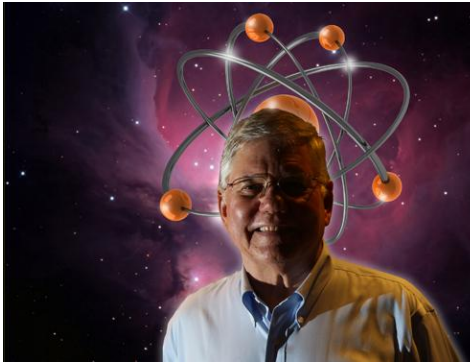


THE TECHNICAL ASPECTS OF GOOD TEAMS



After 30 years at Nasa, Charles Pellerin decided to apply his physics skills to the business of creating a collaborative culture in specialised workplaces

Charles Pellerin knows a thing or two about running successful technical teams. As director of astrophysics at US space agency Nasa in the United States he was in charge of more than 5,000 people, and had an annual budget of US\$750 million. He served in that position for a decade, during which he helped launch 12 satellites

However, in 1990, a project he had managed, the Hubble Space Telescope, became a national embarrassment after it was discovered that the US\$2 billion mission could only produce blurry images because of a faulty mirror.

Even though Pellerin led the repair mission that fixed Hubble, he was haunted by the event, especially after a failure review board cited failed leadership as the root cause of the malfunction. That verdict stuck with Pellerin

When he left Nasa in 1993 after 30 years, he dedicated himself to figuring out what type of leadership produces the most efficient technical teams to help other managers avoid repeating his mistakes.

Using his background in physics, Pellerin looked for universal attributes of successful teams and then created an X-Y co-ordinate system to measure how well teams adhered to qualities that he refers to as dimensions. Thus 4-D Systems was born.

Pellerin teaches the importance of the social context of the workplace and team-building through myriad ways, including three-day workshops, a 15-minute online test and his book, *How Nasa Builds Teams*, published in 2009.

He also collaborates with advisory businesses that are accredited providers of 4-D Systems.

His clients have included Nasa, soft drink maker PepsiCo, accounting firm Ernst & Young and,

most recently, China Aerospace Science and Technology Corporation, a key player in the mainland's moon-landing programme. Based in Boulder, Colorado, Pellerin is working in conjunction with Evans &

Peck, an international advisory business that is using 4-D Systems as part of its consulting practice, particularly in the area of creating high-performance teams.

What attributes or dimensions do successful technical teams need?

In any sector for any number of reasons, many technical people, particularly those without leadership or management training, do not appreciate that team-building is a skill and essential to their success. They regard team-building as being something that is either too touchy-feely or soft.

But there are some universal needs that should not be ignored in the workplace. The first is the cultivating dimension; this is when employees feel valued and authentically appreciated. The second is the including dimension, meaning that people feel appropriately included and behave with integrity. The third is the visioning dimension that measures if people express reality-based optimism, if you accept reality that you can create. The fourth is the directing dimension - to be most



productive a team must not permit blaming and complaining because it wastes and misdirects energy from other roles like accountability and authority. So, an ideal directing dimension is when everybody knows what is expected of them and whether they can do it.

Why are you concentrating on technical teams?

The system can be used on anyone. A guy in Beijing told me that my book saved his marriage. But my speciality is technical teams; no one can speak to them like I can. I believe that the world

is heading for a very difficult transition because of the interplay of three forces: debt in the world is unprecedented; the cheap oil is almost gone; and we have depleted the environment to such a degree that we have tampered with the world's climate. My purpose is to help the technical teams that will be able to find solutions to these problems to be higher performing.

You put a lot of emphasis on the social context - why is it so important?

Even though we are habituated to believe that high performance comes from individual training, it is context that drives behaviours and results. We learn to sense context and respond to it.

Can you give me an example of how context affects performance?

Yes, in the 1990s, Korean Air planes were crashing. The situation got so bad that Canada was on the verge of revoking privileges to its airspace.

This went on for four years because everybody believed that performance leverage was in the individuals. It was mysterious because Korean pilots were just as capable as any other pilots in the world. The cockpits were operating in what I would call a Confucius social context.

Why is a Confucius social context not ideal for collaborative teams?

One of the tenets of Confucianism is to revere those above you and to not criticise them - this is what was happening in Korean Air. When the captain was driving, the first officer was so scared to say if something was wrong because it would be seen as criticism. So the first officer would just sit there reading the paper. But for a modern aircraft, that doesn't make sense [as it is] supposed to be flown by two people - one to drive and the other to monitor the radio.

A Confucius context is one of the high-context cultures. Others include France, Spain and Japan. For example, you go into a bakery shop in France, you need to take that time to talk to the bakery owner for a minute or you'll get a lousy loaf of bread. These cultures are about socialisation and ritual. In contrast, in low-context cultures like the US or Northern Europe, you would go in, ask for your bread and then leave. It's not about socialisation. The ideal of social context is one that permits communication between managers and workers.

Where would Hong Kong fit into this?

Hong Kong is a low-context culture. It's pretty Westernised because of the British influence. When two cultures mix like this, it dilutes both, which means that the Confucius culture is not as intense in Hong Kong as it is in Korea, Japan and mainland China.