

Excellence in Structural Engineering – Are You a Winner?

By Thomas F. Heausler, P.E., S.E., SECB

Do structural engineers (SE) play to win? Certainly when SEs are awarded a new project, they consider it a win. Achieving an excellent reputation is a win. In school, an “A” grade is a winner over a “B.” And in addition to comparing their work to that of colleagues, SEs compete against themselves to reach their personal best. Therefore, one who succeeds at achieving excellence in structural engineering may be categorized as “winning.” Conversely, a performance that lacks excellence may be considered “losing.” Clearly, a structural design resulting in a tarnished reputation, lawsuits, failure or catastrophe should be considered a “loss.”

Legendary football coach Vince Lombardi made a famous speech about winning. To paraphrase, he advocated that “winning is not a sometime thing; it’s an all the time thing. You don’t win once in a while; you don’t do things right once in a while; you do them right all the time. Winning is a habit. Unfortunately, so is losing. It is and always has been an American zeal to be first in anything we do, and to win, and to win, and to win.”

It is a reality of life that humans are competitive, and the most competitive games draw the most competitive people. Achievers not only want to compete; they want to compete against the best that there is. Remember, an SE is one who purposely chose one of the most demanding majors in college, while many other students opted to spend their “all-nighters” at the pubs.

The object is to win – to beat the other guy. Maybe that sounds hard or cruel, but consider just who is “the other guy.” He may be your colleague, but more often your competitor is within yourself – you are competing against procrastination, distractions, discipline, desire. The objective is to exceed your personal best. You assess where you are and where your goals say that you should be. That gap is the source of the “fire in your belly,” your motivation. But sometimes you do not realize how high your personal best can be until a colleague appears to be outperforming you. That is when you realize that taking action towards further excellence, and then achieving that excellence, may be the most appropriate definition of “winning.”



But how do you measure your improvement? How do you keep score? In sports there are rules, boundaries, goals and scoreboards. In business and life, you have to set these for yourself. In the short term, this is often known as your “To Do” list. At work your list should be prepared in concert with your personal goals and those of your employer and clients. Proceed as follows:

- 1) Define: Identify the tasks, making them as detailed and particularized as possible.
- 2) Hours: Assign time to each task based on how long you expect it to take.
- 3) Prioritize: Arrange the tasks into a sequence in relation to their urgency and importance.
- 4) Schedule: Allow for pursuing your other goals and activities such as family, recreation etc.
- 5) Focus: Plan your work, and then work your plan.
- 6) Measure: Look back and compare what you recently completed to your “To Do” list.

You will not know whether you have won unless you keep score. For example, if on Friday your weekly timesheet and production looks exactly like the “To Do” list that you prepared last Monday, then you can declare your week a “winner.” If you can apply the same strategy and procedure to long-term and life goals, then you will be a winner there, as well.

Of course, an SE also faces constant competition with the ill effects of natural hazards (e.g. gravity, snow, earthquakes and hurricanes). People’s lives depend upon SEs doing their work with diligence and integrity. An SE cannot succumb to

the pressure of proceeding without an adequate fee to put in the appropriate hours. Every time SEs ply their trade, they have to play from the ground up, from the soles of their feet to the top of their heads. Some apply their intellect, which is fine – an SE has to be smart – but they fall short if they do not physically put their bodies into the long hours, as well. As for those who additionally put their hearts into it... well, they are not going to leave the drawing board with anything *but* a win.

To paraphrase and apply Vince Lombardi’s treatise further: Successful SEs actually appreciate the grind, the discipline and toil; the study, the research, the creative problem solving, the details, meticulous creation of calculations and drawings, all coupled with the harsh realities of deadlines, budgets and wavering clients. SEs savor the collaborative team environment, whether it is dropping what you are doing to help a weaker teammate, or putting in the extra effort to overcome a personal weakness. In the long run, deep down in their hearts, SEs yearn for this field of play and the camaraderie that is found there.

In conclusion: As SEs, our finest hour, the greatest fulfillment of all that we hold dear, is that moment when we have worked our hearts out on a worthy project and lie exhausted at our workstations – project completed – victorious – confident.

Enjoy the peace that comes with knowing that you have done your very best, and that you have done it *right*. ■

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