

Wait to Speak Last

A Leadership Lesson from the New Horizon's Project: Strong leaders give everyone on the team a chance to speak first.

In 2015, after a nine year, three-billion mile journey, the New Horizon spacecraft successfully completed an historic flyby of Pluto. But success was not guaranteed.



A nine-minute window

For the New Horizons' mission to be successful, all of the spacecraft's data-gathering instruments had to work flawlessly starting seven days before reaching its closest point to the planet and for at least two days after.

All of the maneuvering of the seven data-gathering instruments – what they would look at, what they would measure – had to be preprogrammed into the craft's computer. There was simply no way that someone back at

Mission Control could drive it in real time. By 2015, New Horizons was three billion miles away from Earth, and a signal traveling at the speed of light would take 4.5 hours

to reach the speeding spacecraft. In that amount of time, what Mission Control had been directing the spacecraft to photograph or measure would have likely passed.

But preprogramming didn't guarantee success either. New Horizons, traveling at 35,000 miles an hour, had to reach a specific point in space within a nine-minute window. If the craft were early or late to that point, the computer would be directing the instruments to look at or measure something during the critical flyby period that wasn't centered in their field of view – or potentially not there at all. And there would be no time to recalibrate them. The potential to collect data would be lost.

The mission would have failed.

A grace period of only 540 seconds. After three billion miles. And nine years.

The good news is that Mission Control scientists were carefully monitoring the spacecraft as it approached the point and calculated that it was less than two minutes off – way inside the nine-minute-long safety window.

Everyone in Mission Control breathed a sigh of relief.

But what if we...?

Scientists and engineers are, by trade, perfectionists, so the question quickly arose, *“Do we make a correction? Do we scratch back a few more important seconds to make sure our instruments are pointing where we want them to point?”* Days before the critical flyby, there was still time to do so.

It was a tempting proposition.

Dr. Alan Stern, the mission leader, gathered everyone on his team together to review the navigation calculations, and then took three powerful steps:

1. Stern asked each of his team members to voice their opinion on the wisdom of making the correction. One by one, around the table, each leader of a critical aspect of the program voiced “Go,” recommending the correction.
2. Stern waited and took notes until everyone had the opportunity to voice his or her opinion. He then made the decision: “No go.”
3. He then asked a critical question, “*Is there a must-do reason to make the correction when we’re already safely within the box?*” He went back around the room and asked each section leader to respond.

After hearing from everyone, Stern stood with his original “No go.” It was simply not worth the risk of introducing a potential programming error this late in the game.

New Horizons soon flew past Pluto at 35,000 miles an hour, a mere 7,500 miles above its surface. As the spacecraft began to “phone home” amazing images and other data, it was clear that New Horizons – the first mission to Pluto – was an unqualified success.

“Good enough” was truly good enough.

“All eyes are on me.”

Leaders typically struggle with three questions in scenarios like the one before the New Horizon’s team:

- Do they typically ask to hear from all members of their team on critical questions, or because they’re the leader – “*All eyes are on me.*” – feel they need to make the immediate call?
- Do they typically speak last, or because they’re the leader – “*All eyes are on me.*” – feel they need to speak first?
- Do they typically push for “better” – “*All eyes are on me.*” – when there is evidence that “good enough” is truly good enough?

When Stern returned to his office, he was already receiving emails from the meeting participants expressing relief that he hadn't caved to "group think."

Dr. Melissa Hughes, avowed "neuroscience geek" and author of [Happy Hour with Einstein](#), reinforces Stern's steps as a meaningful way to avoid "group think" – "a *psychological phenomenon that happens when people in a group willingly or unconsciously commit to decisions they don't necessarily agree with to avoid creating emotional tension or conflict with their colleagues.*" In Stern's case, no one on his team wanted to be the only "No go" and buck the "group think."

The consequences of group think, as Dr. Hughes describes, can be significant: "*When people...put harmony and cohesion above the critical evaluation and analysis of the outcome, they stifle their thoughts, refrain from asking the hard questions and avoid exposing potential pitfalls. This often leads to irrational or problematic decisions.*"

In New Horizons' case, the consequences could have been disastrous.