

PROJECT MANAGEMENT PERSPECTIVES FROM THE TOP

Marty Kress, Chairman, Von Braun Center for Science & Innovation



This is the fifth in an ongoing series of interviews with business executives, government officials, academics, and project managers published in the PMI NAC Newsletter. Our goal is to present leading ideas and insights on the practice of project management for our readers.

In addition to his role as Chairman at the Von Braun Center for Science & Innovation – Marty Kress serves as Executive Director of the National Space Science and Technology Center at the University of Alabama Huntsville.

In this 30-minute must-read interview – Marty discussed his outlook on the future business, engineering, scientific, and social benefits these institutions bring to our community – and he also provided insights on his management approach and business model for future research and development initiatives at these Huntsville institutions.

Marty Kress was interviewed for the PMI-NAC Newsletter by Don Ross, PMP

Von Braun Center for Science & Innovation (VCSI) – The VCSI vision is to become a self-sustaining, world-class R&D center that blends local resources with national assets to provide science and technology innovations and solutions to meet critical NASA and DOD mission requirements. VCSI will capitalize on our national investment in R&D by integrating the skills, experience, and research assets of government, university, industry, and R&D organizations. VCSI is a membership organization with member firms from the North Alabama corridor, member universities from Alabama, and strategic partners (universities and R&D organizations) from across the region and nation. Member firms and universities and strategic partners will be aligned with the strategic focus areas of VCSI, which in turn are aligned with the critical science and technology objectives of local NASA and DOD customers. By focusing on research for development and application at the beginning, VCSI will validate our business model and manifest the value of collaborative research for all member organizations, strategic partners, and customers.

Visit <http://www.vcsi.org/> for more information about the Von Braun Center for Science & Innovation.

National Space Science and Technology Center (NSSTC) – The vision of the NSSTC is to become an exemplary national science and technology environment for the conduct and communication of the cutting-edge space research, education, and development in support of NASA's mission to serve the national interest by implementing best business practices using multidisciplinary teams assembled from the university, government, and private sectors to perform that work, and by leveraging the content and conduct of NSSTC activities to enhance university and K-12 educational missions.

Visit <http://www.nsstc.org/> for more information on the National Space Science and Technology Center.

PMI-NAC: *During your luncheon visit with our group in October – you shared some of the exciting things you are engaged in and talked about the various hats you wear. Off the top of your head today, please tell us about some of the things that are important to you as 2008 begins – and what that means to you?*

Kress: So what keeps me awake at night? What do I think is important? A lot of us are coming to realize there is a major revolution within the R&D community. I'm not sure we've all adapted to that. What I mean by that – most of us came out of a generation where we thought we could control our R&D fate. We could develop the technologies we needed to execute our mission – and I think we're at a transition point where very few organizations have the capability to do this from A to Z anymore.

So it helps you realize that you have to create new models – and you have to form new collaborative partnerships. You must have wider and broader networks than you've ever had before.

So when I talk about this in my graduate class at UAH, I tell my students – if you go back to 1978 – venture capital was a new world. If you look at the amount of money invested today by private and institutional investors – it's enormous.

How a government R&D organization capitalizes on this investment has become a key issue.

When you look at the growth of entrepreneurship, at the number of emerging small companies in the U.S. – especially in the high technology arena – you realize that these new firms, moving at incredible speed, are key vehicles for the development of new technology. In today's world, these smaller firms emerge and influence the market with new products and processes, and in many instances they are bought by a larger company to acquire the technology and stay competitive. Once again, one of today's challenges is to integrate these new firms and their emerging technologies into federal R&D initiatives.

When I look at these dramatic changes in the development of technology – at home and abroad – I come back to a point of view where I say “*Collaboration is not an option – it's a requirement.*”

I know people worry about competing – but we need to know how to balance those two dimensions, competing and collaborating, in a successful R&D organization.

PMI-NAC: *What were your first impressions when you started with the NSSTC and VCSI – and what kinds of rewards does that experience deliver?*

Kress: When I look at the portfolio at the NSSTC – I see that we have a phenomenal set of assets. But, I'm also obliged to ask – are we fully optimizing those assets? Our design constraint is that we tend to be NASA-centric in how we apply them and how we use them. We have 33 labs in Cramer Hall at the NSSTC. We have people of national and in some instances global standing in their fields.

So as I walked in the door my view was we needed to do more to collaborate with others, expand the customer base and compete in more areas for R&D funds. The expanded collaboration and customer base could be with other federal government agencies, state government agencies, industry, and academic institutions or with foundations. But I see a dynamic in the R&D community that now requires us to think differently across a broader spectrum.

So along those lines, I recognize the value of the unique space and earth science assets we have at the NSSTC and ask myself every day how can we further capitalize on what we have here, how will the NSSTC evolve over time, and if we were to better integrate our assets with those of other organizations – could we expand our market and the value of our research?

As part of my interview process prior to being hired, I was asked to do an assessment of the NSSTC with recommendations to enhance its value. So as soon as I got here I created an advisory board to assess our options. Everybody from Dave King at MSFC to Frank Franz at UAH was on the committee, along with leaders from industry, other government organizations, and the NSSTC core staff.

After months of advisory committee meetings in early 2006, we decided that a key first step was the establishment of a new 501(c)(3) organization that could better integrate and optimize the assets of the NSSTC and in time that would evolve into a nationally recognized R&D entity.

That was the decision that led to the creation of the Von Braun Center for Science & Innovation (VCSI). More simply stated, for the first phase, we have created a new legal corporate entity with a collaborative business development mindset and the required contracting mechanisms for the NSSTC – to better integrate its strengths and assets with other organizations and compete across a much broader spectrum of government agencies.

This is similar to what other nationally recognized R&D organizations have done and is something that was lacking in the original concept in which the NSSTC was not a legal entity.

You would not be surprised if you looked at other nationally known R&D organizations to see that they created similar mechanisms. Two examples that come to mind are the Georgia Tech Research Institute at the Georgia Institute of Technology and the Applied Physics Lab at Johns Hopkins University. Which by the way – are two entities we would love to be equated with in the future.

So at the outset we created VCSI as a way to help build teams that can capitalize on the assets we have at the NSSTC. We do this by augmenting these assets with other local, regional or national universities, firms, or R&D groups to meet key customer requirements.

When I talk about key customer requirements in my mental model – that could be for Huntsville-based entities like SMDC, MDA, ARMDEC, MSIC, AMCOM, PEO Missiles and Space, PEO Aviation or the NASA MSFC – or it could be with the NASA Langley Research Center, the NASA Glenn Research Center, and others as well. At the same time it could be with NOAA, DOE, Oak Ridge National Lab, or the TVA.

But I look at the fundamental driver here – the ability to build high-performance teams that capitalize on experience and prior technology investments – and see an important niche that we need to create to meet key customer requirements. *So in my own mental model – the NSSTC does R&D. But VCSI does “R for D.”*

Thus, I’m looking to do research at VCSI that provides an engineering solution or science application aligned with key customer requirements some that represent a technology demonstrator, or a high technology readiness-level activity.

PMI-NAC: *Can you explore that difference?*

Kress: I want to deal with hard customer requirements – and have industry partners intimately engaged in our projects. Our goal is to build engineering demonstrators or prototypes and then our member firms can compete to do the actual production units.

What does that mean for the most part? It means we focus on higher technology readiness activities, are requirements driven, and need to be able to deal with near-, mid-, and long-term projects. At the outset we’re finding that we need to be prepared to do really rapid turnaround projects. So right now we have three contracts in place for projects and only one is for more than a year. Most are less than six months. That’s challenging. Hopefully in the not too distant future we will augment our business base with some new activities that will extend for one to two years.

To act in this environment, your business model needs to be as innovative as your technology concept.

In effect, we have to be able to accelerate both ends of the project – the technology development – and the business management. It requires you to be more innovative with your business management models and to be fully integrated with the customer. But that’s what we have in place. We have a core set of assets and we’re trying to create a new mechanism that will let you go further.

The other interesting thing about VCSI – is it’s really owned by the leadership of the community. So if you look at the Board for VCSI – I have voting members that are the senior leaders of industry and the university research community – and I have non-voting members who are the leaders of key government institutions in the region. We bring them together with the hope that the requirements are in the room when we meet, and we have the people with the expertise to execute programs and projects.

The other unique aspect of VCSI is that it is a member organization. The members of VCSI pay annual dues – or make in-kind contributions – that provide critical operations funds and business processes to sustain the entity.

In return, as we clearly highlight in our Member Agreement, the member firms receive certain benefits: preferred vendor status, subcontracting opportunities, IP rights and opportunities, networking opportunities, R&D consortia opportunities, leadership and learning opportunities – including possible positions on the Board. We worked hard on this dimension of VCSI because membership support is the key – and as such we had to table a valid value proposition for the members.

We also have a premise under VCSI that if we do well – *the community benefits*.

So it's a not-for-profit charitable trust, which has great significance. Not just in terms of your ability to do business and the benefits you get under Bayh-Dole, Stevenson-Wydler and other key pieces of legislation – but it sends a message that if we make any money, if we accrue any value – we'll reinvest that in the community.

So even though we're less than a year old – our sales exceeded \$5 million – and at our last Board meeting our Board President, Bill Gurley of SAIC, presented a fully funded four-year scholarship to the new president of UAH, Dr. David Williams.

My hope is to give similar scholarships to other Alabama universities in the not-too-distant future.

We're also going to provide a work-study initiative in biology so UAH students can work on the samples we're bringing back from Antarctica. That's being funded by a generous gift from a family in Cleveland, Ohio.

But again – the goal is to change the equation.

I'm actively looking at what capabilities do I have in NASA that can help the Army? What capabilities do I have in the Army that can help NASA? Which capabilities do I have in the Army and NASA that I could use to help NOAA? This process never ends – and fortunately – it keeps getting better.

It's kind of a dynamic game board – but that's the intent. It's to create a new model and to make Huntsville the focal point for a new R&D model. We hope at the same time it's a way to better brand the full suite of assets you have in Huntsville.

So yes – we're the Rocket City – but at the same time – if you look around – you'll see phenomenal depth in autonomy & robotics, sensor-web technology, data visualization, earth science and many more domains that really come to life synergistically when you integrate them.

So for example – what if I could build a sensor suite and fly it on an Unmanned Aerial Vehicle (UAV) to provide real-time weather for residents in the Gulf of Mexico, the Army in Iraq, or any other specific requirement? That's the kind of business model we have. Or, how do I take the underlying robotics capability of NASA and augment the robotics of the Army so they can better detect and destroy improvised explosive devices?

We're looking for those kinds of relationships and for those kinds of opportunities.

PMI-NAC: *With the launch of the HudsonAlpha Institute here in Huntsville – how does that relate to activities in your organizations and your research objectives?*

Kress: Again as a model – HudsonAlpha is utterly phenomenal. I hope we replicate this model again and again in new domains. What I like about the model is that not only are they doing the basic research, but they are also integrating the research with companies that are going to capitalize on it. If there is a theme there – it is how you capitalize on research you are engaged in to create the new products, processes, or companies of tomorrow. And that is a theme I always talk about it when I'm speaking around the region.

It is great that we meet our customer needs, but what if we were to integrate or augment some of those technologies to enable commercial opportunities or opportunities for other federal projects?

So again – hallelujah – I think what Jim Hudson is doing is *absolutely phenomenal*.

To be honest, I wish I had some level of direct investment at the front end for VCSI. That was a key dimension of both Battelle and Southwest Research Institute in their early years, and it was a key dimension of the new Danforth Plant Sciences Institute in St. Louis. But who knows, maybe with time, we will get there.

When I first arrived I had the opportunity to talk with Jim Hudson on occasion about his concept and I was really impressed. I had a friend at Battelle who ran the Technology Partnership Practice and Jim's concept was as advanced as any this group formulated. It is really quite impressive.

I wish more folks in town knew about it – again – because it would be great to emulate.

I should note that HudsonAlpha actually has been capitalizing on assets at the NSSTC for the last 18 months – prior to their new site being ready. Neil Lamb and some of his colleagues occupy our bio lab and clean rooms. So again if there are some subthemes here – it is how do you capitalize on the assets we have here in Huntsville, create the models of the future, attract key talent to the region, and collaborate near and far?

Hudson Alpha is a first-rate example of just such a model – and one day – I hope the community will come to see VCSI as a model at this level in its own right.

To get VCSI started – we benchmarked about 25 different organizations. The closest analogies we saw to HudsonAlpha were the Southwest Research Institute and Battelle. Both were created by businessmen who wanted to enhance the economic wellbeing of their communities and push technology to meet the needs of the future.

In the case of Southwest – a group of businessman got together in a city that had no federal labs or any major research university and created a dominant research institute that's now performing about \$450 million a year in research and technology. Battelle on the other hand was created by a family in a will, and last time that I looked it has become an almost \$4.7 billion R&D entity that manages six national laboratories.

That is our goal. Our goal is to take our underlying attributes of the region and then integrate them in a way that increases value so we become a nationally recognized R&D organization.

As we evolve, the Board, which is responsible for the health and wellbeing of VCSI, has to make some decisions. What's the best path forward? Is the best path forward that VCSI is a standalone like a Southwest? Or is the best path that it becomes a federally financed R&D corporation aligned to a parent agency? Should VCSI become either a subsidiary or a joint venture of a university or maybe a university system?

As we go forward – those are the kinds of issues we keep our eye on. My view is that any good model should not be static. They have to be flexible and adaptable – things change very quickly in the R&D world.

The model also has to be aligned with the mission of the organization. So as we are building the structure of VCSI – we're also in parallel having discussions and doing assessments because things do change rapidly and new opportunities or challenges continually evolve.

If you look at just the past two years – in terms of the evolution taking place here at Redstone and the presence of the Missile Defense Agency – and future presence of the Army Materiel Command – what does that mean for the Army – and what does that mean for the Army Space effort – and what does that mean for a greater Air Force presence in Huntsville?

For VCSI – those are great opportunities for an organization that wants to do “*R for D.*”

If you go back to the era in which NSSTC was created – 2000 – just seven years ago or so – that was before 911, Iraq, and President Bush's Plans for the Nation's Future Space Exploration Programs.

We're trying to adjust to capitalize on today's needs and key customer requirements. We'll continue to focus our energies on that task.

PMI-NAC: *So this is a trend that will continue to grow and expand?*

Kress: Just look around the community and see the new offices in town with Draper Lab, the Aerospace Corporation, the Applied Physics Lab, USRA – *they're sending you a message.* Huntsville is becoming a critical R&D focal point at the national level.

That's driven by the combination of the expanding DOD presence and its level of investment in Huntsville and by new NASA programs. Both are important to these customers because they represent critical R&D organizations. That's fine because there are so many technology areas that are common within the purview of both of those agencies – which we should capitalize on. But it's sending a message that *proximity to your customer* is a key element for success in the future.

So when we look out there – my mental model says – why aren't all those entities housed here today in the NSSTC complex?

If we were able to do that – what message would it send locally and nationally – as to the role of the NSSTC. Why aren't we the master integrator and how can we structure the NSSTC model in a way that we attract more of them?

My view is that if we can attract them here – we can expand the business base here and attract more technical talent – faculty, students and employees – *and the local community benefits.*

Ultimately, I would love to see every R&D university in the state with grad students and post docs situated at the NSSTC, I would also like other leading R&D universities to do the same. The more grad students and PhDs I can insert into the equation the better it is for the firms and government agencies in Huntsville, as well as the university I work for across the street, UAH.

I'm hoping I can bring that kind of dynamism to the discussion and to the region. I hope that VCSI will enable us to do more sponsored research so companies in the research park can come to a VCSI, UAH, Auburn, Vanderbilt, or wherever they want to go – and do sponsored research activities in critical areas.

I call these types of activities "*technology accelerators.*"

People have different names for them – but it is creating a mechanism where if you have a technology gap for a critical requirement, and need an innovative solution, you create new and innovative teams that capitalize on prior experience and investment. It is my way of saying you do "*R for D*" – focused, shorter duration activities – rather than basic R&D.

That dimension in my thinking comes from a project I helped start at the NASA Glenn Research Center some years ago. I was subsequently responsible for the project's execution when I was at Battelle. It was called the Glennan Microsystems Initiative, after the first NASA Administrator – and it led to development of a new silicon carbide sensor that could operate in a wide range of harsh environments – from the human body to an aircraft engine.

What's the end result of that initiative? Well there are five new spinout companies. There is now a new silicon carbide sensor in existence. It has multiple applications – be it active fuel control at the heat source of an engine or as a sensor in the human body. And importantly, it supported lots of grad student activities at Case Western Reserve University, got large and small firms working together, and manifested the relevance and value of a key NASA technology.

That's part of the dynamism we're looking for. We're trying to create an environment that fosters and promotes R&D – that keeps more of the federal R&D dollars allocated to organizations in the community – here in the community – and makes us a better player at the national level to compete for more dollars.

So how do we grow the R&D business of this community as well as our underlying engineering support service business, our IT support service business, and add another dimension to it?

Our answer is to give our customers more reasons for retaining more R&D dollars in the community – and we do that by giving them innovative models that can provide solutions to real-world requirements in a timely, lower cost manner.

Simply stated – *R&D is the engine of the future.*

It's what is going to create the new companies and the new processes. So in addition to the successful business base that has been created in Huntsville of providing key services in support of customer requirements – we also would like to augment that model by providing more R for D, and providing some higher value-added activities to the local portfolio.

Towards that end, VCSI has created a fantastic board with incredible leaders and is working closely with all the key players to make something new and innovative happen here in our region.

PMI-NAC: *With so many complex activities and initiatives in play simultaneously, how do you set priorities – and what sort of compass guides your planning?*

Kress: In addition to pursuing projects aligned with our strategic plan, the core competences of our member firms and universities, and customer requirements, we are doing business development as a daily function at the VCSI. I am pleased to say that SAIC is going to loan me one of their Technology Fellows, Dr. Mike Lowe, for the next year to assist that effort. And NASA MSFC is assessing assigning a key NASA project manager and technologist to VCSI as well.

Are there new areas we should add to be more competitive in the future? Where are the key leverage points for synergy among our members and customers? Are there more collaborative activities we could do under the banner of NSSTC because NSSTC and VCSI are both linked to the seven Alabama research universities through the State Science and Technology Alliance (SSTA)? Absolutely.

I have a seat on my Board for the SSTA. I have two seats on my Board for UAH so we stay connected to universities. But when you start to look at R for D projects it has a different flavor to it, and so our goal again is to capitalize on the R&D that we're doing and to align it with a real world requirement. By doing this, we hope to expand the R&D pie in the region, broaden the base of activities, and get more and more people engaged in all dimensions of it.

One way we deal with this is to have special presentations at each and every Board Meeting. At our last Board Meeting, UAH got to highlight their technical competencies. At our next meeting, Auburn will highlight the capabilities of their Microelectronics Lab and NASA MSFC will highlight two related projects they are working on – a microsat and a cube sat.

The hope is that we find some new linkages and opportunities by exposing these initiatives. We will also discuss a new Battlefield WhiteBoard concept that will integrate robots and UAVs with support from both NASA MSFC and AMRDEC. So yes, there is a lot to be done in this area and we are taking a step-by-step approach.

So we're trying to go down many different paths simultaneously and synergistically – working with the core knowledge and motivation we have to excel with some of the key technology assets that we have right here today.

Along the same lines, VCSI submitted a proposal last week to the National Science Foundation for a miniature electron scanning microscope. What makes that interesting is that VCSI partnered with NASA MSFC, UAH, University of Tennessee, and the University of Michigan – and if we're successful – it's a great technology platform.

On the one hand – the new microscope would meet the needs of our research universities – and even smaller research universities – for an affordable scanning electron microscope that is field portable.

The way we're designing the microscope, it would also be web-based so you could link your field research back into the classroom. That way, whether you're in the classroom or in the field – you're part of the research activity. That's a major benefit to any student.

It is even more intriguing because the underlying technology for that scanning electron microscope has many other applications we're discussing with other potential users.

For example, such an instrument could be a payload for a lunar or Mars mission as well as enable a next generation non-destructive evaluation tool.

So by pursuing this technology we're creating a new technology platform from which many different end applications could emerge.

You could use it for university research or you could use it to assess the structural integrity of the new Ares launch vehicle or a new blade on a helicopter.

Trying to find technologies of this nature is a key goal of the VCSI – and another key reason for optimizing the assets at the NSSTC – where the key NASA researchers for this technology are housed.

PMI-NAC: *So it's a win-win for everyone involved?*

Kress: A win-win is a model that makes the members of my board very happy, makes our member firms happy, and makes our customers happy.

But again – none of it would have been possible without capitalizing on the strengths and capabilities of different groups and integrating key technologies.

As I noted above, the keys to VCSI are the member firms and the Board – if they see value in this initiative – it will continue to flourish and grow.

If I could give you one other key message about VCSI – *we don't exist to do work for others – we exist to do work with others.*

So when we do a project, we ingrain the customer into the project. Each organization that's involved is in the room with us every week in an integrated product team (IPT) meeting. No member of the team is outside the room.

We capitalize on the assets we have and get people exposed to different organizations and the advances that they're making – because at the end of the day we think that is something that has a value unto itself.

So, in a nutshell, you have two entities. You are sitting two feet from VCSI corporate headquarters – which is the computer on the table there. Then I have the luxury of the NSSTC and its richness in terms of the assets and the people we have here in the complex.

We're always looking for ways to find new venues to expand our R&D and its end application with the view that by doing that, you're going to help your own organization with its mission requirements – and you can help other entities meet their mission requirements.

That's the model: collaborative at the extreme – and virtual at the extreme. If all I have two years from now is that computer – and it's corporate headquarters and we're doing well, that's OK. If we need staff, we'll bring them in. That's the underlying theme.

We go where the expertise is. So if I need to go to the universities of Tennessee and Michigan, as well as capitalize on local assets at UAH and the NSSTC to build a new scanning electron microscope, that's what we do. We reach out and we get the best in class and bring them on the project and integrate them into the team.

As a matter of fact this is actually what we did in a recent proposal to the NSF and I hope the same schools and partners will be part of a new NASA project.

So it's a different model. But as I said, we're constantly reassessing the model, so the reason I like to do interviews or talk to groups is it permits me to highlight the model and get feedback. I like to say that good products can withstand scrutiny and to date VSCI has faired quite well. If it has any weaknesses I'm quite convinced people will help me identify them.

So again this is meant to be an open communication about a new entity that we hope benefits Huntsville. The best thing that I can get out of these sessions is feedback from the community as to the strengths and weaknesses of what we're trying to do – what are the key opportunities for its application – and along the same line of thought what are the key threats sitting out on the horizon?

PMI-NAC: *With so much in the works – you must be getting a lot of help?*

Kress: I can tell the members of your organization without reservation – the community has been incredible and we wouldn't be where we are without that support.

Joe Ritch is on the Board. His law firm, Sirote & Permutt, and his colleague, Fred Coffey, have done more to help us – I mean everything from our bylaws to member agreements to articles of incorporation, to our IRS submission, State of Alabama tax submissions – to a new indemnification agreement for the Antarctic expedition.

Gail Wall and the team at Beason & Nalley have been there since day one helping me with the complexities of creating a new entity and a new model.

Bill Gurley, the President of our Board, has been a never-ending source of support, key advisor, and architect. Last week he informed me that to help us during year two, he asked one of his Senior Technical Fellows to work with VCSI to help make VCSI a success, to improve our business development model, and probably as importantly, to create a network in the university research community that will also enable SAIC to better execute its projects and attract the workforce of tomorrow. I think those are things that are quickly going to be replicated by other members of the team.

VCSI headquarters that you're sitting next to as you conduct this interview is a wireless system with a remote server and email system. This entire system was developed for us compliments of Dynetics. The team at Dynetics did our web page, as well as all the underlying support that's required to sustain it for us.

So we have examples like this from every member of this Board. When I needed to write my first contract, a scary experience when you're a one-person operation, if it wasn't for Gray Research and ASI – I wouldn't have the underpinnings to do it. They provided the help to get through gate one.

When it came to creating the board and enabling government liaison to serve, I got incredible help from NASA MSFC, SMDC, AMRDEC, and others on the legal issues and core questions.

When it came to formulating the Member Agreement, a fairly complex document that deals with everything from intellectual property to export control – the University of Alabama in Tuscaloosa staff were right there for me.

So if there's a story here – there are lots of people sharing their strengths because they believe ultimately they are doing something to benefit this community – and that helps all of us.

That's a great story – and I think if there's anything that differentiates Huntsville as a community from other places I have lived and worked – I think that's one of the key differences. When this community gets behind something – it's amazing what they can accomplish. I think that's our hope – that the community itself will take ownership of VCSI – at this point – its potential becomes unlimited.

Towards that end, I have presented an overview of VCSI and its underlying goals and objectives to the Chamber of Commerce, Kiwanis Club, Rotary Club, and to PMI. We keep going out and presenting it to others because we want people to be aware of this new initiative and to recognize its value.

As importantly, we want people to come up with ways to further capitalize on this asset and its unique model. In the past few weeks, several of my key members firms have approached me with new ideas for using the VCSI model. *That is success!*

At our board meetings – we have a general policy where we invite different companies to come in so they can see what we're doing. At every one of our board meetings we also try and have hardware or technology of interest.

PMI-NAC: *Given the depth and diversity of things you're involved in and the scope and complexity of your activities, you must have a sixth sense for when things are going right or when things need adjustment. Do you have a message for folks in the community who wear project management hats – and how can we support you and Huntsville going forward?*

Kress: Part of my mental model for project management is – know your strengths. I know what I'm good at and what I'm not good at – and that's probably an underlying element of how I tend to run VCSI. Surround yourself with talented people, give them the resources and processes required to do the job, and enable them to succeed.

Messages – one key thing I learned working on the Hill, at NASA and Battelle was always expect the unforeseen and unexpected – because that's more likely to occur than what you planned.

Change is a constant and you have to learn to be able to adapt.

Two examples – we have one project right now for the Army. We have gone through several design integrations to maximize our capability and performance. I should note this also is my first real project in the COTS environment and it scares me.

The gap between what the product spec says it can do and what it does on a daily basis is quite amazing – especially when you are trying to advance a product for the young warfighter. In this world you need to rely on folks to provide a critical part or a component when you have no experience base working together – and when there is little accountability on the back end if they don't deliver.

So getting a common understanding and agreement to support your requirements becomes very important. How do get them to be as committed to the final product and outcome as you are? This can be a very challenging experience. One thing I have learned for sure – the world is even flatter than Tom Friedman thinks.

Our Antarctica project is another example. It is a very complicated science mission. We're shipping massive amounts of research gear, field equipment, and key research personnel off to Antarctica.

Well all of a sudden right before Christmas – we had a major and unexpected event – our freight forwarder quit because the project was too complicated. Trust me that was never even considered to be one of the risks I had to deal with.

It looked like we might be stuck at a very critical point in the deployment process since all of the gear had to be in transport by January 4 – if we were to clear customs in time for the mission deployment on February 4.

But I am still smiling because thankfully NASA MSFC was able to come in and be the white knight in this situation – because we had a project that had been endorsed by both the Russian Arctic and Antarctic Research Institute – and NASA.

Provided that we would handle the Export Control paperwork – they would help with the shipping. That was not an easy task for us as we had no familiarity with the export control process. But a key staffer pulled it off. So as a side benefit – I now have people at VCSI that know a lot more about Export Control paperwork – which should greatly facilitate our next expedition in November. We also probably saved a dollar or two by doing the work ourselves – but that is only because we have committed folks. In the final analysis – we ended up better off – but you would have had a very hard time convincing me that would be the case on that dark day in December.

So the message is – and I think experienced project managers know it – be ready for the “unexpected.”

Because the “unexpected” is going to happen to you everyday – guaranteed. Have some flexibility in both your schedule and in your budget.

And most importantly – rely on very good people. We’re not afraid to ask for help.

When we run into problems, we’re out in this community asking everyone we can find: “Give me your best advice.”

And that’s another thing, the world of emails and networks and webs – you can have a broad reach like never before in the history of civilization. You can find the best people that have real experience with the same issue. We’ve been able to capitalize on the strengths of – again – not only our corporate – but our government members as well.

Good project management is essential. You need to do the right thing in the right order in the right fashion. But the other submessage I have is that *speed is important*.

You must know how to balance the process and system you have with the requirement you’re facing. And that takes people with some experience.

That’s why I say I depend on a lot of people.

Our model is pretty simple in that regard. I act as the overall architect and integrator of the portfolio. I’m also engaged with each project.

But I try and pick the best project managers in addition to hunting for the very best technology. No one walks in with a “right” to lead or manage these projects as such. The project team is created with the lead that can best execute the project – best integrate assets we have – and best meet customer requirements.

We're very much requirements driven. But to succeed, we have to have the project discipline. I think it's important. I believe I told people at the PMI luncheon, and at other events as well – we want our future in-house project managers to get PMI certified.

Key dimensions: good people, good processes, good procedures, but in our world you have to be flexible – and you must have a very good network – because the odds are in our environment – we're going to bump into lots of issues and problems.

We wouldn't get the assignment if it wasn't hard. We wouldn't be able to come in and table our concept if the customer didn't think we could provide either the engineering solution or science application.

None of this is easy. It's building high quality teams that work well together. Our people know their roles and responsibilities and stand up and meet those requirements head on every day. That's our model.

I am optimistic that if we keep up our momentum in this exciting adventure – VCSI can make a huge contribution to Huntsville – and the people of Huntsville will all be there and help us take VCSI and NSSTC to a whole new level in the years ahead.

Thanks for chatting with me today. I hope you'll come back in a year or two and see how we're progressing.

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