

BEST PRACTICES

Reach for the STARS

by **Han van Loon**

Various quality related factors can propel any organization to new levels of productivity and customer retention.

That's what we discovered several years ago when we first looked at motivating new staff at CelsiusTech Australia, a systems and software supplier.¹ The company started in 1990 with fewer than 12 people. Since then, it has grown to about 300 employees and has become a leading high quality supplier in its three industry segments: maritime, defense and intelligent transport systems.

In 50 Words Or Less

- **People, processes and products are three factors that can create a successful quality culture in any organization.**
- **STARS is an innovative approach to help people visualize their role in creating a quality culture.**
- **One of STARS' eight themes—personal—involves setting goals, thinking, acting, reviewing and supplying improvements.**

In large part, CelsiusTech Australia's growth resulted from the commitment and execution of quality embedded in its corporate culture. CelsiusTech Australia had a quality system certified to ISO 9001. However, the company strived to achieve a standard of quality beyond ISO 9001 conformance. This was evidenced by never having a nonconformance in an external audit and winning numerous quality awards.

We believed there was always room for improvement, and in the late 1990s we wanted to show new employees, particularly those familiar with ISO 9001, the importance of our quality culture. This culture leveraged the three elements that determine quality: people, processes and products (See Figure 1).

People: People decide how well a quality system operates and the caliber of the products that result. In particular, it is people who develop the quality software that becomes highly competitive in the market.

Processes: Normally when people work together, they commit to implement processes. In a strong quality culture, people educate one another about best practices and continually improve those processes.

Products: People use and develop products, including the technology and tools used to improve quality results. People want to make things easier and do things quicker to develop the products (including products to automate processes). These software products include requirements,



configuration, development and testing tools. Quality processes guide and control production, and measure the process and product quality.

When people, processes and products integrate with each other, they create a synergy with impact beyond what any one can achieve on its own.

Quality Challenge

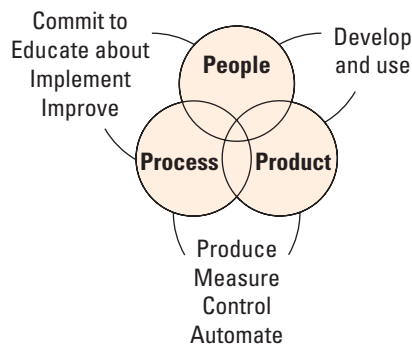
CelsiusTech Australia faced a challenge many other companies face: attracting and retaining the best people. This is especially important in the software business since the best software people can increase a company's productivity much more than an average developer.

Productivity in the software business is determined by two factors: the rate of software creation and the quality of the software in terms of bugs. Bugs result in time and resources spent correcting the errors during production and maintenance. We pursued a high quality culture to enhance productivity and maintain a strong reputation for quality with our customers. Higher productivity and quality lead to better profits, high customer retention and new business activity.

At CelsiusTech Australia, we wanted to achieve a lot with our new employees right off the bat. We wanted them to:

- Understand our quality culture, particularly the corporate management vision, norms and values.

FIGURE 1 People, Process and Product Model



- Understand how we worked individually and in teams to ensure high quality outcomes.
- Embrace continual quality improvement.

Therefore, we invested in our new employees through induction training, including how our quality management culture made the tacit notion of culture into something practical and easy for them to follow.

Seeing STARS

Most quality people are aware of Walter Shewhart's plan-do-check-act (PDCA) cycle.² We wanted to individualize this cycle to help new employees visualize our quality management culture. We decided to create a simple, improved approach with a memorable acronym for our new

employees to understand our culture and their roles. STARS combines a personal approach to quality, teamwork and continual improvement. STARS initially focuses on how each person should personally embrace quality (see Figure 2).

Set goals. We wanted to inspire people to focus on doing the right job and doing the job right. We focused on a small set of goals to quickly achieve success.

FIGURE 2 Personal STARS Theme



Think. We strived to present the company's quality culture as a practical approach to work. We considered how to present and discuss this concept at employee workshops.

Act. At orientations and induction workshops, we asked employees

how they defined quality, what made a product superior and what characteristics made a workplace successful. We wrote their responses in the shape of a star, and presented the STARS concept.

Review. We reviewed the workshops with the HR manager, training specialist and participants. We learned the basic concept was sound but we could improve it.

Supply improvements. Feedback went toward improving the concept. At future workshops, we asked employees how they achieved good results at work, the advantages of working on a team and what they defined as a good product. Similar responses were grouped into topics, and teams were formed to add ideas to each topic.

We asked the new employees to look at the data collected and identify any common themes. The employees offered ideas on themes such as serving customer needs, assessing alternatives and striving for excellence.

We recorded these themes using the STARS diagram. We added the employees' suggestions to each of the points of the star, then explained the STARS concept and possible roadblocks—time pressure, apathy, misunderstanding, lack of communication and uncooperative individuals.

After discussing the presentation with the new employees, we found our model offered a simple

but powerful view of our quality culture. They learned the company's goals and how the company looked to improve. New employees then could assimilate more quickly into the company and become productive much sooner.

During the next two years, we refined the team, improvement and customer themes. This quality approach became the preferred way to describe and discuss quality within CelsiusTech Australia.

STARS Expansion

Today, the concept has matured into a holistic leadership and management method comprising eight themes (personal, team, customer, product, culture, systems, environment and improvement).

STARS encompasses the qualities of successful people and relates individuals to star types, such as white stars, yellow stars, red giants, brown dwarfs, pulsars and black holes. For example, a yellow star is synonymous with a person who is positive, warm and friendly. People usually like to associate with yellow stars.

The fundamental philosophy is that people are free willed and ultimately determine how to embrace quality. The foundation to achieve quality is based on the STARS personal perspective, which expands into teams, systems and organization cultures, and combines with customer, project, environment and improvement perspectives. A person focuses on what to improve personally and how to build and work in high performance teams and satisfy customers through the STARS method.

During workshops on STARS, people are challenged to describe individual means to achieve quality outcomes in a variety of new, innovative and personal ways. Participants learn:

- To use various thinking modes, such as creative thinking to generate ideas and innovations, lateral thinking to spot opportunities and systems thinking to understand systemic interactions
- To recognize when they are using reactive thinking (reaction and pre-learned responses), judgmental thinking, or even worse, prejudicial thinking

People learn to use 12 thinking modes, each with its own benefits and drawbacks. For example, judgmental thinking is good for assessing the quality of outcomes but can discourage new ideas and squash creativity. The twelfth mode is metacognition—literally “thinking about thinking” and is used to summarize the lessons learned in the workshop.

STARS Team Approach

The STARS team theme describes how teams can be a vital and powerful force to achieve quality. The theme describes the difference between groups of people and real teams. A real team achieves synergy and creates results greater than that of individual contributions from team members.

The STARS team theme comprises synergy, teamwork, authority assignment, responsibility and commitment, and supply of support.

The teamwork stage describes methods for building teams and fostering teamwork. It uses an innovative technique to create team balance and foster teamwork essential for team synergy. The technique determines team, individual, management, enterprise and work (TIMEW) goals and needs.

The way to collect, prioritize and reconcile these five sets of goals and needs is called the TIMEWhirlpool technique (see Figure 3). Through this approach, the major common goals and needs are gathered into a central focus, just like a whirlpool pulls things to its center.

In a team building workshop, each participant makes a list of goals that he or she believes important. These lists become the basis for team discussion and decision making. For example, in a project startup team workshop, each participant will list goals according to:

- **Team:** His or her desired goals for the project team
- **Individual:** The individual goals he or she wants to achieve
- **Management:** The important project management goals
- **Enterprise:** The enterprise goals the project should fulfill
- **Work:** The project work goals

Each person writes the goals on sticky notes and sorts them into one or more of the five TIMEW categories. The categories are shown as a set of map areas on a meeting room wall. For example, a map area is created for the goals that fulfill team, individual and management categories.

Each participant places his or her goals in the TIMEWhirlpool map areas. The participants discuss and recategorize the goals as needed.

Participants can negotiate with each other to combine goals. In the process miniteams can be formed that support combined goals. In this way a miniteam can create a combined goal that meets more categories. Goals that meet more categories become part

of the central focus in the TIMEWhirlpool. In general, the most important goals are those meeting all five categories, followed by those that fit four categories, and so on.

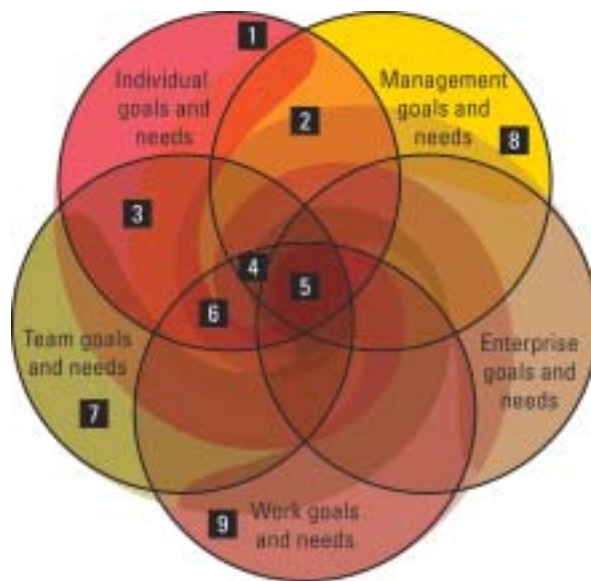
In Figure 3, goal five meets all five categories, goal four meets four categories, and goal six meets three categories. Action and planning on the goals should be considered in that order of importance.

Individuals and miniteams accept a responsibility and commit to achieving one or more goals with defined resources and within a timeframe. The team leader or manager allocates authority to the people who assume the responsibility to achieve the goals. As needed, the leader and organization managers supply support—additional resources or time to perform the required tasks—to the individuals and miniteams.

The TIMEWhirlpool effectively builds teamwork because team members are aware of each other's goals, tasks and expected interdependencies and interactions. Miniteams can form to achieve goals in priority of agreed performance. When the team acts on a limited number of goals, it can usually be completed within a short time.

This technique helps create early success and motivates the team to perform well in the future. Building and reinforcing motivation is part of the STARS cultural theme. Common goals and early success help create team synergy. As goals are achieved, the team revisits the TIMEWhirlpool to take on new goals.

FIGURE 3 TIMEWhirlpool



Combining the STARS team theme with the STARS personal theme can create a reinforcing, positive team spirit and lay the foundation for a success oriented quality culture in any organization.

Using the Method And Program

People require different levels of detailed explicit knowledge to do their work. For example, an expert in a subject needs very little detailed instruction because he or she has internalized most of the required knowledge. A newcomer to a subject needs a great deal of guidance and direction.

In the STARS model, these differences are recognized by classifying knowledge into four layers of increasing detail, as seen in Figure 4.

The top layer comprises the eight themes, which together can be interpreted as an upward spiral toward excellence. Each theme of five stages describes a holistic view of an important subject. Each theme is supported in the second layer by a number of suggestions for performing each stage (suggestions encourage people to make free-willed choices). The suggestions are supported in a third layer by a process model. Finally, the process model is supported by an information layer.

When using STARS, a person, team or enterprise can:

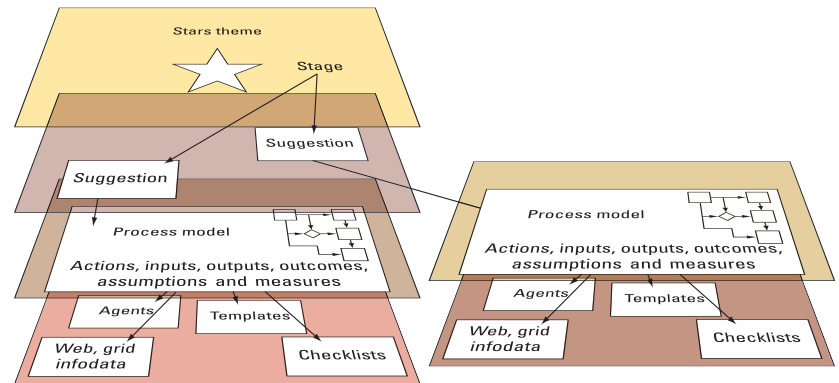
- Choose one or more STARS themes or one or more stages in the top layer.
- Choose one or more STARS suggestions from the second layer.
- Choose to follow a process model in the third layer to help with the activity details.
- Choose to use checklists, templates and various sources of data and information, such as the internet, from the fourth layer.

In STARS, a person can choose to use all or part of the information and knowledge from any layer as needed to achieve the desired quality outcomes. STARS provides a wealth of concepts, methods and practices with practical applications in the manner of a toolbox.

STARS and Beyond

The STARS approach grew from a desire to fos-

FIGURE 4 STARS' Layered Knowledge Model



ter a human approach to quality and achieve a culture of excellence within a company. People who strive for excellence can achieve success in their personal and working lives. These people are the stars who make life better, not only for themselves, but also for others.

REFERENCES

1. Han van Loon, "STARS of Quality Management," *Quality Progress*, Vol. 33, No. 9, 2000, p. 136.
2. Walter Shewhart, *Statistical Method From the Viewpoint of Quality Control*, Courier Dover Publications, 1939.

NOTES

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