



## WHARTON AEROSPACE & DEFENSE REPORT

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# Extending the Value of Aging Aerospace and Defense Workers: Creative Management Tools Can Keep Experienced Workers in the Mix

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*Almost 60% of the US aerospace workforce was 45 years old or older in 2007, and a significant number of those workers were already eligible to retire, according to a report by the Aerospace Industries Association. Many of the companies interviewed for the report noted that within the next 10 years, half of their workforce will be eligible for retirement.*

*The Defense Department faces similar trends in its civilian acquisition workforce. Industry analysts say there are about twice as many people over 50 years old as there are under 30 in the government workforce. This aging workforce poses challenges: When retirements surge in the next few years, years of technical and managerial experience will be lost.*

*While it may be impossible to stop the graying of the American workforce, there are management techniques to better harness the skills and experience of older workers.*

*In order to delve deeper into these questions, Knowledge@Wharton spoke with Wharton Management professor [Peter Cappelli](#), who also is the director of Wharton's Center for Human Resources and the author of the newly published book -- *Managing the Older Worker: How to Prepare for the New Organizational Order*. (An edited transcript of that conversation follows.)*

**Knowledge@Wharton:** What are some of the top lessons in your book that apply across multiple industries, including the defense and aerospace industry?

**Peter Cappelli:** The big ones which apply to almost all economies, certainly all the developed economies, [is that] populations are getting older because we are living longer. And as a result, the workforces are getting older and will get even older as we go on.

Part of that reason is because people have to work. To support longer lives, they have to work longer. And the other reason, which is maybe more interesting, is that they want to [work] because in most of our societies, work is a way in which people are engaged. It provides a way for them to contribute and keep active.

So the biggest issue is that we have this bigger aging workforce, though in many organizations we are chasing all this fascination with generation X, Y, and Z, and all the young people who are coming in. But we are ignoring a bigger and way more important segment of the labor force, and that's these older workers. So that's a big thing.

The second issue applies particularly in aerospace and industries like it. Older workers provide lots of unique competencies that younger ones do not. Your current employees have an enormous amount of tacit knowledge which in many organizations is going to be lost if they leave. They provide a kind of just-in-time workforce. They provide a workforce which in almost all dimensions is better in terms of performance and costs than the younger workforce.

**Knowledge@Wharton:** The cost of the older worker is also a consideration when dealing with consolidation in the defense industry. Generally, when two companies merge, many older mid-level workers are laid off. Is that an effective strategy? Why or why not?

**Cappelli:** I think what happens in a lot of these re-organizations, as well as mergers and acquisitions, is that they offer employees opportunities to leave. The opportunities are often funded through the pension system: "We will allow you to take a full pension earlier" -- and that encourages older employees to leave.

When you can make these decisions, you feel you are doing a pretty good job -- "This is great; we got a lot of expensive people to leave" -- but unless you are also thinking about the workforce that remains, it may be a bad idea. There are a couple of reasons for this: One is that it changes the demographic balance. The workforce inside gets a lot younger when you lose older employees, and that changes the knowledge base.

It also changes the risk profile of the workforce that remains -- if you don't have workers there who have seen the last downturn, for example, or who have seen projects run through the whole course, you lose a lot of expertise and different ways of thinking about making decisions.

So it can be a real bad thing, actually. You end up altering your workforce in ways that you cannot get the stuff done.

**Knowledge@Wharton:** The Pentagon's acquisition workforce is woefully understaffed, yet there is a mandatory retirement age. Are mandatory retirement ages relics of the past, and what are some alternatives?

**Cappelli:** In most organizations they are illegal now; you can't have mandatory retirement ages.

So yes, I would say they are relics of the past. But I think there are smarter ways for organizations to think about retaining the knowledge, the skills and the expertise of older workers. So the choice is not simply to say, "Gee, we never have anybody retire; they just work until they die" -- or doing what we do now, which is forced mandatory retirement.

A lot of organizations have moved towards phased retirement, where people can keep working but on different sorts of schedules, on different sorts of projects in different sorts of ways. A lot of them bring back their retired workers as consultants. Some organizations -- Dow Chemical is one -- have developed web-based systems that allow younger current employees to keep in touch with retired employees as ways of tapping some of their knowledge.

So there are lots of alternatives, and it is not as simple as just keeping everybody forever or letting them all go.

**Knowledge@Wharton:** The usual pattern is that you work for the Defense Department procurement/acquisition workforce for several years, and once you have gained experience and contacts, you start to work for industry where the pay is higher. What are some incentives -- apart from paying at the same level as industry -- to counter this tendency to flow from public to private sectors?

**Cappelli:** We know a lot about retention. We know, for example, that people are retained by social relationships, by being able to engage with people that they care about and people who care about them.

We know that people are motivated -- especially once they get older -- by more challenging work, by the ability to feel like you are making a contribution. So I think some of the ways in which you could make it attractive to stay is by offering people more interesting work as they get older.

Companies like Deloitte, for example, have moved towards a model where once their senior people hit a certain age, they are eligible to move into projects that they want to work on. They say, "Look, at this point we trust you on what you think is important to do for the firm. Let us know, and we will give it a quick vetting, but more or less we will let you work on the projects you want to work on."

We also know that of those projects, older workers are particularly motivated by social relationships -- as I said before, working with people they like, having more contact with people, getting out of the back room and working on the technical details.

I think in this particular context, though, there is something worth pointing out, and that is the higher salaries in the industry are in many ways what attracts people to the Defense Department in the first place. It is like pilots who decide to join the military in order to then fly the cargo planes rather than the fighter planes. The reason is because they are expecting a career as a commercial airline pilot afterwards. So it may be a difficult thing to do to prevent that movement.

And I think, ultimately, the real question to ask yourself in the Defense Department is, "What is it that we really need? Do we need these people to stay with us forever? Is it okay if they leave at 50, or would it be much better for us if they left at 53?"

You can structure those kinds of career paths pretty clearly. It doesn't mean you keep everybody. You are going to lose them at some point, but you can shape when you lose them and that might be a reasonable thing to think about.

**Knowledge@Wharton:** The acquisition culture at the Defense Department still leans toward massive weapons systems, even though there is a move toward smaller, less expensive systems as mandated by Secretary Gates' initiatives. How do you train people who come from an entrenched culture to think in new ways?

**Cappelli:** I think a simple way to get people to think in new ways is to mix up the groups, mix up the people in different ways. So for example, rather than outsourcing the tasks altogether, it is interesting sometimes to have a mix of current employees and contractors.

You are not pushing the task out onto them, but you are bringing in people who have done different kinds of projects in different kinds of ways, and you are beginning to start a dialogue which persuades, if you do it well, the people who have done things the old ways, that in fact it is not the only way to skin a cat.

Sometimes you could do this by conversations or meetings with people who have done very similar things in other contexts, or sometimes in other countries. I don't think re-training the individuals per se is the way to do it. I don't think that works very well. But showing them that these things have worked in a different context is a good way to do it, and I think you often find in these organizations that not everybody is stuck in the mud, that there are some people who are enthused about the idea of doing things differently. And an even simpler way to do things is to ask for volunteers.

Say: "Look, we are designing a system in a really different way, and this has got quite a different goal than what we have done before. Here's what we are thinking. Who would like to work on this?"

Then we will see who wants to work on it -- and if they have got the right skills, we are all set. If they don't, maybe we've got to mix them up with some people who have the right skills, but don't necessarily have the right vision, and we will get a team.

**Knowledge@Wharton:** Two recent trends could affect the U.S. Defense Industry. One is the decline of research funding, and the other is cancellation of some weapons programs. Both could lead to a weakening of the defense industrial base as expertise and institutional knowledge moves from one sector. How can this expertise and institutional knowledge be protected as these trends accelerate?

**Cappelli:** This is, amazingly, not well known: In 1960s, in the aerospace industry, there was a practice where the major defense contractors, and particularly aerospace contractors, would lend employees back and forth to each other. And the reason they did that is because they would win and lose contracts on an unpredictable basis. If you have lost a contract, what are you going to do with all these employees who worked on a project?

And if you suddenly won the contract, where are you going to get people to do that stuff? So if I was a Lockheed employee and I was part of this team that worked on this particular wing configuration and somebody else won the contract, Lockheed would loan this team of people for five years to Grumman or Boeing or somebody, and they would work under contract from Lockheed to Boeing.

So there is no reason why some of those arrangements couldn't come back.

I think the big issue, though, in terms of expertise, is that we don't do a good enough job passing it along to the next generation of people. We've got a group of senior folks who have been working on this project forever. They are all about 60 now, and we haven't thought that once these guys go, we are in big trouble.

One way to help solve this problem would be to mix some people into that team earlier on, but other ways are mentoring programs and various ways of re-engaging people after they leave, ways of passing along that tacit knowledge. It takes a while for it to completely go away, as long as the people are still around. But we have to think purposefully about it, and frankly we have paid no attention to it.

So it's not surprising it's a problem.

**Knowledge@Wharton:** At first, the defense industry was wary of Secretary Robert Gates because he ruthlessly pushed for the cancellation of weapons programs he thought were redundant, or had limited benefits. Now the industry sees his push for efficiency as his way of slowing the shrinking of the defense budget. Since Gates hinted that he might retire in

the middle of 2011, they've become concerned that a change might be bad for business. What are some ways to mitigate the side effects when an effective leader retires?

**Cappelli:** I think in a context like this, which is a political context of course, it is important to inform the people who are making decisions regarding successors about the aspects of the approach that have been working. If this were a for-profit company, you would hope the board of directors would understand which innovations have made sense and which ones are important to continue, and that they would play some role in that. I think the problem here is that there are all kinds of other considerations that go on, and it sometimes is unlikely that an internal successor would become the Secretary, although we could certainly lobby for that.

I think in this context, again, one alternative is to lobby hard for people at the Deputy and the Assistant Secretary levels, to maintain the policies and practices that have White House support. It's possible that even if you get a different Secretary who is not from within and has quite different views on some issues, some of the policies could at least continue.

**Knowledge@Wharton:** Is there anything else you would like to add that would be relevant to this topic?

**Cappelli:** The most important things to remember about older workers are that if you look at the actual evidence on their performance, they do better than just about any other group.

They perform better than younger employees on all dimensions and they are not more expensive. There are premiums associated with experience -- but not with age, even though older people often make more money because of experience. They are not necessarily more expensive for health care. Although they use more health care themselves, they don't have dependents, and dependents are really where the costs are in healthcare. They don't have babies and don't have little kids. So the costs are not greater and their performance is better.

There are all kinds of ways that you could make use of them, especially in industries like aerospace where continuity of knowledge is important and where requirements can sometimes change in a big way. They have the ability to work flexibly. They have the ability to do project work, etcetera.

So I think they are particularly good bet for the economy as a whole, and especially for an industry like this one.