



*A technician who gets “into the flow” at work performs optimally and with a feeling of investment in the job.*

## Keeping the momentum going

**O**ne of the challenging things about manufacturing is the need to continually stay motivated each day. This is because in the manufacturing world of processing parts for aerospace — unlike in sports — there are no finish lines. A soccer game is done after two 45-minute halves. The marathon is complete when the athlete crosses the finish line after 26.2 miles of running. But the industrial “athlete” who works in heat treatment continually needs to find ways to stay motivated to get the required work done. Author Simon Sinek talks about the difference between a finite game and an infinite game. Sports are finite games as they are played within finite rules and boundaries. Business (and life), on the other hand, are infinite games. The rules keep changing as the world keeps evolving. New technologies. Years ago, the technology to perform a TUS wirelessly was not available. Now, companies can integrate this recent technology into their practice. So, in order for the heat-treat athlete to stay motivated each day, they need to redefine how they look at their work.

Most people will define “work” as what they do for a living. What earns money for them. However, work is beyond that narrow definition. Instead, if work is viewed from the perspective of the physics definition of an object being displaced in space by a force, that is “work”. Thus, people showing up each day are being subjected to the force of gravity as they move their hands and bodies on the factory floor. But there are psychological forces that we need to contend with as well.

### HOW TO KEEP YOUR TEAM MOTIVATED

People want challenges that are manageable. Telling them to work for 40 years and then they can retire is a goal, but that isn’t a strong way to motivate them on the day-to-day or hour-to-hour or even minute-to-minute basis of those 40 years. Perhaps surprisingly, throwing more money their way isn’t the answer. Sure, it helps these things. But what is needed most is kindling an intrinsic desire to do something. And to do that, you need to identify the clear challenge presented and align that with both the overall goal and the respective skills of that employee.

Here is an example. A pyrometry technician has been running the TUS for months now. It has now been extended to a periodic schedule based upon the compliance of AMS 2750. The technician is doing their job, but they seem disengaged. They have done this so many times. They understand the importance of doing it and why it’s necessary to uphold compliance to the requirements of Nadcap, but they are having a hard time getting motivated. In this instance, you might recognize several things with this employee. Maybe they are very skilled with knowledge of the TUS and good with hands-on types of tasks. In this case, maybe you present a relative challenge for them to find ways to save on the length of the expendable thermocouple wire you use for the TUS (assuming the requirements of this TUS are one and done and the parameters for the cycle are adequate for this type of wire). Now, this slight challenge can incentivize the technician to use their skills and overcome an immediate challenge and succeed

in a relatively more attainable goal.

The formula used here is one that I apply in all the “work” I do. It is derived from the antecedents of getting into flow states. In psychology, flow states have been correlated to optimal performance, well-being, optimal states of consciousness, and — in my practical and personal experiences — how some of the best work can get done. Flow is the state in which you are “in the zone.” You are so engrossed in your work that time can become distorted. That tedious TUS setup with nine thermocouples placed perfectly seems to take only minutes, but an hour or so has gone by with the setup to get the cycle running.

We want employees to be in flow, just like athletes wanting to be in flow states to play their best game. Industrial athletes need to be given opportunities to find flow states on the job and in their work. Doing that requires a clear understanding of the goal. Assessing the relative goals that need to get done each day and thinking in terms of short-term goals rather than long-term helps to keep the team motivated.

With clear goals, there is then the need to recognize the challenges and skills with respect to the task at hand. In the case of the TUS setup, there is the challenge to now use the optimal amount of expendable TC wire. The skill is the technician’s ability to navigate the AMS2750 requirements and physical setup to get this done. Then, there is the immediate feedback. This can come in various forms. There is the feedback from the setup itself. That is, the wire is either too short or too long when you close the furnace door and plug the thermocouple wires into the field test instrument. There is also the feedback from you as the manager or engineer encouraging their efforts and guiding them toward success.

Feedback to the industrial athlete is often overlooked these days. People lose motivation because they lose the feedback that keeps them on track. Feedback extends beyond annual reviews and passing/failing pyrometry tests. It comes from the “small talk” the heat-treat people have among themselves. One of the best things to do is to ask the technicians how they prefer feedback. One person might say, “to tell it like it is.” Others may prefer a report, or even just a simple high five or encouragement on the job itself.

Remember, the industrial athletes and the work of organizations today require a longer-term vision of the game they are actually playing. But companies need to stop motivating with just long-term rewards and focus more on the daily scale of how to get their team into these flow states. Provide that consistency and support, and they will be motivated to show up and perform their best each day. ♡

### ABOUT THE AUTHOR

Tony Tenaglier is the quality manager at AlCuMet. He earned both a B.S. in material science engineering and M.A. in psychology. He is the author of two self-help books and is currently pursuing his Ph.D. in Industrial Organization Psychology. Contact him at [ttenaglier@alcumet.com](mailto:ttenaglier@alcumet.com)