

As Prepared
**REMARKS FOR ACTING ADMINISTRATOR
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To take on this ambitious set of missions we've been discussing, we have to get better at managing risk and increase our decision velocity.

My friend General Hyten and others have talked many times about how we have to move faster in all aspects of our acquisitions. He couldn't be more correct.

As I close out my career with NASA, this is the one area where I didn't make as much progress as I had hoped, but I thought I'd share my view on this topic as the leader of NASA.

Risk Management

We sell something on the benefit a mission or program or budget request provides. But that benefit rarely gets discussed after the initial approval, and we become focused on the risks associated with accomplishing the effort.

Risk is simply a discussion between likelihood and consequence.

There are many components of risk. What I've learned is that over-focus on one component without balancing these risk components is a challenge. I'm guilty of this myself.

For instance, maniacal cost control can lead to a penny-wise/pound-foolish mentality.

Too much focus on schedule will cause a mission to launch before it's ready, when maybe a little more time and dollars would've saved the mission.

Too often technical risk is tempered by saying, "we've always done it that way," without the appropriate understanding of the requirements

The obvious risks -- cost, schedule, and technical -- are challenging enough to balance. Now add in the multiple external stakeholders we all have, and it gets more complicated.

The cycle can be vicious.

Think about it. We make a mistake, which is going to happen when taking on such challenges. We do an internal investigation and fix it, usually through a new process so it never happens again.

Then, depending on the severity of the mistake, we have external stakeholders -- IG,

OMB, GAO, or an august independent review board -- come into play. Then they give us another set of recommendations and track our implementation of these into our processes.

That's how the FAR becomes so thick and the 5000 series and 7120 series documents become so thick. It's why we get the reporting requirements from OMB and Congress.

It becomes more about the process and not the product. Even more concerning is often the process BECOMES the product.

Don't get me wrong. Some of this is WELL EARNED. Most of us in any leadership position have experienced something where we immediately knee jerk to corrective action, and we should. But we also need the DOES NOT APPLY option. Yes, all our governing documents are "Tailorable," but WOW, just try to do that. Did I mention we also hire folks to make sure those "shall" statements get done?

Decision velocity

All this process simply crushes decision velocity.

But we can elevate risk decisions early and relieve the teams. Even better, we can delegate risk back to the right folks.

Your teams will protect you as a leader, but sometimes you have to accept the risk for them so they can move on. But again, this needs to be elevated early.

Example: GAO letter with allocations.

Protecting against risk and being safe are not the same thing. Do you think in today's environment we would do Apollo? Do you think we would ever launch the first shuttle with crew?

Summary

The activities I described that we want to do will require an "eyes wide open" approach to risk management and decision velocity. The bigger picture benefit must be remembered.

This has to be recognized by all the stakeholders in the system -- the executing organization -- in this case NASA -- but also the Administration, Congress, and the public. I'm reminded of the quote from British Structural Engineer A.R. Dykes, who defined engineering:

"Engineering is the art of modeling materials we do not wholly understand, into shapes we cannot precisely analyze, so as to withstand forces we cannot properly assess, in such a way that the public has no reason to suspect the extent of our ignorance."

That is risk management. What we are about to embark on with the plan we've shown and rolled out in the budget is going to take a change in risk management culture. What we do will never be without risk, but we never want to take risk without ensuring the bigger picture benefit is there.

I tell my senior leaders:

Managing is doing things right.

Leadership is doing the right things.

Both are important and apply to risk as well.

We, as a nation, must balance risk management to risk leadership. Follow the risk management process to address risk but balance this with risk leadership, which looks at the bigger picture effort benefit to any risk we assume.

It's also important as a "risk leader" to recognize when your team needs you to relieve them of the risk, otherwise they will continue to work it as "risk managers"

From a risk management perspective, the safest place to be is on the ground. From a risk leadership perspective, I believe that is the worst place this nation can be.

Leadership is moving human presence farther away than we've ever been before and pushing the boundaries of scientific knowledge and discovery. We want "civilization changing" level impacts. THAT is larger benefit of what we do. This means we will have to take risks to accomplish such audacious goals. Well understood and thoughtful risks, but risks nonetheless.

We are poised as a nation to do that in the next decade -- from the ISS to the Moon to the beginnings of humanity's first trip to mars. The WILL is there in NASA, our industry teams, and our international partners.

My charge to each of you as I depart is "strive every day to be a risk leader." This amazing endeavor will never be without risk, however, remember the benefit -- we will change the world.

Thank you.