



Vol. XIII, Issue No. 1 · 1st Qtr. 2008

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PREVENTING PROJECT PROLIFERATION: MANAGING YOUR OPTIMAL PROJECT PORTFOLIO

by Eric Morfin, PMP, NPd SIG Past Chair

Project Proliferation

A medical products manufacturer needed to reduce complexity in the company project portfolio. Anecdotal evidence, interviews, and analysis, indicated that the organization was attempting to conduct too many projects. The portfolio ran the gamut from strategic product development projects to essential business maintenance projects, ranging in scale from quite small to very large. The company project portfolio lacked focus as a whole, while individual projects were seldom well-defined, planned, or implemented. The project staff felt overwhelmed by the number of responsibilities assigned to them and frustrated by their inability to get things done.

The Optimal Project Portfolio

Many projects run over time and over budget. Among the factors cited are inadequate definition, shortages of key human and other resources, poor management skills, and conflicting priorities. With projects a way of life and so many factors contributing to project performance, there is a clear need for a systematic, integrated approach to improving project portfolio performance.

The Critical Skills approach to Optimal Project Portfolio management helps companies select the best projects for their businesses. Decision Analysis, a proven Critical Skills tool, is applied, incorporating consistent objectives, rigorous evaluation, risk analysis and database management to guide client decision making. Once a portfolio is selected, skills for planning and managing projects can be effectively practiced. Finally, the social and technological environment in the company must support improved project performance.

Continued on page 11

Upcoming Events



PMI Global Congress EMEA
May 19-21, 2008

PMI Global Congress Latin
America
August 11-13, 2008

PMI Global Congress North
America
October 18-21, 2008

If products represent the
lifeblood of the firm,



projects represent the
skeletal structure.

LETTER FROM THE CHAIR

by *Brian Piper, PMP, NPD SIG Chair*

As your newly elected Chair, I would like to thank and acknowledge our past Chair, Eric Morfin, for his leadership and as well the commitment by our past Board on delivering value to our members.

One of the values of membership is participation in our recurring webinars, which continue to be well attended and growing in interest with each presentation. Our February 15th webinar by Eric Cahill, of our Board, titled ***Practical Steps for Implementing the PMO***, was our best attended to date.

Also as part of our effort to deliver new product development processes, tools and knowledge from different industries to our members, our highly regarded newsletter included many relevant articles and reviews. We encourage you to revisit any of those past newsletters/articles on our website, www.pminpdsig.org and, as well, ask your input on any subjects of interest for our future newsletters.

We urge our membership to continue to share your expertise and experience across the membership through our NPD Yahoo!® Group www.PMI_SIG@yahoo.com and any face-to-face opportunities such as your local chapter meetings.

We are always looking for new ideas about value to bring to your membership, so please contact any one of your Board members with your thoughts. Your feedback is the only way we can improve value.

Again, your Board is here to serve and execute the needs of our group and to grow the exchange of new product development knowledge across industries.

Thanks for the opportunity to serve as your Chair.

Brian Piper, PMP
2008 NPD SIG Chair

EARNED VALUE FOR TECHNOLOGY DEVELOPMENT PROJECTS AN INNOVATIVE APPROACH

by Lee Lambert, PMP, Lambert Consulting Group Inc.

In the profession of Project Management, **Lee R. Lambert, PMP** has established the standard against which others in the field are measured. Throughout a fast-paced 18 year corporate career with Chicago Bridge & Iron, Lawrence Livermore National Laboratory, General Electric (Nuclear Reactor Division) and Battelle Memorial Institute--where he worked almost exclusively with engineers and scientists--he quickly ascended to senior management positions and was responsible for the development and implementation of ground-breaking, sophisticated Enterprise project management processes for Engineering, Medical Diagnostics and Research & Development. In 1981, as a result of his pragmatic application of the PM methodologies, he was invited to be an integral part of the creation of the Project Management Institute's (PMI) Project Management Professional (PMP) Certification Program. He is a recipient of the PMI's Distinguished Contribution Award and was a member of the PMNetwork/PM Journal Editorial Review team for over a decade. He also contributed as a Subject Matter Expert (SME) for the PMI's Earned Value Management System (EVMS) Practice Standard. Educated as a Mechanical Engineer, he is a holder of a Master's Certificate in Project Management from George Washington University. He most recently has been awarded one of the PMI's highest honors for his ground breaking applied learning programs: The Professional Development Provider of the Year 2007. As an author of two books and 32 professional papers, no other project management educator/speaker can contend with his uncanny technical knowledge, material content and refreshing and entertaining delivery—his hard-hitting, but humorous style, has mesmerized more than 40,000 students in 22 countries. In May, Wiley Publishing retained Lee as author of **PMP Prep A-All-In-One Desk Reference Guide**. Lee takes the saying; "Been there, done that, got the T-shirt" to a new level.

Lee can be reached at Lee@LambertConsultingGroup.com.

High technology development with substantial research (R) content, have often found the use of the traditional cost (\$) based Earned Value Management System (EVMS) techniques too cumbersome, too restrictive, and considerably less than effective.

Despite this relatively bad experience with EVMS on R & D projects, there is a modified EVMS approach that has demonstrated the capability to provide realistic, accurate and timely technology based decision support information. This information is useful for project managers and Work Breakdown Structure (WBS) Control Account managers and can be created without relying on dollars as the common denominator data element.

This creative technology driven approach focuses on a new methodology for establishing and managing development project schedules. It introduces a way to combine three independent "point values" data elements to generate the project's technical Performance Measurement Baseline (PMB). These three informative components of the development project EVMS methodology are:

1. the specific position of each project Work Package (WP) on the Precedence Diagram Method (PDM) relative to the Critical Path/Float Path
2. the assessed technical difficulty of each specific project WP as provided by the individual contributor responsible for the delivery of the WP objective
3. the level of Risk (uncertainty of outcome) for each specific project WP as assessed by the those with the skill set/technical expertise associated with the WP scope

Continued on page 4

EARNED VALUE TECHNOLOGY DEVELOPMENT CONT.

The allocation of WP “EV Point” value (aka Planned Value) will be determined based upon the simple schedule sensitive formula:

$$\text{Factor 1 (F1)}[\text{Factor 2 (F2) + Factor 3 (F3)}] = \text{WP Point Value}$$

Using this innovative formula, the maximum EV point value for any one WP is 300 and the minimum value for any individual WP would be 10 (See Figure 1)

F1 – EV Point Value determined by position of WP on/off project critical path

WP CPM Schedule Position	EV Points
On Critical Path (CP)	30
10 days or less OFF CP	25
11 or more days off CP	15
30 or more days off CP	10

When the proper EV Point values have been determined for each specific WP, the EV Point values are assigned to the calendar time frame in which the WP is schedule to be completed. It should be clearly noted that since the EV Points are awarded only when a WP is completed, the shorter the individual WP duration the less distortion of the plan-to-actual comparison database. Subjectively earned EV Points associated with progress on the accomplishment of WP work scope can be awarded as work is done, but this “percent complete” earning technique is NOT recommended unless the use of objective indicator (OI) milestones are incorporated into the plan.

Once all WPs have been assigned an EV Point value based on the criteria illustrated in Figure 1 the points are assigned to the WP planned completion time and a Project Performance Measurement Baseline (PMB) curve (similar to the traditional project “S” Curve) is created and becomes the basis for variance analysis.

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As technical/development WPs are completed, EV Points are then earned. The total EV Points earned for the current reporting period, or the cumulative-to-date period, can be determined and compared to the expected achievement based EV Point plan represented by the PMB. These EV Point plan-to-actual comparisons can be generated and analysis conducted for the project total or any WBS subdivision of the total Development Project, ie; by individual WP, by technology or functional group, by product component, or even by individual responsible contributor.

This unique application of EV concepts to a high uncertainty development project provides management information that is, by its very derivation, clearly consistent with all planned technical work and the work that has actually been accomplished.

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EARNED VALUE TECHNOLOGY DEVELOPMENT CONT.

Obviously, the EV Point integration of planned effort and actually accomplishment relies heavily on candid input during the planning and progress reporting by the project management professional. The development project manager serves as the catalyst for the development of the EV Point data and as a coordinator and/or integrator of the EV Point data at the various reporting time frames and at selected project project summary levels.

It must be noted that this approach is focused on managing the development project schedule using an EVMS approach without intending to give any serious consideration to the project cost relationship. This methodology was created for a Fast Track Development Project where cost was not a serious consideration. In order to realize the full range of potential benefits using the various EVMS status/forecast formulae, it is imperative that the WBS is properly structured and decomposed AND carefully numbered to facilitate the many different "information sorts" needed to support the project management decision making process throughout the life cycle of the project.

Author's Note: This innovative EVMS approach was successfully used on a new product development blood glucose monitoring project for Roche Labs (formerly Boehringer Mannheim) to comprehensively manage and achieve a very critical market enter schedule date. This approach should only be used when cost management is secondary to schedule achievement.


F2 – EV Point Value determined by the project type and the assessed level of technical difficulty

WP Type	EV Points
TYPE I Pure Research (Concept)	Not recommended for extremely high levels of uncertainty as EV add little value
TYPE II Development (Post Research)	3-5 EV Points based on assessed technical difficulty (greater the difficulty-- higher the value)
TYPE III Enhancement or Improvement (Upgrade)	1-3 EV Points based on assessed technical difficulty (greater the Difficulty— higher the value)

F3—EV Point Value determined by assessing each work package to evaluate any risk factors that could have significant impact on the project

All Project WPs	EV Points
TYPE I Pure Research (Concept)	0-5 EV Points based on WP owners level of confidence that the any risk can be managed (greater the confidence lower the value)

Lee R. Lambert, PMP
PMI PROFESSIONAL DEVELOPMENT
PROVIDER OF THE YEAR 2007

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PRODUCT MANAGEMENT AND PROJECT MANAGEMENT: *TWO FUNCTIONS, TWO VITAL ROLES*

By Steven Haines

For the past few years, the business world has suffered from “growing pains” and the corporate community is certainly enduring its share of turbulence and disorder. Among the many causative issues, mergers and downsizing are creating conflicts over strategies, roles and responsibilities, and corporate culture clashes. The current shift to outsourcing of important business functions like Product Development and Customer Service is another area of concern.

To bring some order to this organizational chaos, we will explore the vital roles of two of the most critical business functions that, in the words of Rodney Dangerfield, “get no respect.” These essential fields are **Product Management and Project Management**. In most organizations, these functions are symbiotic, yet their purposes are distinctly individual and different. Moreover, the perceptions of those who fill roles in these areas are often confused about goals, methods and responsibilities. Even the terms “product management” and “project management” are used interchangeably despite their discrete purposes.

In this article, we will describe how each function should operate within the framework of the organization. Then we will compare and contrast them so that you will have a clearer idea of what each job involves, where it fits, who performs each job, how they interrelate and why every one of these jobs is important to the success of the firm. That said, we need a set of definitions to work with to clarify the terminology. First we will describe the terms Product and Project; then we’ll define the differing roles of Product Manager and Project Manager.

A **Product** includes any tangible or intangible item or service, or bundles of goods and services offered for sale. Products have a life cycle. They are conceived, developed, introduced to and managed in the market, over a period of time.

A **Project** is a series of activities and tasks which contribute to the creation or support of a product or service. Projects are organized within a systematic framework, utilizing appointed or allocated resources. The tasks are subject to dependencies (e.g. upon the performance of others) and risks (e.g. upon factors that can go wrong). The delivery of a **product** signals the conclusion of these project activities and tasks. Projects also have a life cycle. They have a start point and an end point.

Product Managers are individuals appointed to be product or product line “mini-business” owners. They are the leaders of cross-functional product teams. These teams are formed to optimize the product’s market position and financial return over its life cycle and their performance should be consistent with division and corporate strategies. (Source: Sequent Learning Networks.)

Project Managers are individuals responsible for planning, monitoring and controlling all aspects of a project. They must motivate and synchronize the assigned resources to achieve the goals of the project, while coping with the constraints of time, cost and consistent quality. Project Managers manage projects from start to finish. Here is the most important distinction between *products* and *projects*. *Products* represent the essence of the business – how it thrives, grows and brings revenue to the firm. *Projects* are the vehicles used to derive, deliver and support products, and any other business elements related to them.

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PRODUCT MGT. AND PROJECT MGT. CONTINUED

For example: a bank's offering of a new credit card. The credit card is the *product*. However, in order to get into the credit card business, several *projects* have to be undertaken. Shown below (within each of the functional areas) are some of these *project* types.

Marketing projects

- Conducting a market research project to determine the market segments to pursue
- Design the credit card – a design team is assembled to hire a design company and oversee the creation of the physical card and some of the advertising themes

IT and systems projects

- Order taking systems
- Transaction processing projects
- Complaint handling and management

Product launch projects

- Creating and managing advertising and public relations programs for print media and television
- Writing and designing inserts for direct mail campaigns

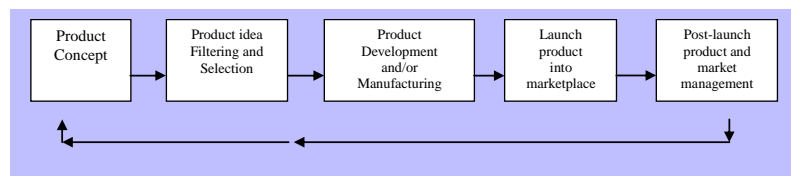
Underlying Methodologies of Projects

All projects use a standard methodology which includes project initiation, project planning, the execution of work, monitoring of performance against the plan, and project completion or closeout. A typical *project life cycle* appears as follows: Products are also managed using a fairly systematic methodology. These steps are shown below and then diagrammed for greater clarity.

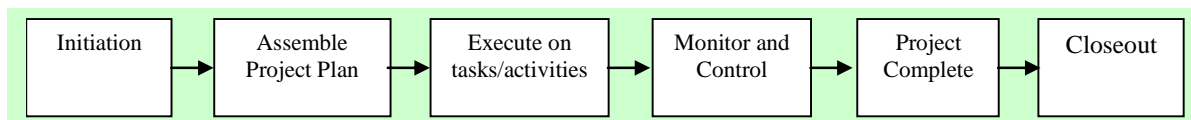
Products are managed using a fairly systematic methodology which includes the following steps (also diagrammed below for greater clarity):

1. The product is conceived from a series of ideas which originate from market or customer observations, competitive activities, customer suggestions, or new technology or market ideas
2. Many product ideas are then screened so that the firm can select the product or new product projects which fulfill the goals of the firm
3. Selected products or product projects are developed
4. Developed products are introduced to the market
5. Once the products are introduced, they are managed to optimize their overall performance, with attention paid to pricing, product content, packaging and design, advertising and promotion, distribution channels, etc.
6. As products move through their life cycles, new product ideas emerge, new market opportunities are uncovered, and thus, the cycle starts again.

A typical *product life cycle* looks like this:

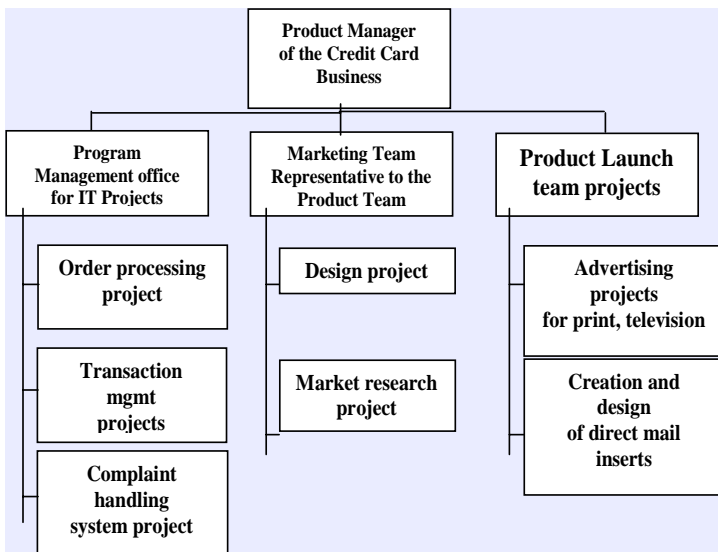


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PRODUCT MGT. AND PROJECT MGT. CONTINUED

All individual projects should have a project manager and roll-up to the product team. Some companies may actually have a separate program office where project resources are managed. However, in the final analysis, the product manager is responsible for the financial and market performance of the product. In some instances, the product manager can actually wear more than one hat, and be the project manager for several of the projects undertaken for the product team. In order to put this into some perspective, take a look at the chart below.



Points of Origin

The actual practice of product management is interpreted in diverse ways across organizations, often the result of the functional orientation of the people who are in charge of the firm's products, brands, or categories. Why the disparity? One reason is that there is very little of the Product Management body of knowledge taught by institutions of higher learning. Another is that too often there are no standard internal Product Management training programs inside corporations. Universities teach core business functions like Marketing, Engineering, Accounting, etc., but few if any include Product Management in their core course offerings. Therefore, Product Managers are usually "home-grown" and originate from those core functions (Marketing, Product Development, Finance, etc.)

Few certifications exist in this protocol. One is offered by the Association of International Product Management and Marketing (AIPMM.com); the other is from the Product Development and Management Association (PDMA.org). The total number of certified practitioners from these two organizations is less than 1,000 worldwide.

On the other hand, Project Management has a standard Project Management Body of Knowledge (PMBOK®) from the Project Management Institute (PMI). Their website contains the following definition: "The 'Project Management Body of Knowledge' is an inclusive term that describes the sum of knowledge within the profession of Project Management." A unified body of knowledge means that an organization can be assured that if they employ certificated Project Managers who have completed specific training, those Project Managers will have the skills to manage projects according to a standard methodology.

Common Realities

Product Managers and Project Managers share some common challenges. In most organizations, resources need to be secured from various business functions with agendas of their own. Functional organizations that are not aligned with corporate or divisional strategies may fail to commit those important resources, therefore jeopardizing product and project goals. Or when team members are provided, they often have other responsibilities. Since many people are reluctant to "push back" for fear of confrontation or retaliation, team members may over-commit, and then under-deliver. This, in turn exposes the projects and product programs to risks which could include the missing of a market window or a specific customer commitment.

Common Characteristics

Product Managers and Project Managers also share some common characteristics. They all need to have excellent organizational and interpersonal skills. They need to be relentless and persistent in the drive to achieve their teams' goals. Further, they need to possess qualities of leadership.

PRODUCT MGT. AND PROJECT MGT. CONT.

Teams don't just "rally 'round the cause;" they rally around the vitality and inspiration of the person who represents the cause. Finally, they need appropriate systems and tools so that data can be synchronized across the business to offer visibility into the performance of projects, effectiveness of resources, and the consequent success of the products and services of the firm.

Summary

Product management is re-emerging as a critical business function. Project management remains an important underpinning. If products represent the lifeblood of the firm, projects represent the skeletal structure. Both functions work in harmony in a cross-functional environment as they fulfill the goals of the organization. It is the responsibility of every member of the organization to understand these roles, and how vital they are to the survival of the business in fiercely competitive, ever-changing markets.

Steven Haines is the CEO of Sequent Learning Networks, a New York City based training company focusing on improving the capabilities of those who manage products & services, sequentlearning.com, 212-647-9100.

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PROJECT EXPERT BEWARE CAREER CROSS-BREEDING

by Michael Vinje & Michelle Burke

If you try to turn your business analyst into a project manager, you could wind up with a hybrid employee you don't want.

What do you get when you blend the responsibilities of a business analyst (BA) and those of a project manager (PM)? In short: a mess. In our practice, we frequently see this dangerous, though common, tendency to blend job assignments; it's an inclination that doesn't lead to successful project management.

Many companies wind up having one person perform both jobs because they don't understand the unique skill sets each role entails. Ideally your PM is a big-picture thinker, someone who likes to look at all the parts of the whole. This person excels at seeing how all the parts come together and craves control of the overall direction of a project.

A good BA, on the other hand, is detail oriented to the max. He focuses on critical business functions, drills into stakeholder concerns like a laser and wants to answer specific questions. The BA doesn't worry about scheduling -- or costs, for that matter. Instead, a solid BA tears into product requirements and specifications to make sure that the business side gets what it asked for. Like a good investigative reporter, an effective BA leaves no stone unturned in the quest to ensure that each team member does what he's paid to do.

Continued on page 11

Corporate Strategy

Corporate strategy frames the products and markets an organization will pursue and the projects necessary to serve them. The key contribution of strategy to the project portfolio is a set of weighted, measurable business objectives. Each project is evaluated according to these objectives to determine its place in the portfolio. Some projects will be critical, some will be necessary and some projects will not survive this strategic assessment.

Capacity Analysis

An analysis of project capacity – a compilation of the workdays available to do project work – should be completed before data on individual projects is collected. Data from company reports can be supplemented by interviews with resource managers estimating the percentage of staff time available for work on projects. The end result is an estimate for the whole company, by department, of the number of days available each year to conduct projects.

The Project Database

Because projects themselves are complex, and a portfolio of projects even more so, effective evaluation depends upon a project database characterizing each project. Basic project descriptions, including project name, objectives, work breakdown structure, and an estimate of resources by department in specific reporting periods provide a common basis for evaluation. These data are gathered on formatted spreadsheets and consolidated in a database. Depending on the consistency and sophistication of the existing project management methodology and software tools this can be easy, or very painful, but it is always revealing.

Each project is evaluated using a questionnaire-style worksheet, assessing performance on such objectives as financial return, market impact, and regulatory compliance. Adverse consequences (risks) for each project are also assessed.

A database accumulates the project descriptions and the project evaluations. The database, which can also be used for other large scale Decision Analysis efforts, facilitates accumulation and reporting of information on over 100 projects.

Project Data Analysis

The project database allows comprehensive reporting on the project portfolio.

The database also facilitates graphical analysis of the aggregate project to indicate the project capacity constraints faced by the company and the relative performance and risks of the projects in the portfolio. Links to other software, such as MS Project™ and time reporting systems, are easy to establish.

The compilation of project data, in combination with the capacity analysis, provides a number of useful comparisons. What resources are committed to projects compared to the resources that are available? Which projects generate the highest return with the lowest risk? Where are there resource bottlenecks in particular departments?

Decision Making

The analysis and reporting tools enable client decision makers to move easily between a macro view of the entire project portfolio and a more detailed view of each project. Tradeoffs between projects can be understood and effective decisions made. A more realistic balance is achieved between what should be done and what can be done.

Social and Technical Systems

The rigor of the Optimal Project Portfolio requires both social and technical changes. The performance system must encourage teams to work together.

Conclusion

There is considerable evidence that the shift to project-based work has not been accompanied by sufficient development of management tools to establish and maintain priorities among projects. The Optimal Project Portfolio, driven by strategy and supported by social and technical systems, is a powerful tool for shaping the projects that will create the future of your company.

Eric Morfin is a partner with Critical Skills Inc. and can be reached at pmpharma@gmail.com.

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BEWARE CAREER CROSS- BREEDING CONTINUED.

Having It All

Here are three real-world scenarios we've encountered that explain why a jack-of-all-trades is hard to find:

The "king" versus the "joker." With blending, the most common problem is that the person occupying the role isn't evenly good at both parts. As a result, an employee saddled with both roles may become the king of detail-oriented tasks -- paying close attention to one phase of product development, for example -- but still be viewed as a joker when it comes to leading the project as a whole.

The "C player." Some people are average at both roles, so they jump back and forth between them while executing both below par. Unfortunately, this approach minimizes focus on the product and the project, which means the C player is average -- or even mediocre -- at managing the project, and he may put the project in jeopardy.

The superstar. Sure, some superstars can pull off both roles. But here's the problem: It's a two-person job. So the superstar has no choice but to put in 80-hour weeks to make both roles a success, and there's no way he can sustain that pace over the long term.

So if someone tries to tell you to "blend" the BA and PM functions into one person's role, here are our recommendations:

1. **Resist.** Educate management about the importance of role delineation. Each job requires different strengths and skills, so advocate to management that there be two jobs to satisfy these functions, not one.
2. **Create clear career paths.** Map out two distinct career trajectories to prevent individuals from being forced into a dual role simply because that is their only promotion path. Becoming a project manager is not a promotion from a BA. It requires an entirely new skill set.

If you must combine roles, plan for skill gaps. To get value from one person occupying two jobs, assign a mentor to guide the employee in the role in which he is weaker.