organizations, where product life cycles have been shortened and global competition has increased, management-by-projects and project management have been widely embraced in recent years.

Growth of Project Management Professional Associations

The rise of projects and project management has resulted in the formation and growth of professional project management associations and societies worldwide. Beginning in 1967 in Europe and 1969 in the USA, professional project management associations were established by professionals working on projects. Initially,

most formal project management was found in the aerospace, construction, defense, petrochemical, pharmaceutical and other similar industries. As mentioned above, project management has now been embraced by practitioners in all industries and in all types of organizations, ranging in size from small one-person consulting companies to large global corporations and government agencies. PMI, the world's largest PM professional association based near Philadelphia, has seen its membership grow from around 25,000 members ten years ago to approximately 100,000 members today. PMI has members in over 100 countries and chapter in 40 nations. The International Project Management Association, based in Europe, has approximately 35 national PM associations and members in nearly 100 countries. National PM associations or PMI chapters have been established in all industrialized countries and many developing economies worldwide, with most of them experiencing growth in membership and activities. Any CEO, program manager, project manager or professional that is serious about using project management should join one of these associations in order to gain access to the latest information, tools and developments related to project management.

Enterprise Project Management

The growing number and visibility of projects within organizations, and the increasing knowledge and usage of project management in some industries, has led to the growing trend of Enterprise Project Management (EPM). Dinsmore defines EPM as an organization-wide managerial philosophy based on the principle that company goals are achievable through a web of simultaneous projects.[22] It may be defined differently by various experts and organizations, but EPM is where executives decide to implement professional project management across multiple projects and often throughout an organization. This is generally accompanied by efforts to standardize processes and procedures for managing projects within that enterprise. Standardized procedures and tools are needed to ensure consistency and to improve performance across the entire organization. This can lead to better and more timely reporting on projects, providing top executives with more reliable information for decision making. As EPM is established, standard performance measures can be reported and productivity improved. A project office or project management office is a powerful approach to successfully implementing EPM. Over the last five years, information about EPM and the use of the project office has become available from a wide range of sources.[23,24] EPM is of strategic importance to senior-level executives, especially program managers and CEOs, who wish to harness the power of project management over an entire program, division or enterprise – that is, for those who want to make more money.

Project Portfolio Management

Project portfolio management (PPM) has also grown in popularity among sophisticated corporations in some industries and countries over the last five years. PPM is step beyond EPM in which companies are perceived as enterprises consisting of portfolios of programs and projects, which are aligned with the organizations' strategic plans and priorities. Through the use of PPM, it becomes clear to the CEO and senior management how the outcome of various projects can affect the entire organization. PPM provides clear visibility of the strategic importance of projects and how project management directly affects the enterprise. Within organizations, projects may be grouped by program, by similar project type, geographic region, customers or markets. Projects within each portfolio can be strategic, operational or for compliance with laws and regulations. A number of models and papers describing PPM have been published and are well worth studying.[25,26] An important related topic is the Strategic Project Office, for which Kent Crawford has recently published a classic textbook.[27] PPM is a subject for the CEO and, in the long run, is the best way to make the most money through the usage of project management.

Project Management Maturity

The final significant trend to mention is organizational project management maturity. Several project management maturity models have emerged in recent years [28,29] and PMI has a major project underway to publish a new PM standard for organizational project management maturity within the next 12-18 months. These models provide a basis for organizations to determine their level of maturity with regard to the use and benefits of project management. The most mature organizations (level five) enjoy a high level of efficiency and success on projects throughout the enterprise. Recent research by Ibbs and Reginato at the University of California at Berkeley suggests that companies with higher maturity in project management have a higher ratio of return on investment to project management-related costs. [30] Those companies make more money with project management.

5. PROJECT MANAGERS MAKE MORE MONEY

Now, how can a project manager make the most money, for his organization and for himself, with project management? First, he or she must identify and use the best project management principles and tools that are available and most appropriate for the project. The project manager and the project team should be educated and trained in project management principles. Here are some practical suggestions for project managers to get the most out of project management:

- Join a project management professional association, to gain access to latest information and to demonstrate that you are serious about project management.
- Obtain a well-respected project management textbook and become familiar with the basic principles of
 modern project management. Study project management and build a library, even if small. Purchase PMI's
 PMBOK© Guide and become familiar with other project management standards.
- Study "Lessons Learned" and other practical aspects of project management published by others.
- Obtain a professional project management Certification, to demonstrate to yourself and others that you know and understand project management principles.
- Develop a Project Management Plan, a plan for how project management will be implemented and used on your project. The plan should be "by the book", covering the basic topics included in any good PM textbook. Involve project team leaders in the development of the plan. It need not be a long document, but should include specific steps and procedures.
- Complete appropriate project kickoff and planning activities and documents, to ensure that scope, schedule, cost, quality and risks are clearly defined. Involve the project team in these activities.
- Proceed "Step-by-Step". Don't go too fast, even if there is great time pressure to complete the project. As project management "experts" know too well, "Failing to plan is planning to fail!" Systematic project planning and initiation will help ensure success.
- Systematically implement the plans, monitor and report progress, and control changes.
- Plan for, monitor and manage stakeholder communications, including reports to customers and upper management, communications with suppliers and contractors, and press releases to the public regarding the project.
- Use modern software for project management, including Web-based tools. Include these tools in the project budget. If they are not available within the organization, purchase or lease them for the project.
- Obtain upper management sponsorship and support. Keep management informed of progress but only
 involve them as needed.
- Hire consultants to help implement project management, but only if needed.
- Manage the project schedule, because schedule slippage costs money. Develop good cost and schedule
 estimates. Budget carefully, accurately and completely. Perform cost/benefit analysis when needed.
 Identify cost variances and address them immediately. Understand tradeoffs between cost, schedule and
 quality. Always plan for the reduction in resources after usage.
- Always perform risk analysis on your projects, and identify contingency plans.

If a project manager can maximize project management performance on his or her project, and complete the project successfully, then benefits should include a performance bonus (MORE MONEY), salary increase (MORE MONEY), promotion (to more responsibilities, larger project, bigger title), personal satisfaction, stronger relationships (with project stakeholders, co-workers, company executives, customers), and personal growth. A successful project should result in new products or services, as the least cost and at the earliest time possible, resulting in increased revenues or cost savings for the organization (MORE MONEY).

6. PROGRAM MANAGERS MULTIPLY MONEY

The program manager, or a company manager who is responsible for multiple projects, can make the most money by multiplying the success of individual projects under his or her command. Here are some suggestions:

- Purchase a good textbook or two on project management and become familiar with the latest project management principles and techniques.
- Become familiar with both project management and enterprise project management theory and practice.
 Then implement EPM as quickly as possible, to ensure that all projects within your program are planned and managed according to company standards and your own requirements.
- Hire or promote good project managers, then support PM training, education and professional development for the project managers and their team members.
- Require that all project managers belong to a professional project management association and obtain a professional project management certification.
- Require a project management plan and a project plan of scope, schedule and budget that can be used as a baseline for performance reporting over the life of the project, integrated baselines preferred.
- Require risk analysis and contingency plans for each project.
- Require regular (weekly or monthly) reports from all project managers and covering all projects. This should include monthly cost performance reports, variance analysis and "get well plans".
- Establish a project office within the program, if one does not exist at the company level.

In essence, the program manager must implement Enterprise Project Management as completely and effectively as possible across the projects for which he or she is responsible. The results should include more successful projects, resulting in the same benefits as for an individual project manager, only larger: performance bonus (MORE MONEY), salary increase (MORE MONEY), promotion, personal satisfaction, stronger relationships (with project managers, other company executives, customers), and personal growth. MORE MONEY for the organization should also result, through cost savings or sooner use of the output of the completed projects.

7. THE CEO CAN MAKE THE MOST MONEY

A chief executive officer (CEO) is responsible for the overall success of an organization. That success means survival and success in the short-term, and strategic direction and growth for the future. Profits are needed for survival in the short term and to replenish resources and infrastructure. Significant profitability and capital are needed to support future growth, which always requires new products, services, facilities, acquisitions or other investments. Project management is the perfect tool for a CEO to ensure maximum efficiency in short-term operations through managing by projects and enterprise project management. Project portfolio management can ensure that programs and projects are aligned with corporate strategies, which should ensure higher profits and success in the future. Archibald suggests that "to gain the full power of project management the CEO must demand that (i) project portfolio management fully supports the organization's growth strategies; (ii) a coherent project management process exists and is fully understood; (iii) this process and the supporting systems and tools are fully integrated with corporate policies, procedures and systems; and (iv) the Internet and World Wide Web are used properly in the daily project management operations. [31]

The CEO that wants to make the most money will focus attention on growth, efficiency, profitability and cash flow. Growth requires the development of new products, services or markets (projects and project management can maximize!). Maximum efficiency requires cost savings, low overhead, streamlined operations and shortest time-to-market (project management can maximize efficiencies!). Profitability requires higher revenues, lower costs, competitive advantages, high quality and customer satisfaction. (project management can help maximize!) Positive cash flow requires the ability to control schedules and resources (portfolio project management can help maximize!). The CEO can maximize the benefits of project management by embracing and implementing Enterprise Project Management and Portfolio Project Management. Here are a few suggestions for CEOs and senior executives:

- Embrace professional project management. Read a project management book and learn what you can about modern project management concepts, tools and benefits.
- Implement EPM and PPM. Identify all projects within the organization, then align the projects in programs and portfolios for management purposes. Relate each project directly to strategic objectives and priorities.
- Establish project manager, program manager and portfolio management responsibilities. Hire or promote good and experienced project and program managers.
- Hire at least one project management expert or experienced project manager to establish a project office or Strategic Project Office. Plan and implement enterprise-wide project management policies, procedures and tools
- Consider re-organizing the company to minimize overhead expenses, to streamline the organization, and to maximize the resources assigned directly to programs and projects. This will focus resources on projects whose outcomes are aligned with company strategies and priorities, as well as your own.
- Require monthly performance reports covering all projects, with clear and honest variances identified, so management attention can be focused on those projects that need help.

While it takes time to achieve maximum efficiency, an immediate result should be higher visibility of project performance. As project achievements begin to improve, so will financial performance of the organization, either through decreased costs or increased revenues. Results should include more successful programs and projects with lower costs (MORE MONEY), higher profitability (MORE MONEY), more resources available for future growth (MORE MONEY), happier customers who repeat business (MORE MONEY), happier shareholders who invest more (MORE MONEY), happier employees who cause fewer problems (MORE MONEY), less employee turnover costs (MORE MONEY), higher performance bonus (MORE MONEY), salary increase (MORE MONEY!), and even greater personal satisfaction.

8. PROJECT TEAM MEMBERS MAKE MORE MONEY TOO

Project team members contribute to the success of each project and to the benefits and rewards accruing to the project manager, program manager, CEO and organization. Pproject team members who successfully learn, implement and use the powerful concepts and tools of modern project management should realize personal financial rewards in two fundamental ways: through performance-based compensation and via career

progression. Within an organization, some element of salary should be performance based, with some financial rewards given for successful completion of projects. Bonuses should be common for project participants. Various publications and research in recent years have identified project management as one of the most valuable and sought-after skill sets for the rapidly changing economies of the late twentieth and twenty-first centuries. This is one reason for the high rate of growth in PMI membership over the last seven years, and as large organizations around the world have sought project managers and project management professionals to manage and oversee projects in every industry and every location imaginable. In addition, PMI periodically conducts salary surveys among its members with the results clearly showing that project management professionals receive relatively high salaries. Even during the economic downturn in the USA of 2002, project managers were in high demand. The bottom line is that project management professionals should MAKE MORE MONEY than those who do not know PM.

9. CONCLUSION - EVERYONE MAKES MORE MONEY

I have tried to show that project success can lead to financial rewards for organizations, CEOs, program managers, project managers and individual project team members when modern project management is fully implemented and used. Many concepts, models, tools, theories and practices are now available for the management of any type of project. A robust project management profession now exists that includes professional associations, research, standards, certifications, publications, training, education and resources. There are now many example of organizations that have successfully implemented project management, and even an organizational project management maturity model for self evaluation. Evidence has been published of the benefits and rewards for both organizations and individuals resulting from the successful use of modern project management. The bottom line is, the successful use of modern project management can help anyone MAKE MORE MONEY!

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