A job well done deserves a proper reward, right? But in collaborative efforts such as agile development, can you single out individual efforts without killing the team’s morale and productivity? When it comes time to divvy up the pie, can justice ever be served? Or will your team members be left with unjust deserts?

THE TEAM HAD DONE AN INCREDIBLE JOB, AND THEY KNEW IT. ITERATION

by iteration they had built a new software product, and, when the deadline came, everything that had to be operational was working flawlessly. At an afternoon celebration, the division vice president thanked everyone who had contributed to the effort, and the team members congratulated each other as they relived some of the more harrowing moments of the last six months.
The Morning After

The next day, the team’s Scrum Master was catching up on long-ignored email when Dave, the development manager, called. “Sue, Sue,” he said, “great job your team did! I’ve been waiting for the product launch before I bothered you with this, but the appraisal deadline is next week. I need your evaluation of each team member. And if you could, I’d like you to rank the team from who contributed the most down to who contributed the least.”

Sue could almost hear the air escaping as her world deflated. “I can’t do that,” she said. “Everyone pitched in 100 percent. We could not have done it otherwise. In fact, collaboration is at the core of our Agile process.”

“But Sue,” Dave said, “there must have been a most valuable player, a run-up, and so on.”

“No, not really,” Sue replied. “But what I can do is evaluate everyone’s contribution to the effort.”

Sue filled out an appraisal input form for each team member. She rated everyone’s performance but found that she had to check the “far exceeded expectations” box for each team member. After all, getting out the product on time was a spectacular feat, one that far exceeded everyone’s expectations.

The Aftershocks

Two days later, Sue got a call from Janice in human resources. “Sue,” she said, “great job your team did! And thanks for filling out those appraisal input forms.”

But really, you can’t give everyone a top rating. Your average rating should be ‘meets expectations.’ You can only have one or two people who ‘far exceeded expectations.’ Oh, and by the way, since you didn’t rank the team members, would you please plan on coming to our ranking meeting next week? We are going to need your input on that. After all, at this company we pay for performance, and we need to evaluate everyone carefully so that our fairness cannot be questioned.”

Sue felt like a flat tire. In the past, when she had a particularly difficult problem, she had always consulted the team, and they had always come up with creative solutions, so she decided to consult them once again. She thought she might convince them to elect a MVP or two, to help her put some variation into the evaluations.

The next morning, the entire team listened as Sue explained her problem. Sue was disappointed and surprised when she didn’t rank the team members, just as quickly as she had. The best they could do was insist that everyone had given 200 percent effort, that they had all helped each other, and that they had thought that every single person had done a truly outstanding job. They were not interested in electing a most valuable player, but they were willing to choose a least valuable player: the unnamed manager who was asking Sue to choose among them.

Now Sue really had a problem. She had no idea how to respond to Dave and Janice, and her plan to involve the team had only succeeded in making them angry and suspicious. Tomorrow, they would have to start working together on the next release. How could something that was supposed to boost performance do such a thorough job of crushing the team’s spirit? Sue is not the only one who has had trouble with merit pay evaluation and ranking systems. One of the greatest thought leaders of the twentieth century, W. Edwards Deming, wrote that immeasurable damage is created by ranking systems, merit raises, and incentive pay. (See this issue’s StickyNotes for more details.)

Deming believed that every business is a system, and the performance of individuals is largely the result of the way the system operates. In his view, the system causes 80 percent of the problems in a business, and the system is management’s responsibility. He wrote that using exhortations and incentives to get individuals to solve management problems simply doesn’t work. Deming opposed ranking because it destroys pride in workmanship, and he opposed merit raises because they address the symptoms, rather than the causes, of problems.

It’s a bit difficult to take Deming at face value on this; after all, companies have been using merit pay systems for decades, and their use is increasing. Moreover, Deming was mainly involved in manufacturing, so possibly his thinking does not apply directly to knowledge work like software development. Still, someone as wise as Deming is not to be ignored; so let’s take a deeper look into employee evaluation and reward systems and explore what causes them to become dysfunctional.

DYSFUNCTION #1: Competition

As Sue’s team instinctively realized, ranking people for merit raises pits individual employees against each other and strongly discourages collaboration, a cornerstone of Agile practices. Even when the rankings are not made public, the fact that they happen does not remain a secret. Sometimes ranking systems are used as a basis for dismissing the lowest performers, making the practice even more threatening. When team members are in competition with each other for their livelihood, teamwork quickly evaporates.

Competition between teams, rather than individuals, may seem like a good idea, but it can be equally damaging. Once, I worked in a division in which there were two separate teams developing software products that were targeting similar markets. The members of the team that attracted the larger market share were likely to have more secure jobs and enhanced career opportunities. So, each team expanded the capability of its product to attract a broader market.

THE PRODUCT ON TIME WAS A SPECTACULAR FEAT.

She had to check the “far exceeds expectations” box for each team member. After all, getting out the product on time was a spectacular feat, one that far exceeded everyone’s expectations.**
end up competing fiercely with each other for the same customer base as well as for division resources. In the end, both products failed. A single product would have had a much better chance at success.

**DISFUNCTION #2: The Perception of Unfairness**

There is no greater de-motivator than a reward system that is perceived to be unfair. It doesn’t matter if the system is fair or not. If there is a perception of unfairness, then those who think that they have been treated unfairly will rapidly lose their motivation.

People perceive unfairness when they miss out on rewards they think they should have had. Sue, the project manager, the vice president had given Sue a big reward but not rewarded the team? Even if Sue had acknowledged the hard work of her team members, they would probably have felt that she was profiting at their expense. You can be sure that Sue would have had a difficult time generating enthusiasm for work on the next release, even if the evaluation issues had not surfaced.

Here’s another scenario: What would have happened if Sue’s team had been asked out to dinner with the VP and each member had been given a good-sized bonus? The next day the operations people who worked late nights and weekends would say that they had outperformed the product out on time and would have found out and felt cheated. The developers who took over maintenance tasks so their colleagues could go into beta release. She thought this ranking business was a bad idea. Everyone agreed that Sue’s team had done an excellent job, and the new product was bought by the customers. No one had thought that it could be done, and indeed the team as a whole had far exceeded everyone’s expectations. It became apparent that there wasn’t a person in the room who was willing to sort out who had contributed more or less to the effort, so Sue’s top evaluation for everyone was dropped.

Sue was amazed at how fast the nature of the discussion changed after Wayne jumped to her defense. Apparently, Sue’s father did not think that the team about this,” said Janice. The committee developed some guidelines for dealing with various forms of differential pay systems.

**GUIDELINE #1: Make the Promotion System Unassailable**

In most organizations, significant salary gains come from promotions that move a person to a higher salary grade, not from merit increases. Where promotions are not available, as is the case for many teachers, merit pay systems have a tendency to lose their appeal. When promotions are available, employees tend to ignore the merit pay system and focus on the promotion system. Of course, this system of promotions tends to encourage people to move into management as they run out of promotion opportunities. Companies address this problem with “dual ladders” that offer management-level pay scales to technical gurus. The foundation of any promotion system is a series of job grades, each with a salary range in line with industry standards and regional averages. People need to know that their skills and responsibilities match the job requirements of their level. Initial placement of new employees in decisions should be made carefully and reviewed by a management team.

Usually, job grades are embedded in titles and descriptions. Make the new job grade public through a new title. A person’s job grade is generally considered public information. If employees are fairly placed in these job grades, decisions are made only when they are clearly performing at a new job grade, then salary differentials based on job grade are generally perceived to be fair. Therefore, if you have both senior and junior people, generalists and highly skilled specialists, all making the same salary, it is a problem. As long as the system of determining job grades and promotions is transparent and perceived to be fair, this kind of difference in pay is rarely a problem.

The management team at Sue’s company decided to focus on a promotion process that did not use either a ranking or a promotion system. Instead, they created promotion criteria that would be established for each level; when someone has met the criteria, that person will be eligible for promotion. A new promotion committee will review each promotion proposal and gain a consensus that the promotion criteria have been met. This will be similar to existing committees that review new promotions to fill open supervisor or management positions.

**GUIDELINE #2: De-emphasize the Merit Pay System**

When the primitve tool for significant salary increases is promotion, then it’s important to focus as much attention as possible on merit increases. In an environment where promotion is fair. When it comes to the evaluation system that drives merit pay, it’s best not to try too hard to sort people into categories.
Manage People & Projects

Sue's team met its deadline by following The Perception of Impossibility. They felt that they could have been equal to the task if they worked full time on the product also would have had a much better chance at success. The developers who took over maintenance would have found out and felt cheated. The management team was promised a bonus if they met the deadline. There were two things that could happen in this scenario. Financial incentives are powerful motivators, so there is a chance that the team might have found a way to do the impossible. However, the more likely case is that the promise of a bonus that was impossible to achieve would make the team cynical, and the team would be even less motivated to meet the deadline than before the incentive was offered. When people find management exhorting them to do what is clearly impossible rather than helping to make the task possible, they are likely to be insulated by the offer of a reward and give up without even trying.

DYSFUNCTION #4: Sub-Optimization

I recently heard of a business owner who offered testers five dollars for every defect they could find in a product about to go into beta release. She thought this would encourage the testers to find more defects. Unfortunately, the test results showed that the fewer defects the testers found, the more money they made.

When we optimize a part of a chain, we invariably sub-optimize overall performance. One of the most obvious examples of sub-optimization is the separation of software development from support and maintenance. If developers are rewarded for meeting a schedule even if they deliver brittle code without automated test suites or an installation process, then support and maintenance of the system will cost far more than was saved during development.

DYSFUNCTION #5: Destroying Intrinsic Motivation

There are two approaches to giving financial incentives that are key to their business. No one had been aware of any promotions in the firm. Everyone agreed that Sue's team had done their homework and paid the children weekly for the household chores. The father, however, had not had a much better chance at success. The management team was promised a bonus if they met the deadline. This was the last thing the team wanted to be doing, but the result was quite different.

The good working relationship between developers and testers deteriorated. The testers lost their incentive to help developers quickly find and fix defects before their product propagated into multiple problems. After all, the more problems the testers found, the more money they made.

When we optimize a part of a chain, we invariably sub-optimize overall performance. One of the most obvious examples of sub-optimization is the separation of software development from support and maintenance. If developers are rewarded for meeting a schedule even if they deliver brittle code without automated test suites or an installation process, then support and maintenance for an employee, but if this is the only time the employees find out how they are doing, a lot more needs fixing than the appraisal system.

With this disclaimer in mind, the committee developed some guidelines for dealing with various forms of differential pay systems.

GUIDELINE #1: Make the Promotion System Unassailable

In most organizations, significant salary gains come from promotions that move a person to a higher salary grade, not from merit increases. Where promotions are not available, as is the case for many teachers, merit pay systems have a tendency to become contentious, because promotions remain the only way to make more money. When promotions are available, employees tend to ignore the merit pay system and focus on the promotion system. Of course, this system of promotions tends to encourage people to move into management as they run out of opportunities to make merit increases. Companies address this problem with “dual ladders” that offer management-level pay scales to technical gurus. The foundation of any promotion system is a series of job grades, each with a salary range in line with industry standards and regional averages. People must be treated fairly and not feel that their skills and responsibilities match the job requirements of their level. Initial placement and lateral moves in decision should be made carefully and reviewed by a management team.

Usually, job grades are embedded in titles, and pay grades are added in a new job grade public through a new title. A person's job grade is generally considered public information. If employees are fairly placed in these job grades, it can be done only when they are clearly performing at a new job grade, then salary differentials based on job grade are generally perceived to be fair. That means the managers must have both senior and junior people, generalists and highly skilled specialists, all making equal pay. The result as long as the system of determining job grades and promotions is transparent and perceived to be fair, this kind of differentiation in pay is rarely a problem.

The management team at Sue's company decided to focus on a promotion process that did not use either a ranking or a quota system. Instead, the promotion criteria will be established for each level, when someone has met the criteria, that person will be eligible for promotion. A new promotion committee will review each promotion proposal and gain a consensus that the promotion criteria have been met. This will be similar to existing committees that review new promotions to fill open supervisor or management positions.

GUIDELINE #2: De-emphasize the Merit Pay System

When the primacy tool for significant salary increases is promotion, then it's important to focus on the promotion system. The committee started by agreeing that evaluation systems should not be used to surprise employees with unex- pected feedback about their performance. Performance feedback loops must be far shorter than annual, or even quarterly, evaluations. Appraisals are good times to review and update development plans.

In the 1980s, when Baby Bells were independent telephone companies, there was a de-motivated team was a serious problem. Sue's team was nervous as she entered the room to discuss the team's problem withManagement exhorting them to do what is clearly impossible rather than helping to make the task possible, they are likely to be insulated by the offer of a reward and give up without even trying. She was amazed at how fast the nature of the discussion changed after Wayne jumped to her defense. Apparently, everyone agreed that Sue's team had done an excellent job, and the new product was the key to their business. No one had thought that it could be done, and indeed the team as a whole had far exceeded everyone's expectations. It became apparent that there wasn't a person in the room who was willing to sort out who had contributed more or less to the effort, so Sue's top evaluation for every team member was accepted. More importantly, the group was concerned that a de-motivated team was a serious problem. Everyone agreed that Sue's team had done an excellent job, and the new product was the key to their business. One of the most obvious examples of sub-optimization is the separation of software development from support and maintenance. If developers are rewarded for meeting a schedule even if they deliver brittle code without automated test suites or an installation process, then support and maintenance of the system will cost far more than was saved during development. There are two things that could happen in this scenario. Financial incentives are powerful motivators, so there is a chance that the team might have found a way to do the impossible. However, the more likely case is that the promise of a bonus that was impossible to achieve would make the team cynical, and the team would be even less motivated to meet the deadline than before the incentive was offered. 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years later it was the biggest steel company in the United States. When Nucor started up, Bethlehem Steel considered it a mere gnat, but thirty-five years later, Bethlehem Steel was not only bankrupt but sold off for assets. So, Nucor Steel is one very successful company that has done a lot of things right in a tough industry.

GUIDELINE #3: Tie Profit Sharing to Economic Drivers

Nucor Steel decided to get into the steel-making business in 1968, and thirty years later it was the biggest steel company in the United States. When Nucor started up, Bethlehem Steel considered it a mere gnat, but thirty-five years later, Bethlehem Steel was not only bankrupt but sold off for assets. So, Nucor Steel is one very successful company that has done a lot of things right in a tough industry.

GUIDELINE #4: Reward Based on Span of Influence, Not Span of Control

Nucor Steel worked hard to create a learning environment where experts move from one plant to another, machine operators play a significant role in selecting and deploying new technology, and tacit knowledge spreads rapidly throughout the company. Its reward system encourages knowledge sharing by rewarding people for influencing the success of areas they do not control.

Conventional wisdom says that people should be evaluated based on results that are under their control. However, this kind of evaluation creates competition rather than collaboration. How, exactly, can rewards be based on span of influence rather than span of control? I recommend a technique called “Measure UP.” No matter how hard you try to evaluate knowledge work or how good a scorecard you create, something will go unmeasured. Over time, the unmeasured area will be de-emphasized, and problems will arise. We have a tendency to add more measurements to the scorecard to draw attention to the neglected areas.

However, it is a lot easier to catch everything that falls between the cracks by reducing the number of measurements and raising them to a higher level. For instance, instead of measuring software development with cost, schedule, and earned value, try creating a P&L or ROI.
Six Months Later

Sue’s team is having another celebration. The team members had been surprised when the VP came to their team meeting six months earlier. But they quickly recovered and told her that they each wanted to be the best, they wanted to work with the best, and they did not appreciate the implication that some of them were better than others. When the VP left, the team cheered Sue for sticking up for them and then got down to work with renewed enthusiasm. Now, two releases later, the customers were showing their appreciation with their pocketbooks.

There haven’t been any dramatic pay increases and only the occasional, well-deserved promotion; however, the company has expanded its training budget, and team members have found themselves mentoring other teams. Sue is rather proud of them all as she fills out the newly revised appraisal input forms, which have more team-friendly evaluation criteria. This time, Sue is confident that her judgment will not be questioned.

Mary Poppendieck, a Cutter Consortium consultant, is a seasoned leader in both operations and new product development. With more than 25 years of IT experience, she has led teams implementing lean solutions, ranging from enterprise supply chain management to digital media, and built one of 3M’s first just-in-time lean production systems. Mary is currently the president of Poppendieck LLC, located in Minnesota. Her book Lean Software Development: An Agile Toolkit, which brings lean production techniques to software development, won the Software Development Productivity Award in 2004.

Sticky Notes

For more on the following topics go to www.sticky minds.com/bettersoftware
• References and further reading