

Self-managing teams at general electric aircraft

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The organizational behavior issues that I addressed in this paper pertain to self-managing teams at General Electric's aircraft engine assembly facility in Durham, North Carolina (hereafter referred to as "GE"). The article "Engines of Democracy" from Fast Company magazine is particularly interesting because the self-managed teams at General Electric fit the definition from our class text, *Organizational Behavior* (1998), almost perfectly. According to this book, "Among the management responsibilities allotted each self-managing team is that of continually assessing the work of the team and redesigning the jobs of the team's members" (p. 152).

Throughout the article, examples of job and process changes made at GE were noted. The majority of these changes were made to existing company processes prior to the opening of the plant, while the quest for continuous improvement has driven other changes since the facility opened. You will find various examples of these changes throughout this paper. Although our course text *Organizational Behavior* (1998) just touches on self-managing teams, the situation at GE seems to be a hybrid of not only self-managing teams (p. 152), but of quality circles (p. 151), and TQM (p. 150).

I chose the article "Engines of Democracy" because I believe that self-directed work teams can be successful in many situations. Unfortunately, they do not formally exist at Commonwealth Edison (my employer), which is a traditional hierarchical company. I also chose this article because jets fascinate me. Simply stated, I am amazed by the fact that something that is so heavy is able to fly so high and so fast. In the article, Charles Fishman (1999) sums up my feelings when he states "That someone who lives in

Topeka can decide on a whim to go to Tokyo, and be there in less than a day, is truly miraculous" (p. 180).

In this paper, I have highlighted several success factors at GE, and examples are included where it is appropriate. The success factors included are: (a) Team Dynamics and Job Satisfaction, (b) Employee Selection and Skill Level, (c) Work Methods, (d) Employee Pride and Motivation, and (e) Telling Remarks about Commitment.

The research methods used to create the GE organization are most similar to the Explicit Theory. Robert Henderson and his managers were responsible for opening the GE plant in Durham, North Carolina. Mr. Henderson decided that the assembly work would be done in the most radical fashion possible. In researching how this would be done, Henderson and his team researched "best practices", by visiting other factories looking for ideas and methods that would empower his employees with authority and independence (Fishman, 1999, p. 188).

The GE organization also has a hint of the Action Research Method, although it does not appear that it was intentionally used in the development of the organization, nor do all of the stages of the Action Research Model apply to GE.

The GE plant has a staff of 170 employees, and 1 plant manager. Teams are responsible for the production of engines from start to finish, and they are told only 1 thing - the date the engine needs to be on a truck. Team members handle all other facets of management. In the empowered

atmosphere, decisions are made by consensus. The concept of teamwork is obvious, and a remark of employee by Keith McKee, who stated " I have 15 bosses - all of my teammates are my bosses" (Fishman, 1999, p. 192) is indicative of the workenvironment. In addition, the former plant manager, Paula Sims stated that " We call this the feedback capital of the world" (Fishman, 1999, p. 192). No one is exempt from feedback. Early in Ms. Sim" s assignment, an employee told her that there was no need for her to micromanage the employees, because when she told them to do something, it would get done. I find this refreshing.

In Organizational Management (1998), job satisfaction is defined as " a pleasurable feeling that results from the perception that one" s job fulfills or allows for the fulfillment of one" s important job values" (p. 107). Since the article makes no mention of the measurement of job satisfaction, I believe we can measure employee satisfaction by the turn over rate, which is less than five-percent annually. The article also includes some individual remarks relating to job satisfaction. For example, employee Pat Miller commented on previous jobs that he held, "... I had not input at all-none. I" m much happier here. I [italics added] can change what goes on" (Fishman, 1999, p. 184).

With members of the plant conducting interviews of potential co-workers, GE uses extensive interviews that encompass eleven skill areas to evaluate candidates. Interviews have been known to last 8 hours, and they include interactive exercises.

It was also decided that all employees should be FAA-certified mechanics. This is the only GE facility that has such a requirement. The rationale behind

this thinking is that candidates will already possess valuable training if they are hired. As stated by Robert Henderson, who was in charge of opening the facility, " That would mean that we" d start with a better caliber of employee ..." (Fishman, 1999, p. 188). This remark fits the same line of thinking of another successful businessman, Ron Wolf, General Manager of the Green Bay Packers. Mr. Wolf stated in his book *The Packer Way - Nine Stepping Stones to Building a Winning Organization*, that the first of the nine keys to winning is to " hire the best"(Attner, Wolf, 1998).

The GE workers strive to keep it simple. For example, the floor in an assembly building is painted blue, so when parts are dropped, they can be easily seen. To hold certain parts in place before they are permanently installed, technicians began using beeswax. Also, all tools have foam cutout areas so that they are not left out of place. This addresses both productivity and safety issues.

The plant utilizes what GE employees call " multiskilling", which means that all employees know all of the jobs. Derrick McCoy, a GE employee, stated " Multiskilling is how the place is kept together"(Fishman, 1999, p. 186).

As Mr. Fishman (1999) mentions in the article, money alone can not motivate people to perform as well as GE employees have (p. 182). The book *Organizational Behavior* (1998) shows that Abraham Maslow would agree, as evidenced by his " Needs Hierarchy" (p. 83). Based on Maslow" s model, money would satisfy physiological and safety needs at best.

Pride and satisfaction fuel motivation at the GE plant, as there are no performance incentives. GE team members are so proud that they sweep out trucks so that no damage occurs to their finished product while they are being shipped via truck. Mr. Fishman (1999) reports that GE employees believe that their job is not to make jet engines, but to make jet engines better (p. 202).

Commitment and the drive for perfection is taken very seriously by GE employees. This is evidenced by comments like those of employee Bill Lane, who said " I" ve got a 3-year old daughter, and I figure that every plane we build engines for has someone with a 3-year old daughter riding on it" (Fishman, 1999, p. 180).

Employee Duane Williams, referring to problems that workers normally complain about, said "... well, we have a chance to do something about them. I can" t say, " They" don" t know what" s going on, or, " They" made a bad decision. I [italics added] am " they"" (Fishman, 1999, p. 186). Certainly commitment comes from self-esteem and being appreciated. Again, Duane Williams remarked that " I was never valued that much as an employee in my life." "... But here, I couldn" t wait to get to work every day. That" s no BS!" (Fishman, 1999, p. 184).

So how effective is this self-directed plant? The GE plant has not missed a delivery date on their CF6 engine in 38 straight months. The cost of producing the CF6 engine has been reduced by 30 percent since 1995, which is even more astonishing since this engine has been in production for twenty years.

When faced with the challenge of reducing plant costs by \$1.2 million, the "expense council" that was assigned to address this issue provided a proposal within 3 weeks. This plan ultimately superseded the plant manager's plan that had been submitted earlier.

Perhaps the greatest achievement of the team occurred when the plant was given the opportunity to build a new style of engine, the CFM56. From the time of the announcement that GE would build this engine, the team produced its first engine 9 weeks later. This was done at a cost that was 12% to 13% less than the Ohio plant, which had been manufacturing this engine style for years.

Finally, the best tribute to the employees came from Robert Henderson, who even with the goal of making the plant as radical as possible, stated "I was just constantly amazed by what was accomplished here" (Fishman, 1999, p. 188).