Do The Right Projects, The Right Way

Making The Transition From Bumper Cars To The Freeway

By Kim Colenso
Artemis International Solutions Corporation

You know the symptoms: there is an immediate need to be filled, and a project is promptly launched – but with no time for analysis or planning. The *modus operandi* is "just get it done."

The project manager assembles a team, although it is lacking key individuals. A rough idea of the objective is communicated, but with little participation from subject matter experts (SME). A never-ending battle to assign and keep the right people and skills on the team ensues.

During the project, requirement changes are constant. And because management never fully committed to the project, participation falls short. Suddenly, the project is no longer a priority. Even if the project reaches completion, the results are less than optimal. The team, especially the project manager, will breath a sigh of relief when this one is over – hoping that the next project will go more smoothly.

The Analogy – *progressing from bumper cars to the freeway*

One way to illustrate how companies limit their own project- and resource-driven progress is to understand the difference between the bumper car environment and the real rules of the road. Many organizations seeking to reach a certain destination are spinning their wheels, regularly falling short of business goals – their chaotic "bumper car" approach causes them to be tardy and over-budget, consistently failing to meet project expectations. Managers serious about achieving specific strategic objectives will find that driving the project freeway yields faster, more consistent and more reliable results. Here's why:

There are two extremes in moving people from one point to another. You can move people with a bumper car approach, in which case you won't travel very efficiently – or very far - from your point of origin. Or you can reach your destination via a streamlined road network, with the freeway as its backbone.

In the bumper car environment, people climb into simulated automobiles. They circle in random order and collide with each other. As a group, they collectively prevent any single individual from making significant progress. There are no rules – at least, none that are standardized and enforced.

But in real life, people climb into real cars and are required to follow very precise rules. Since each individual's life is at stake, most people follow the rules – most of the time. There are also some lesser rules which, when disobeyed, result in a penalty (e.g., a ticket or a fine). This system provides the infrastructure to allow the driver to select a specific destination, choose the best route, and fairly accurately predict how long the journey will last. Best of all, passengers are assured the reasonable expectation that they will reach their destination without incident. A side benefit is the periodic road signs that inform the driver of progress along the way.

<u>The bumper car game:</u>

- Play time starts when the power is turned on.
- It is acceptable to block others' progress, since they aren't going anywhere anyway – no advance notice is required.

- It is acceptable to do a complete and sudden U-turn in one spot – especially when you want to cause a crash, which is likely since none of the drivers nearby have been warned about what you are about to do.
- It is acceptable to collide with other bumper cars. In fact, collisions with others are an assumed and expected characteristic of the bumper car environment!

The real thing:

- You must abide by the rules of the road and learn to do the right things in the right way; otherwise, you risk a serious accident. For example, you must enter the freeway on the entry ramp – or risk going against traffic.
- In general, drive at a steady, reasonable speed – unless you want to pass. Then, go into the passing lane until you have safely passed slower vehicles.
- For every new move you make, give advance notice with turn signals. Anything less is considered unacceptable by other freeway drivers, and may result in a fine.
- When approaching an entry ramp where other traffic is entering the freeway, move into the high-speed lane to give the new vehicles room to catch up. If you don't, you must slow down until the entering cars accelerate.
- It is considered to be risky and unacceptable to cross medians or drive against oncoming traffic.
- It is also considered to be dangerous to stop in a traffic lane, especially at night or in low visibility conditions. The standard method for anyone needing to slow or stop for help is to pull over to the shoulder.
- Leave the freeway via the clearly marked exit ramp.

Real-World Application

In the corporate world, every change initiative is implemented through a project. There are two extremes in introducing change – as per the illustration above, one is the so-called "bumper car" project approach, and the other is the "freeway" project approach.

The bumper car project approach – it's just a game!

An organization has no broadly-accepted rules of conduct – as in a child's game, success (or, "winning") is left more or less to chance. Managers request projects without justification; projects are begun without consideration as to whether or not there are sufficient resources available to do the work; and, once a project has started, progress is not consistently monitored, or critically reviewed. And since project requirements are not well thought-out at project inception, they are likely to change frequently. Requirement changes are not formally evaluated for impact on the project as a whole, and as a result the "destination" is changing constantly.

Resources working on existing projects are interrupted and re-assigned to new projects, and the investment already made is often wasted. There is no widely agreed-upon prioritization of projects, as dictated by overall strategic goals and supporting business objectives. As business needs change, no formal evaluation of alternatives is made, and no evaluation on existing projects is done to determine if the original business need that started the project even still exists.

The real thing – a real-world approach to project and resource management

All projects are supported according to their contribution toward reaching strategic goals. All project proposals are cost-justified; and after a project is completed, results are validated. Further, no project starts unless the required resources are available. Once started, no project resources are re-assigned without careful consideration, including the possibility for an existing project to be cancelled due to a shift in priorities. (By canceling projects early on, significant savings can be achieved.) Changed requirements are evaluated for impact on the project, and only those that are justified by critical business needs are approved.

By eliminating the restrictions on progress associated with the bumper car approach, projects are generally on time, within budget, and meet expectations. The result is significant savings for the organization; a side benefit is that standardized milestones used across all projects within an organization provide "sign posts" for

progress, enabling all stakeholders to see the status of each project. At the conclusion of each project, a "lessons learned" review is conducted; the information gathered is used to ensure that new projects do not hit the same bumps in the road.

In the real world, when attempting to facilitate change to make your company more efficient, effective and competitive, you must ask yourself if you are playing bumper cars, or if your project managers are familiar with the real rules of the road. If your organization is on the project and resource collaboration freeway, then it is among the very few – according to recent project implementation statistics in the Software Engineering Institute's Capability Maturity Model (CMM). Their latest results have reported less than 5% of *assessed* organizations are at CMM Level 5 (the highest level of software development capability).[i] But since most organizations have not been assessed, the percentage of Level 5 organizations against all organizations is very small – probably less than 0.1%.

In a March 2001 *Crosstalk* article, Raytheon reported a 144% productivity improvement from a Level 2 organization in 1995 to a Level 4 organization in 1998. During this time, they expended 6% of their budget on process improvement, and yielded a 6-to-1 return on investment (ROI). In our analogy, CMM Level 1 organizations use the bumper car approach to projects, while CMM Level 5 organizations are clearly cruising the freeway.

If your organization is following the bumper car approach, your results are likely similar to those reported in the Standish Group's *Chaos* report.[ii] The original report concluded that most projects are late, over budget, and lacking expected functionality. Such projects cost roughly twice as much, take twice as long, and deliver 2/3 of the functionality expected. The report's findings also indicate that the larger and more complex a project is, the worse the results – and ensuing risk and losses – tend to be. Learning from the original report, many companies have attempted to split larger projects into smaller ones, leading to an overall improvement in project success – according to the latest *Chaos* report.[iii]

But there will always be a need for large projects – so the challenge is whether an organization has the tools and processes in place to deliver all project investments with maximum efficiency and reliability.

How To Get Started

Educate the executives. Your management team must understand current results, and the ROI that could be achieved by improving cycle time and quality, and lowering costs.[iv]

Develop preliminary performance metrics. Before implementing any improvements, identify what level of performance you have now, otherwise you will not be able to quantify the savings achieved. At the very least, capture the planned project start and finish, and actual project start and finish – for every project. Make sure that the dates are captured in the same manner on all projects (e.g. the planned dates are captured at the same point in the decision process, and the actual dates are captured with the same entry/exit criteria). If possible, get planned project cost, actual project cost, and planned and delivered functionality measures as well.

Implement preliminary "what-if" analyses, and anticipate the need for corrective steps. Once you know your results, you can implement both simple and effective improvements. At the beginning of a process improvement effort, there is usually some obvious "low-hanging fruit" – such corrective measures that make life easier for the project managers are a good place to start. Then, as they realize the improvements have helped them, they will more likely support additional improvements.

Don't expect to transition from a bumper car environment to the project freeway, overnight. You must allow yourself to travel intermediate road systems before you embark on the project and resource collaboration freeway. And you'll need to ensure that everyone in your organization receives the required drivers' education and license … but the sooner you begin your journey, the sooner you'll arrive at your destination! And the more often you will realize project success.

About The Author

Kim Colenso is a Managing Principal Consultant with Artemis International Solutions Corporation. He has accumulated over 20 years of experience in IT, and over 15 years of experience in project management. He is PMP-certified by the Project Management Institute (PMI), as well as a Certified Software Quality Engineer of the American Society for Quality (ASQ).

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[i] "Process Maturity Profile of the Software Community, 2001 Mid-Year Update," August 2001. Software Engineering Institute.

[ii] "Chaos: The Dollar Drain Of IT Project Failures," *Application Development Trends*, January 1995. Jim Johnson, Standish Group.

[iii] "Chaos Chronicles Version 2.0," 2001. The Standish Group.

[iv] Sources of information: Standish Group, Chaos Report. www.standishgroup.com, Software Engineering Institute. www.sei.cmu.edu