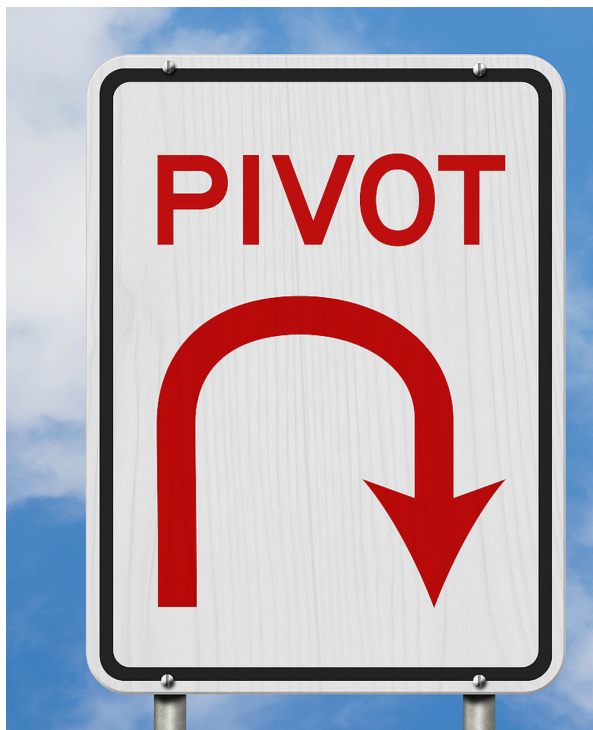


The German Defense Reset: Implications for the Helicopter Lift Decision



April 24, 2022

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How Prepared is Germany and the EU for 21st Century Geo-political Competition?

01/26/2020

By Kenneth Maxwell

Angela Merkel has been in power for 14 years. She was first elected as chancellor of Germany in 2005. She was then re-elected in 2009, and again in 2013, and for a further term in 2018. She plans to stay on until 2021.

67% of Germans approve of this and only 29% oppose.

She is the most powerful leader within the EU. What she says matters. In particular it matters because Germany will assume the presidency of the EU during the second half of 2020. The newly installed president of the European Commission is also a German, Ursula von der Leyen, who is a Merkel protégée. Von der Leyen was between 2013 and 2020 the German Minister of Defence.

Only Vladimir Putin has been in power longer than Angela Merkel.

Putin was appointed acting President of Russia by Boris Yeltsin on December 31, 1999, having served until then as Yeltsin's head of security. Putin's recent constitutional changes make clear he plans to retain effective power after his current presidential term ends in 2024.

Merkel in Germany and Putin in Russia will have a lot to say about how Europe reacts to the challenging dynamics of geo-strategic change over the next few years.

Merkel, unlike the French president Emanuel Macron, says that NATO is not "brain dead." Which is reassuring up to a point. Especially as this comes from the most powerful political leader in the European Union.

But what is most striking about Merkel's interview with *The Financial Times* is not so much what she says but what she goes not say. It is certainly true that Europe, as Merkel acknowledged, is "no longer" at the center of the world. What apparently, she means is that Europe is no longer at the "interface of the Cold War."

But this has been true for several decades.

The end of the Cold War 30 years ago brought about the reunification of Germany and the rise of German economic and political power and influence at the core of a geographically expanded European Community, and, of course, the possibility of the rise of the former East German Angela Merkel to become the chancellor of a reunited Germany.

In particular the post-Cold War years saw the incorporation of the former Soviet dominated territories to the Eastern Europe into the “new” Europe.

This is something Merkel does not comment on. Which is odd given the role of the government of Hungary, for example, that is critical to the new intra-European conflicts and disagreements over national identity, and above all over migration.

Migration is the elephant in the room here. Hungary was on the front line of the tens of thousands of refugees and economic migrants which poured over the Balkans from Turkey and Greece, from Syria and points east and west 1.1 million of them were received during 2015 into Germany. Putin has found a happy hunting ground in Hungary as a result.

There is also no mention of Turkey. Which is odd since Germany was opposed to the entrance of Turkey into the EU (and there are many Turks living in Germany) and helped broker (and in part pay for) the financial deal which keep Syrian refugees there and stopped their onward escape into Europe via Greece.

Of course, Russia has become the major outside military and political power in Syria from which a large part of the refugees fleeing the conflict come from.

It is also odd that she does not deal with the draconian economic policies forced on the southern European EU members (Greece, Portugal, Spain and Italy) by the German dominated European Central Bank (ECB) in the wake of the eurozone crisis. Nor does she talk about Poland engaged in a dispute with the EU over judicial independence.

Merkel, however, see a diminution of the position of Germany in comparison with the exponential rise of China and the resilience of the U.S. China overtook Germany in 2007 in terms of global output.

Germany, she says is “too small to exert geo-political Influence on its own.” She has led 7 trade delegations to China since 2005. Germany, she believes lacks enough skilled workers, especially in engineering and in software engineering. Germany, she says does not currently have capabilities in certain sectors, chips, hyperscalers, and battery cells and artificial intelligence (AI).

And there is major conflict within her coalition over Huawei. Currently, there is US pressure on Germany (and on other European countries including Britain) to reject the Chinese companies fifth generation telecom equipment, which the U.S. (and many in Germany and Britain) regard as a security risk.

Among the liberal democracies, the Australians have led the way on excluding the Chinese company from Australian efforts to build a 5G network, and the Australians have been active in Europe making their case as well.

But Merkel is hosting in Leipzig an EU-China summit in September.

Neither Russia nor migration figures in Merkel's galaxy of Germany's interests. At least they do not figure in this FT interview. Which is also very curious. Germany is involved in the mediation over the Ukraine (though President Donald Trump in his now famous telephone call to the Ukrainian President Volodymyr Zelensky said in terms of "burden sharing" that "Germany talks but does nothing.")

Berlin recently hosted a summit on the conflict in Libya. But there are no German boots on the ground in Libya which is probably just as well in the theater of the North African campaign of Generals Rommel and Montgomery during WW2.

In both of these regions Russia is now a major player. And Libya is the origin (or way station) of the African refugees and economic migrants crossing the Mediterranean into Italy and this clearly has become a major issue in Italian politics.

The U.S. has been most concerned with European dependence on Russian oil and gas. In particular, it has objected to the EU/Russian Nord Stream 2 gas pipeline energy project in the Baltic Sea. Germany is the beneficiary of this pipeline.

Speaking of NATO, Merkel says that Germany has increased Defense spending by 40% since 2015 and will reach the 2% figure by the 2030s.

But the legacy of Ursula von der Leyen as German Defense minister tells a different story. Hans Peter Bartels of the Bundestag military commission in a damning report last year criticized the state of the German military. According to the report, less than 50% of Germany's tanks, ships, and aircraft are available for training or operational. There is a lack of vital equipment. The Bundeswehr had to rely in Afghanistan on civilian helicopters for transport and borrowed body armor.

Merkel has promised that the current number of active personnel of 181,000 will rise to 198, 500 by 2025. But the overall picture is of a military lacking equipment, understaffed, and overly bureaucratic, and in the most important and influential EU member, with outdated equipment and a shortage of experts.

Merkel says that Europe will not be autonomous in a military sense in the foreseeable future and like Macron she speaks of European military cooperation. She says that Germany is too small to exist with geo-political influence on its own. Which is of course quite true.

In fact, Germany in the twilight years of the Merkel regime is the hollow core at the center of the European doughnut as far as defense is concerned. She says Germany is too small without Europe.

But Germany is bigger than Britain, a fact it is well worth remembering on the eve of Brexit.

Time for a Competitive Germany

03/02/2022

By Dr. Andrew Denison

The invasion of Ukraine has made it all too clear that Germany is too big, too rich, and too geo-strategically important to forgo influence, to opt out of the competition with Russia and China.

European security urgently needs German leadership in providing military capabilities, developing geostrategy, and mobilizing allies for this ongoing struggle.

More than Cooperation

Germany needs a new language to meet the challenge of competition. In the foreign policy section of the new German government's coalition agreement, the word "cooperation" appears 29 times, the word "competition" only once. Even the word "conflict" appears only 9 times, but in the sense of "causes" and "resolution," not in the sense of "persevere" or "win." Historic Bundestag speeches on Sunday, 27 February gave an indication of where Germany needs to go.

Cooperation is important, but not sufficient. It is time for Germany to focus on strengthening its influence and competitiveness. Germany's decisions are of utmost consequence not only for Germany but for the entire Western alliance. Europe's ability to avoid military blackmail will increasingly depend on Germany wielding influence effectively.

In the face of aggression from Russia as well as from China, the Federal Republic finds itself in a new position – no longer that of 1989 but rather that of 1949, albeit with marked differences. In 1949, Germany stood as a defeated, divided country, increasingly exposed to the ever more aggressive Russians. Today, also unlike 1989, Germany stands as the largest, richest, most geo-strategically important country in Europe – and faces a global competition with Russia and China the likes of which the world has not seen since the hottest phases of the Cold War.

Germany Must Take a Stand

Without German leadership in the sense of skillful use of the levers of power, including military power, Europe, if not the entire West, is increasingly vulnerable to a broad-based, well-conceived offensive by authoritarian, even totalitarian, rivals. Without a competitive and influential Germany, the European Union and NATO will be challenged to counter the threat posed by Beijing and Moscow.

Germany did not seek this challenge, but now the country must face it – just as the United States was forced to confront Stalin and Moscow after World War II. Whether Germany likes it or not, Moscow like Beijing, sees Europe's peace and prosperity as a potent danger to its system of rule. While Germany enjoys Europe's open order like no other, German's location and wealth have also made it the vital if not sufficiently influential keystone of this order.

Germany needs the strategy, the organization, and the sustainability to bring its political, economic, and military strengths to bear – but also to recognize its weaknesses and reduce them. Germany needs carefully considered resilience in all areas of competition.

Europe has rarely succeeded in keeping the peace and becoming the master of its own destiny.

A strategic and competitive Germany focused on strengthening its global role could change this.

This article is an English version of his German article published on the Transatlantic Networks website on [February 18, 2022](#).

Dr. Denison is the Director of Transatlantic Networks.

Transatlantic Networks is a center for political education and consulting based in Koenigswinter, Germany. The center's research focuses on the possibilities and limitations of a globalization of the Atlantic partnership.

Germany's U-Turn on Defense and Security

03/06/2022

By Robbin Laird

During my 2018 trip to Germany to focus on how Germany was addressing the new era of European direct defense, I had a chance to discuss the challenges with Dr. Andrew Denison.

As the German government has announced a significant U-turn on their defense policy in the midst of the Russian invasion of Ukraine, I talked with Denison about his take on the new German position and shaping a way ahead.

Dr. Denison: "In the late 1940s, the United States learned to deal with the new threats posed by the Soviet Union and China. Germany is now faces something akin to the United States in 1949 with the Soviet atom bomb and the Chinese revolution. Germany needs to learn to use military power to contain and deter, while strengthening its ability to compete on a multiplying number of non-military fronts.

"Germany is the richest and most technologically advanced country in Europe and central to European geo-politics. Germans are now seeing that there will not be an adequate European response to Putin's aggressive designs without Germany playing a much larger role.

"I have argued for some time that Germany's relative absence from European deterrence and defense was not only an expression of weakness, but an invitation to Putin to think he could use force with impunity and break Germany off from its European partners – who have taken the Russian challenge much more seriously, notably Poland, the Baltics and the Nordics.

"Now things have changed. In addition to a one-time \$110 billion dollar supplement, Germany will spend at least 2 percent of GDP on defense, an increase from \$55 billion in 2021 to at least \$90 billion annually. More money is important, but not sufficient. Now Germany needs to rethink its strategy.

"Germany has been very good at building bridges, networking with the Europeans, and reacting to crises. But Germany has not been very good at getting out ahead of crises, taking the initiative and being dynamic. Germany needs to develop its strengths, take advantage of its opponents' weaknesses, and truly understand the other side as an opponent.

“The foreign policy chapter of the coalition agreement used the word “cooperation” 29 times, “competition” once. Germany needs a new language of competition, and it needs to develop the best strategic thinkers in Europe. Without a German strategy, there’s no European strategy.

“The coalition agreement calls for a “strategically sovereign Europe”, other European leaders have called for an autonomous Europe. Everyone wants a more powerful Europe. Few are ready to acknowledge that without a more powerful Germany, Europe will not be very powerful.”

Denison underscored how the brutality and shock of the Russian invasion of Ukraine is creating a broad a social movement against Russian aggression and for freedom.

He argued that the Berlin government can no longer claim that the German public will not accept Germany playing a stronger military role in Europe.

Denison put the challenge very clearly: “Germany needs to help win the competition with the autocrats of our age.

“The German government has often hidden behind the notion that the German public does not want to get in a fight with anyone.

“The situation has now changed dramatically. As the Chancellor Scholz announced higher military spending in the Bundestag, almost half a million marched in front of the Brandenburg Gate in solidarity with Ukraine. The new government must lead by channeling this energy, explaining how security and defense programs can counter the Russian and Chinese threats.

“German leaders need to openly admit that change is necessary – also to make up for past mistakes. Indeed, rarely have German leaders expressed such contrition and self-criticism as they have on Berlin’s past policy toward Russia. Europe is now surrounded by challenges that European governments long ignored.

“Germany needs to employ strategic thinking to maximize its advantages in an increasingly existential competition with Eurasia’s autocratic, hostile, nuclear-armed giants. ”

“Germany must leverage its comparative advantages, mobilizing its own tech giants to contribute to European security, from IT and energy to chemicals, engineering, and logistics.

Denison argued that the German government needed to start by repairing and recapitalizing the hollowed-out German military, fulfilling the goals set out in existing “capability profile” documents.

“Equipment needs to be functional, maintainable and sustainable. Germany must focus on relearning homeland defense.

“Germany needs armed resilience to resist blackmail and protect NATO’s primary lines of communication with the East.

“Assuring air superiority and information dominance for Germany and NATO is the first step. On the ground, Germany must be able to defend itself from attacking tank columns, even though the

Bundeswehr has gone from 7000 main battle tanks in 1989 to 245 in 2022. Germany's large defense industry must step up to this challenge, leveraging its missile-making skills to counter the armored threat from Belarus and Kaliningrad.

"German planners must learn to think in terms of countering Russian military options – in concert with NATO and non-NATO partners.

I argued that the relearning of military art is really about how to deal with the 21st century authoritarians and is not simply a repeat of what was done in the Cold War. It is about innovation and change, and as the United States itself is struggling to break the shackles of a 20-year approach to war in the Middle East, it is not the dispenser of wisdom in the new warfare context.

This means that much of the learning which has been going on in Europe since 2014 from the Ukraine to Poland, the Baltics, France, the Nordics, and Pacific powers like Australia, could provide significant opportunities to shape innovations.

And to do so in ways that can provide not such military and security capabilities but global supply chains and defense industrial working relationships as well. At the same time, those parts of the U.S. military which are providing innovative solution sets to the kind of warfighting challenges the 21st century authoritarians pose provide significant partnerships as well.

Denison commented: "He with the most friends wins. Being able to attract the world's best and brightest into collaboration on defense and security technologies is the West's trump card.

"With thoughtful strategic direction, German technological and production prowess can make a significant contribution to global security and defense. There is a new budget and a new market. Low-hanging fruit abounds."

He cited the Bracken comment made in an earlier piece that Putin has already used nuclear weapons in terms of nuclear head games.

Germany needs to understand this issue and re-engage with NATO and France on these issues. The short-term acquisition of the F-35 as the Tornado replacement can be part of such a re-learning and re-connecting process. Whichever combination of systems is chosen, Germany's role in supporting NATO nuclear deterrence will need to expand – and be better explained.

A core concept for the new strategic environment is clearly about building resilient societies, not just an arms buildup in a classic sense.

Denison argued that "Germans need to take a whole of society and whole of government approach to the 21st century security and defense challenges. We are talking about security of infrastructure, cyber and energy security, sustainability in terms of enduring conflicts, and reshaping our world view. Getting off fossil fuels is now good Green geostrategy, not just climate protection."

He argued as well that Europe and Germany needed to understand the Pacific side of all of this.

"Like the United States, Germany must think of itself as an Atlantic and a Pacific power. A rising China has profound consequences for Europe. Chinas emissions are bad enough, its aggressive rhetoric

and military buildup also pose a growing threat to Europe. No policy to defeat Putinism in Russia is complete without a clear sense of how China fits into the Eurasian dispensation.

“In short, we are at a tipping point, a new phase in Germany’s relations with the world. Germany did not want this fight; Germany’s neutralism might have even made the Putin’s aggression more likely. Now things are different. Today’s Germany can rise to the occasion and use its influence to help ensure that the ultimate settlement with Russia and China is on Western terms.”

Germany Re-Boots its Defense Efforts in the Middle of the Russian Ukraine Invasion

03/10/2022

By Robbin Laird

Recently, I had a chance to talk again with Lt. General (Retired) Klaus-Peter Stieglitz about Germany and the government’s recent decision to change course on defense and security. I first had the opportunity to meet Lt. General (Retired) Klaus-Peter Stieglitz, a former German Air Chief, last Fall in Berlin at the International Fighter Conference.

During my visit to Germany in February 2019, where I was continuing my look at the challenge of building a 21st century approach to the direct defense of Europe, I had a chance to meet with him again, this time in Bonn, to discuss the challenges facing a German reset on direct defense.

According to my discussion with Stieglitz [during the visit to Bonn in 2019](#): “The strategic environment has changed and requires Germany, a nation in the heart of Europe with more than 80 million people, to pay its fair share for the collective defense and to shape and focus on a force appropriate to the new situation.

“Obviously, the new defense effort requires more money. This is starting to happen.

But we are facing a significant rebuild given the state of readiness of the force today and the need to repair that force.

“Just undertaking the repair of today’s state of readiness will make the Bundeswehr a construction site for the next years. We are almost back to 1955 when we had to build a new Bundeswehr.

“Our rebuild for the new strategic environment today is as significant as during these early years of the Bundeswehr. And all that happens after decades enjoying a peace dividend, where savings certainly have not been spent within the Bundeswehr.”

“But money alone is not enough. We are talking about changing the focus and building a 21st century defense force which can play its role at the heart of Europe.”

Unfortunately, not much progress has been made since that conversation.

But has Stieglitz put it in our recent discussion in the midst of the Russian invasion of Ukraine, there is a decisive shift in Germany now to make this happen.

He underscored that “The German chancellor in day 3 of the Russian invasion, announced a major shift in German defense policy. Not only was new money generated for the Bundeswehr, but a new attitude was expressed towards the priority upon defense.”

He also noted that German companies were now leaving Russia and the Nordstream II pipeline stopped. He added: “I don’t see such a project getting support in the future. There is a new attitude and a new approach.”

“We are now discussing and will procure weapons systems which the German forces are missing very badly. Those steps will be taken in the next few weeks and months. But the really key point is the decisive action by the Chancellor and the government towards Russia and the focus on the defense of Europe and the forces for the NATO alliance.

“We have a new situation in Europe since the invasion. The war from the Russian side with the support of Belarus is a decisive change for Germany and for Europe.

“The government deployed German fighter aircraft to Romania. We will support the Baltics with air defense. We will strengthen the German ground deployment in the Baltics.

“We will enhance our role in safeguarding the airspace of Europe to the East. These steps have already been taken within the past few days. And this is in stark contrast to what Germany did after the 2014 Crimean takeover by Putin.”

With Lt. General (Retired) Klaus-Peter Stieglitz’s core emphasis on the Chancellor’s announcement and his focus on that statement being an important turning point, let me turn to what the Chancellor indeed said in his policy statement of February 27, 2022.

The Chancellor underscored that the Russian attack on Ukraine means that “we have entered a new era.” He clearly warned Putin to not threaten NATO states with a direct attack.

“President Putin should not underestimate our resolve to defend every square metre of NATO territory together with our allies!

“We are absolutely serious about this. When we welcome a country into NATO, we commit to defending that country as a partner and ally. Just as we would defend ourselves!

“The Bundeswehr has already bolstered its support for our eastern allies – and will continue to do so. I thank the Federal Defence Minister for this important gesture!

- We have deployed additional troops in Lithuania, where we lead the NATO battlegroup.

- We have extended and enhanced our participation in air policing in Romania.
- We want to contribute to the establishment of a new NATO unit in Slovakia.
- Our navy is helping to secure the North Sea and the Baltic as well as the Mediterranean with additional vessels.
- And we are also prepared to contribute to the defence of our allies' air space in Eastern Europe using anti-aircraft missiles."

"The page has been turned and Putin's real agenda is clear to Europeans."

As the Chancellor said: "Anyone who reads Putin's historicising essays, who has watched his televised declaration of war on Ukraine, or who has recently – as I have done – held hours of direct talks with him, can no longer have any doubt that Putin wants to build a Russian empire.

"He wants to fundamentally redefine the status quo within Europe in line with his own vision.

"And he has no qualms about using military force to do so. We can see that today in Ukraine.

"We must therefore ask ourselves: What capabilities does Putin's Russia possess? And what capabilities do we need in order to counter this threat – today and in the future?

"It is clear that we must invest much more in the security of our country. In order to protect our freedom and our democracy. This is a major national undertaking. The goal is a powerful, cutting-edge, progressive Bundeswehr that can be relied upon to protect us.

"At the Munich Security Conference a week ago I said that we need aeroplanes that fly, ships that can set out to sea and soldiers who are optimally equipped for their missions. That is what is important. And it is quite certainly something that a country of our size and our significance within Europe should be able to achieve.

"But we should be under no illusions. Better equipment, modern technology, more personnel – all of this costs a lot of money. We will therefore set up a special fund for the Bundeswehr. And I am deeply grateful to Federal Finance Minister Lindner for his support on this! The 2022 federal budget will provide a one-off sum of 100 billion euro for the fund. We will use this money for necessary investments and armament projects.

"We will now – year after year – invest more than two percent of our gross domestic product in our defence. And I now appeal to all parliamentary groups within the German Bundestag: We must secure this special fund in our Basic Law!

"There is one thing that I would like to add. We have set this goal not only because we have made a promise to our friends and allies to increase our defence expenditure to two percent of our economic output by 2024. We are also doing this for us, for our own security.

"In the awareness that the Bundeswehr alone does not have the means to contain all future threats.

“We therefore need strong development cooperation. We will therefore strengthen our resilience – in terms of technology and as a society – for example against cyberattacks and disinformation campaigns, against attacks on our critical infrastructure and channels of communication.

“And we will keep pace with new technology. This is why it is so important to me, for example, that we build the next generation of combat aircraft and tanks here in Europe together with European partners, and particularly France. These projects are our utmost priority. Until the aircraft are operational, we will continue to develop the Eurofighter together.

“Another encouraging development is that the contracts for the Eurodrone were finally signed this week. We are also pushing ahead on the purchase of the armed Heron drone from Israel.

“And with regard to nuclear sharing, we will procure a modern replacement for the outdated Tornado jets in good time.

“The Eurofighter is set to be equipped with electronic warfare capabilities.

“The F-35 fighter jet has the potential to be used as a carrier aircraft.

“And finally, ladies and gentlemen, we will do more to guarantee a secure energy supply for our country. The Federal Government has already initiated one important measure to address this.

“And we will change course in order to eliminate our dependence on imports from individual energy suppliers.

“After all, the events of recent days and weeks have shown us that responsible, forward-looking energy policy is not just crucial for our economy and our climate. It is also crucial for our security. This means that the faster we make progress with the development of renewable energies, the better. And we are on the right track. We are an industrialised country aiming to become carbon-neutral by 2045!

“With this goal on the horizon, we will have to take major decisions. For example, on building up a reserve of coal and gas. We have decided to increase the amount of natural gas in storage via long-term options to two billion cubic metres. Furthermore, we will acquire additional natural gas on the world markets – in consultation with the EU. And finally, we have made the decision to rapidly build two LNG terminals in Brunsbüttel and Wilhelmshaven. I would like to expressly thank Federal Economics Minister Habeck for his efforts to facilitate this!

“Our current short-term needs can dovetail with what is already needed long-term for the transformation to succeed. An LNG terminal that today receives gas can tomorrow be used to import green hydrogen. And amidst all this, we will of course not lose sight of the high energy prices. They have now been driven up yet further by Putin’s war.

“This week we have therefore agreed on a relief package, which includes lifting the surcharge under the Renewable Energy Sources Act by the end of this year, as well as an increase in the commuter tax allowance, a heating subsidy for low earners, subsidies for families and tax relief measures. The

Federal Government will act swiftly to set these in motion. Our message is clear. We will not leave individuals and businesses to face this situation alone.

“Ladies and gentlemen, this watershed does not just affect our country. It affects all of Europe. And this, too, is both a challenge and an opportunity. The challenge consists in strengthening the sovereignty of the European Union sustainably and permanently. The opportunity lies in preserving the united front that we have demonstrated in recent days in agreeing the sanctions package.

“For Germany and for all of the EU’s other member states, that means not simply asking what they can extract in Brussels for their own country. But asking: What is the best decision for our Union? Europe is our framework for action. Only when we understand that will we prevail over the challenges of our time.”

We closed our discussion by this thought – perhaps the Russian invasion of Ukraine is as decisive a moment in the minds of the new generation of Germany as it was for the German and European generations at the time of the Berlin Airlift.

Lieutenant General (ret) Klaus-Peter Stieglitz was Chief of Staff, German Air Force from 2004 to 2009.

Lieutenant General Stieglitz joined the Luftwaffe in October 1968 and commenced officer training, followed by pilot training in the USA to become a fighter pilot. During his flying career he has accumulated more than 3.600 flight hours, mostly on combat aircraft, i.e. the F-104 Starfighter, F-4F Phantom, Mig-29 and Eurofighter/Typhoon. In 1981 – 83 he attended the German Armed Forces Staff College.

During his career he held numerous national and international staff and command positions, i.e. squadron commander, group commander, commander of a fighter wing, staff officer within the German MOD, staff officer at NATO Headquarters SHAPE, Belgium, commander of the NATO AWACS Component, Director Flight Safety of the German Armed Forces, commander of a German Air Division in Berlin and Deputy Commander NATO Air Forces Northern Europe, Ramstein.

In his last assignment he was Chief of Staff of the German Air Force from January 2004 to October 2009. Today he is engaged as senior advisor and consultant.

In the Presence of War in Europe, Germany to Join F-35 Global Enterprise

03/22/2022

By Billie Flynn

For 30 years post-Cold War, we have heard that the large-scale conflicts are history, that heavily armored battle tanks no longer needed and asymmetric warfare was the future. Big armies and highly sophisticated fighter jets and bombers were over-kill for what would be needed in the future.

Putin's war of choice in Ukraine has killed those conversations.

If we are lucky, we will enter a new Cold War; if unlucky, the future will be far worse.

When we look into the future of warfare and what is needed to be effective, lethal and survive in highly contested conflicts, the most sophisticated stealth fighter in the world is the only logical choice.

Germany decided in favor of the F-35 and Canada is next.

Germany's announcement to procure up to 35 F-35As for the Luftwaffe to assume the nuclear delivery role that the aging Tornado has flown for many years adds yet another European country to the long list of F-35 users.

I was in Berlin some years ago when the F-35 first made a push in Germany briefing the press about its capabilities. The German Defense Minister at the time succumbed to pressure from a proposed French German '6th Gen' fighter proposal plus pushback from the Eurofighter consortium and subsequently shut down any conversation about the F-35 coming to Germany.

The fallout of that included the firing of the Commander of the German Air Force who had advocated for 5th Gen.

Times have changed, F-35 is back in without a competition ever happening.

So now Germany is added to the list of European nations: Netherlands, Belgium, Italy, Switzerland, Denmark, Norway, Finland, UK (sort of European) and soon enough will be Spain and Greece. The U.S. and soon to be Canada gets added to a NATO list.

I know that Finland not part of NATO yet, but you get the point.

Why is it powerful to have everyone flying the same data-gathering spaceship in the coming years?

Seamless interoperability is the term.

For Germany and Canada, the F-35 drops into an Ecosystem that has already been crafted and is being populated by the non-US F-35 users. The globalization of F-35 brings 5th Gen capabilities and a new level of interoperability not imagined with legacy 4/4.5 Gen platforms. F-35 users share knowledge not just data.

The many dimensions of F-35 drives integration into all elements of military services, leveraging what the F-35 is capable. Imagine the shield of deterrence in Europe and Asia from the non-U.S. services matching the USAF/USMC/USN fleets.

This umbrella will not be equaled by any adversary for many years.

While many wondered if the F-35 could ever deliver on the promises made 20 years ago,

I doubt anyone ever understood the compounding effect of so many air forces buying into F-35 and how it has transformed aerial warfare.

In the supersonic-paced conduct of war, we need everyone speaking exactly the same language, understanding exactly the same data at exactly the same speed. We cannot be translating for the non-F-35 pilots what is happening on the battlefield when there are S-300s, S-400s and S-500 Surface-to-Air missiles (SAMs) below us as we weave our way around the threats to deliver our weapons and take out the enemy.

We can't be coddling to the 4.5 Gen fighters who are threatened long before they cross into enemy territory by the SAM radars that see them 150 Km away because they are not VLO (stealth) fighters and have only their electronic warfare defensive systems to protect them.

We cannot be spending our efforts to keep them safe when we are flying in the most contested airspace in modern warfare.

We need everyone to operate a stealth fighter, using the same tactics to avoid being detected, not emitting tons of electronic energy from our fighters (which makes it easy for the enemy to detect us). We need to share sophisticated data back and forth between F-35 fighters in our formations with our stealthy datalink systems.

That data sharing allows all the F-35s in a formation to know exactly what every other jet sees and hears (electronically) to build the air picture dramatically more comprehensive and all-knowing than could ever be imagined in the non-F-35 jets.

That means that every F-35 pilot knows everything that the other pilots know for many, many kilometers in front, off to the sides and even behind the formations. Only a fraction of that Situational Awareness (SA) can be gathered in the non-F-35 fighters.

For many years I have traveled the globe debating the capabilities of advanced fighters, especially F-35, with friends and peers from other aircraft manufacturers.

“You Don't Know What You Don't Know” best describes trying to explain context to pilots, engineers and marketers who have no insight into the level of SA and knowledge that I saw in the F-35 that I flew every day.

Interoperability between fighters has its roots in the teaming of NATO Air Forces based in Europe over those many decades of the Cold War.

Air Forces would conduct squadron-level exchanges of different countries flying different fighters to learn more about how each other operate. We would regularly fly to different air bases, and have their ground crew service our jets, give us fuel and send us back in the air, to familiarize them with our particular jets and maintenance requirements.

The best forum for understanding how to operate with other air forces was attending the Tactical Leadership Programme (TLP). Hosted at different bases in Europe over the years, TLP was a one-month crash course in flying with other nations and building on the theme of interoperability. Aircrew

would deploy with their own ground crew and logistics support to the TLP base, where the pilots would learn, plan and fly progressively more sophisticated (and hard) scenarios versus more capable adversaries as the course progressed.

I attended TLP in 1986 with the CF-18 before the Canadian Hornet community knew anything about true multi-role and especially air-to-air roles in Europe. We were sponges taking in everything we could from the instructors (from many different NATO nations) and other flyers.

In our case, the product that we came back home with led to the introduction of air-to-air tactics for the CF-18 community far beyond the NORAD tactics that we had inherited in those early days. TLP remains an invaluable tool for teaching interoperability amongst the NATO nations.

And here we are, on the edge of a new Cold War where NATO nations need to fly together to manage highly lethal threats in the air and from the ground. We need to leverage the best of our capabilities not nurse the 'Have Nots' to conduct warfare. Train like you fight...fight like you train.

That means upping the game for everyone and expecting only the most survivable and capable fighters to be used. F-35 flown by all nations will ensure that we are all operating a fighter that can survive in the worst of environments, deliver the weapons or spy on the enemy without being detected and be more effective complementing each other's efforts. F-35 in combat is like playing football except our team is invisible and theirs isn't.

For so many years, we have heard about how incredibly potent the F-22 has been in peacetime exercises. I have posted often about how capable the F-35 has been in these same exercises since its early years.

There is a complete silence from the Non-stealth crowd since the Ukraine war broke out. Everyone, even in Canada, gets it now. So many Russian-built fighters have been shot down on both sides, in one case apparently targeted from more than 150 KM away with a SAM, that we all understand how it would be unthinkable and suicidal to send a 4th Gen fighter into that conflict. No stealth means no fly.

F-35 it is. Everyone flying the same jet, speaking the same language, sharing the same data, surviving and coming home each time. That's what seamless interoperability is.

The German F-35 Decision and Its Cascading Effects on German Defense

04/12/2022

By Robbin Laird

At the end of February 2022, the German chancellor announced a new way ahead with regard to German defense and the immediacy required for upgrading German defense capabilities.

Relatively shortly after that the German government announced a decision to acquire F-35s to replace their gaining Tornados, which provides the current nuclear option for Germany.

Although the F-35 in this sense is “replacing” an aging ground attack aircraft, the F-35 is not literally speaking a replacement aircraft.

As I have argued for many years, the F-35 global enterprise is really about re-norming combat aircraft for 21st century defense.

When I attended the International Fighter Conference in Berlin in 2018, there was a spirited discussion of the F-35 option now versus the wait and acquire a 2040 replacement aircraft via the future combat air system being shaped by France and Spain along with Germany.

The Russians seemed to have shifted the timeline for a needed new fighter to the immediate period, but at the time it was clear that the Luftwaffe wanted the F-35 in the near term.

This how two former Chiefs of the Luftwaffe, one of whom was fired over expressing his public opinion on the importance for Germany of acquiring the F-35, put it:

“With the decision not to procure the F-35, Italy and Great Britain not only consolidate their leading role in the field of European NATO air forces, they also gain valuable technological Know-how and secure high-tech jobs. Incidentally, both countries are also involved in the Eurofighter, which, despite intended further developments, offers far less high-tech potential in the coming years than the F-35.

“That the F-35 could hardly be beaten in a fair competition is proven by the competitions already held in Norway, Denmark, the Netherlands and Belgium. The F-35 clearly won in all relevant categories against all European and US competitors, including the Eurofighter.

“The performance of the F-35 is undisputed, the operating costs are at a comparable level, especially in the logistical network with the partner nations, and the initial costs are significantly lower than those of a Eurofighter.

“Together with the future European F-35 nations Italy and Great Britain, these European countries will then have the world’s most advanced fighter aircraft, which, with its unique capabilities, will open completely new doors to European and transatlantic military cooperation in operations and operations. Nations like Germany, but also France, will only be in the second or third row.”

With a reversal of this early decision not to procure the F-35, Germany will now join in the broader F-35 enterprise which is delivering Europe’s core air combat capability for the foreseeable future. With the ability of the F-35s to fight as wolfpacks, the ability of Germany to train, learn and evolve their F-35s in conjunction with their core geographical partners and allies will be significant as well.

But the coming of the F-35 to the German forces can have a much wider reaching impact than simply “replacing” the Tornado or even the significant coalition consequences.

The “flying combat system” which is the F-35 triggers further changes in the air-ground-naval forces which German has and will develop.

For example, this decision clearly highlights the importance of Germany building out its force transformation capabilities such as acquiring the CH-53K, a digital aircraft, which the Marines are integrating with the F-35 in shaping their ability to enhance force mobility in the combat space.

And for Germany, moving force to the point of impact against an adversary always looking to exploit the seams in the Alliance, such a capability is crucial.

For Germany to get full value out of its F-35 acquisition, opening up the possibilities for force development and transformation driven by the operation of this aircraft with its allies over the extended battlespace crucial to German and European security.

The German Helicopter Lift Decision: FCAS Way Ahead Makes the CH-53K the Obvious Choice

04/19/2022

By Robbin Laird

For the reworking of German defense, which can be enabled by the F-35 acquisition, adding the CH-53K which is being integrated into the next phase of USMC transformation makes a great deal of sense.

Why would the German Luftwaffe wish to operate a legacy lift helicopter – a variant of the CH-47 — whose future is behind it?

Even more interesting to me is the question of how the F-35 acquisition affects FCAS and how the choice of a new heavy lift — versus medium lift — helicopter either slows down an FCAS enabled German force or helps accelerate it.

The Future Combat Air System (FCAS) is built around shaping a networked force, one which can operate as a kill web enabled force. At the same time, the focus of the partners in FCAS, Germany, France and Spain, is upon platforms as well, notably building a new fighter which would be IOC'd in the late 2030s.

But there is an inherent tension between the network enablement piece and the platform piece. Shaping a 21st century kill enabled network force is built around C2 and ISR systems which are both sovereign from a national point of view and integrable from a coalition point of view. Platforms which can enable such capabilities are a clear priority, whether built in Europe or bought from allies.

So why is Airbus Germany which has underscored the importance of FCAS, supporting Boeing in supporting a legacy system which does really nothing to carry forward the FCAS aspirational approach whereas clearly an F-35-CH-53K tandem does?

For the Marines, the F-35 capabilities are crucial to enable the ground insertion force and to enable their ability to distribute the ground force but to provide integrative C² and ISR “tissue” to enable the

360-degree warfighting capabilities of the ground maneuver force. One reason the Marines are adding a new combat heavy lift capability to their force is precisely because they needed a new lift capability which is fully integratable with their F-35 enabled ground insertion force.

Put simply, the CH-53E is too old of an aircraft in terms of how the C² and sensor systems have been built for legacy systems to take advantage of the digital revolution of which the F-35 is a key driver for a joint force. It is designed from the ground up to be a digital aircraft, and to work on the digital battlefield, for which the F-35 is a key element. The aircraft brings new capabilities to the force which are in no way the same as the CH-53E. Much like the F-35 is built the ground up differently from legacy aircraft which enables them to anchor a digitally enabled warfighting force, the CH-53K is built from the ground up to operate in this context. Neither the CH-53E or the legacy U.S. Army medium-lift helicopters are.

One of those capabilities is the new cockpit in the aircraft and how digital interoperability and integration with the evolution of the Marine combat elements more broadly is facilitated by the operation of a 21st century cockpit. The cockpits are very different and fit in with a general trend for 21st century aircraft of having digital cockpits with combat flexibility management built in.

Because the flight crew is operating a digital aircraft, many of the functions which have to be done manually in the E, are done by the aircraft itself. This allows the cockpit crew to focus on combat management and force insertion tasks. And the systems within the cockpit allow for the crew to play this function.

This means that the K and its onboard Marines and cargo can be integrated into a digitally interoperable force. This means as well that the K could provide a lead role for the insertion package, or provide for a variety of support roles beyond simply bringing Marines and cargo to the fight. They are bringing information as well which can be distributed to the combat force in the area of interest.

In a 2020 interview which I did with Col. Perrin, Program Manager, PMA-261 H53 Heavy Lift Helicopters, U.S. Naval Air Systems Command at Pax River Naval Air Station, the officer highlighted the importance of the USMC having a digital heavy lift aircraft integrated into the evolving digital battlefield which is a key driver in USMC transformation to succeed in the high-end fight which our 21st century authoritarian competitors are engaged in: “The CH-53K can operate and fight on the digital battlefield.”

For example, it is clearly a conceivable future that CH-53Ks would be flying a heavy lift operation with unmanned “mules” accompanying them. Such manned-unmanned teaming requires a lot of digital capability and bandwidth, a capability built into the CH-53K.

An additional USMC perspective was provided during a visit to 2nd Marine Air Wing in July 2021 to Marine Corps Air Station New River where I had a chance to visit the VMX-1 CH-53K detachment at New River Marine Corps Air Station and to continue my discussions with LtCol Frank, Officer in Charge of the CH-53K Operational Test Detachment at New River. Being a generational shift, the new digital aircraft is in LtCol Frank’s words “a blank slate.”

“You have an aircraft that can carry significant supplies or Marines inside and can carry 36,000 pounds externally. They can carry a lot of stuff. It has automated flight control systems that allows you to land in the degraded visual environments that you would not dare land an ECHO or a DELTA in. It can fly long distance without the air crew being fatigued. If you’re aerial refueling and flying 1,000 miles in

the E, the air crew would be wet noodles getting out after the flight. In the K you can relax a little, take a breath, allow the aircraft to help you fly and thus reduce aircrew fatigue significantly.

“I think when the necessity for conflict rears its head the K will be able to respond, and using human ingenuity, the operators will be able to find a way to support any mission that the Marine Corps needs it to do. The K is so versatile that I don’t see people being pigeonholed into not being able to do something with a K. I think they’ll be able to answer the call 99.9% of the time.

“It’ll be able to pick up its combat payload. It’ll be able to transport it, fly it any distance and land it anywhere. And you’re not going to be afraid to do it. In the ECHO, if it was low light at night, the visibility was bad, you didn’t have a moving map, and you were headed to a dusty and tight zone the pucker factor would be through the roof. The altitude hold was suspect, it didn’t have lateral navigation and flight director capability, your attitude gyros would fail often. So you get this hair on the back of your neck stands up that, I don’t want to be flying in this environment. The aircraft’s not going to help me, and I can’t help myself because I don’t have my sensory cues.

“But in the K, you know the aircraft’s going to help you. We’ve sat in brown out dust, just sitting there hovering and talking to each other with position hold on. And we’ve been debriefing the landing, and the aircraft’s just holding a hover perfectly. So that’s what I like about the K is that I think it will be able to answer the call for the mission most anytime the Marine Corps needs it, whether we know what the mission is going to be, or not.”

We have focused on the shaping of a future combat system in Europe for several years. And last year published a report which provide an overview on its evolution.

The Future Combat Air System (FCAS) is a core initiative of the Macron Administration for both defense modernization and building out defense cooperation with its core Airbus allies, Germany and Spain. The Administration is committed to the modernization of their core combat fighter aircraft, the Rafale, for the next thirty years. But FCAS is designed to deliver a next generation fighter aircraft.

This project is designed to replace both the Rafale and the Eurofighter with a “combat cloud” ready aircraft, that is one designed to work interactively with other air assets in delivering the desired combat effects.

It is a clear response to what the Macron Administration views as the F-35 challenge to European sovereignty. And indeed, European sovereignty is a key part of the Macron version of Gaullism, much like the General launched the independent nuclear deterrent.

At its core, the goal is for Germany and France to work closely together in shaping this new collaborative venture. But the significant disconnect between defense in Germany and France poses a core challenge to the project. And different approaches to arms exports also affects the program and its future.

Even more significant is the pressure of time. Europe is being challenged by Putin significantly. Does Europe have time to wait for enhanced sovereignty in exchange for enhanced defense capabilities in the near to mid- term?

The F-35 is already a significant player in European defense and will steadily enhance its role in the multi- domain defense being shaped by NATO. The interoperability efforts of NATO are a key part of

the Macron Administration's approach to defense as well, so FCAS will be designed to work with core allies as the program evolves.

But there is a major challenge facing networking in defense, as several initiatives are underway to shape secure communications for the combat force, and some of those clearly are designed to leverage new civilian technologies like 5G.

Germany's Heavy Lift Helicopter Choice: Seen from the Perspective of the International Fighter Conference, 2019

11/26/2019

By Robbin Laird

I have just returned from Berlin.

I attended the International Fighter Conference 2019 and visited [Checkpoint Charlie](#) and shared thoughts with German friends of the thirty-year anniversary of the Fall of the Berlin Wall.

Both events had much in common – the Cold War is over but the Russians are back.

And this faces Germany and its trans-Atlantic allies with major challenges in rebuilding their military forces and their over-arching deterrent strategy.

Earlier this year, I visited Munich, Bonn, Hamburg, Frankfurt and Berlin, and met with and conducted interviews with a wide range of recently retired Bundeswehr officials, journalists and strategists to discuss the challenge facing both Germany and the Alliance to deal with the new challenges posed by the 21st century authoritarian powers, including conflicts in what are being called, “gray zone” and “hybrid warfare” conflicts.

The nuclear threat clearly remains, and as the European Union and NATO confront internal disagreements as well as differentiated modernization, the challenge will be to ensure that the nations meet their Article III national defense obligations as they come to the table to the defense of their NATO allies in terms of crisis, conflict or war.

This is occurring at a time of profound change in military technologies and the overall nature of the security and defense threats and challenges as well.

For example, the [International Fighter Conference 2019](#) focused on the challenges facing the fighter forces as they adjusted to the new context of multi-domain threats in a full spectrum crisis threat environment.

Much of the fighter conference was a clear recognition that the role of the fighter force was changing significantly in terms of how they would play various roles in a multi-domain force.

This meant that much of their combat focus would be within the changing context of the tailored force packages which would need to operate against discrete and specific threats facing the alliance.

It is about how to shape an effective combat package which can operate within a contested environment and to do so rapidly enough to make a difference.

What this means for any new platforms coming to the combat force that it is crucial that they are the best choices available to deliver the kind of combat capability which can be anticipated in a crisis environment.

It is about having connected platforms which can work together to deliver the combat effect needed in a particular crisis, recognizing that within Europe there is no such thing as uncontested operational space likely in a major crisis.

What this means for Germany as they start the process of recovery in terms of Bundeswehr capabilities that new platforms need to be building blocks which pull the force in the right direction, that is shaping an integrated distributed force.

Key allies of Germany and NATO overall are placing a priority on cross-domain operational capabilities within an integrated force able to distribute C2 to operate in a manner which the adversary would find credible.

Building a Relevant Force Structure

I have published a report which has dealt with the [German defense challenge](#) and have written extensively on what I have termed the [integrated distributed force](#).

Those reports can be read as background to this article.

But I would summarize the main findings as a baseline by which to address the case study of German's coming selection of a heavy lift helicopter.

The force we are building will have five key interactive capabilities:

- Enough platforms with allied and US forces in mind to provide significant presence;
- A capability to maximize economy of force with that presence;
- Scalability whereby the presence force can reach back if necessary, at the speed of light and receive combat reinforcements;
- Be able to tap into variable lethality capabilities appropriate to the mission or the threat in order to exercise dominance.

- And to have the situational awareness relevant to proactive crisis management at the point of interest and an ability to link the fluidity of local knowledge to appropriate tactical and strategic decisions.

I would add a specific German requirement as well as they build out what the call along with the French and the Spanish, a future combat air system.

Here the approach is to build a new fighter aircraft by 2040 but do so through the process of creating a more integrated force able to operate by drawing data from a common combat cloud, and to do so by ensuring that integration leads to great force lethality and effectiveness at the distances which European combat forces will need to operate.

And given the twin expansion of the European Union and NATO to which Germany has been a key driver, this means a much larger combat space than the Bundeswehr had to cover in the days of the Cold War.

In the Cold War, direct defense was largely about territorial defense and support of core allies operating from German territory or from other NATO territories in supporting defense of the Central Front.

Now the area German forces need to GO TO is much further than envisaged in the Cold War.

It is not primarily about reinforcing force strength within West Germany; it is about moving force rapidly over distance to the crisis point and making a difference by being interoperable and connected with the relevant allies engaged in dealing with the crisis.

The Key Role of the Heavy Lift Program

The selection of a new heavy lift helicopter is a near term decision for the Bundeswehr which can move it forward towards the force it needs, or can stay within the genre of replacing what it had bought for the Cold War period.

It is a key decision which will either move Germany forward towards the integrated distributed force envisaged in its European focused Future Combat System program or in its most recent NATO commitments to modernize its forces in a way that can support the NATO that has been shaped in the post-Cold War period.

As I argued in my report on German defense published earlier this year:

But key questions facing Germany are very clear.

How will Germany pump money rapidly into the Bundeswehr to repair its severe readiness problems in a short period of time?

Rumsfeld always argued that you have to fight with the army you have, so how will the government take seriously the need to repair an increasingly hollow force?

NATO now has the longest border in its history.

Germany is no longer garrisoning the inner-German border, where are the forces that can project power rapidly to reinforce the Baltic states, the Poles and other NATO allies to the East?

Repairing the Army you have and preparing for serious engagement forward are the two most immediate tasks facing Germany.

During the Cold War Germans spent 4% on defense; where are they now?

Russia directly threatens a core German value – multilateralism.

Putin clearly has a divide and conquer strategy and if Germany is to counter this, then the Bundeswehr needs to be built for force mobility throughout Europe.

This will take significant defense investment delivering capabilities in the midterm; it is not about the long term or an FCAS in 2040.

Preparing for the long-term is important but there needs to be a sense of urgency or there won't be a long-term or at least one that supports the "European" values one hears so much about in Germany.

To take an example, in the recent Trident Juncture 2018 exercise, Germany committed 8500 of the 50,000 troops in the exercise, which is a clear declaration of intent.

But to do so, the entire Bundeswehr had to be cannibalized and one clearly could ask how sustainable forward any such German engagement could be in a real conflict?

It is clear the German MoD is looking to its heavy lift helicopter replacement program to set in motion a new approach to how operations and sustainment are to be addressed, clearly in part because the new helicopter is expected to operate over a wider area within Europe than its heavy lift helicopters did in the Cold War.

The approach is built around selecting a single contractor responsible for delivering and sustaining the new build helicopter throughout its operational life. In the past, the sustainment part was done by one company and the build and delivery of the helicopter by another.

But the MoD has understood that in a 21st century platform, this makes less sense as there is a continuous modernization process envisaged in the operational and sustainment process, seen as an integrated whole.

According to the MoD's Industry Day held in Koblenz, Germany on February 28, 2018, the new approach was articulated and explained to those wishing to compete for the program.

The briefing underscored that the new heavy lift fleet would operate and be sustained from two main operating bases, one at Schönewalde and the second at Laupheim.

These are the two current air bases from which the Luftwaffe operates its rotary wing aircraft. The first is located not far from the "new" European nations of NATO.

It is located South of Berlin and not far from the Polish border.

The Luftwaffe has purchased in common with France, a squadron of C-130Js and is building a new airlift fleet around the A400M European heavy airlifter.

And given the evolution of airlifters, seen in terms of the KC-130J for the Marines in terms of the Harvest Hawk version, and in terms of the projected use of the A400M in the FCAS program of the ability to launch remote carriers, a new heavy lift helicopter should clearly be able to work seamlessly with these other lift assets and to be able to integrate into the evolved concept of what kind of support lift can provide in the future, up to and including working the sensor-shooter relationship across a distributed force.

With the shaping of a new force structure within the context of the current and projected security context for Germany, it makes sense that each new platform or program be made with regard to where Germany is headed in terms of its 21st century strategic situation, and not be limited by the thinking of the inner-German defense period.

How then do the considerations identified in this section affect the heavy lift helicopter choice?

Evaluating the Options

The German approach was laid out in a military aviation strategy paper published by the German Ministry of Defence in early 2016.

The overall approach was defined as launching the Next Generation Weapons System or the Future Combat Air System in which a system of systems approach would be developed with European partners, and provide for the successor to the Tornado and build out the role of unmanned systems or what are now referred to as remote carriers within an overall combat cloud driven system of systems.

The heavy lift helicopter choice will come into being prior to a fully developed FCAS but clearly will be not only affected by the FCAS approach but should be a contributor to the new approach.

This means that it should have connectivity and C2 capabilities which can anticipate the strategic shift envisaged with the FCAS.

Indeed, in the recently held International Fighter Conference 2019, a senior defense industrial official involved with FCAS highlighted the need by 2025 to have significant communications integration between the French and German forces, and that connectivity collaboration was a key element of the FCAS approach.

This would mean as well that the heavy lift helicopter needs to be capable of being part of the connectivity collaboration dynamic as well.

In that same 2016 paper, the German MoD indicated that the MoD had shortlisted the CH-53K from Sikorsky and the CH-47F Chinook from Boeing as the potential successors to its aging fleet of CH-53 heavy-lift helicopters.

According to the paper, the new helo would increase the air mobility of the ground forces as well as contribute to medical evacuation, the support of special forces and to personnel recovery missions.

As of December 2015, the Luftwaffe had 75 CH-53s in its fleet, with some of these being converted to an upgraded version. But the new build helicopter is clearly not just a heavy lift asset but part of a combat assault force necessary to insert German combat capability into the German neighborhood in response to future crises in the neighborhood.

The FCAS commitment provides a framework for rethinking what a support asset can do, as envisaged clearly by what is anticipated by the A400M and its role in launching remote carriers and supporting the networked weaponized force.

It makes sense to consider the heavy lift helo as part of this shift in what is anticipated from the lift fleet as well....

The CH-53K and Expanding German Defense Options: Shaping a Way Ahead for Enhanced Defense of the German Defense Perimeter

04/22/2022

By Robbin Laird

Germany needs to have capabilities to move force in support of allies with real military capability to deploy force rapidly to close a seam and to reinforce both security and defense needs to shore up coalition capabilities rapidly.

This is about force insertion to both deter and defend with allies the key choke points or seams which the Russians seek to exploit to get the kind of crisis management outcomes they seek. Having the right insertion force package to move on the European chessboard is crucial for Germany.

The heavy lift capabilities which the CH-53K will provide for German forces allow for support across the range of military operations (ROMO), ranging from security assistance to moving force into place to reinforce defensive positions (such as for the German forces which deploy to the Baltics) or to provide forward deployed forces at greater range such as in Norway or Romania.

For example, in an April 22, 2022 story, the German Foreign Minister in a meeting with the Lithuanian Foreign Minister highlighted the importance of reinforcing Baltic defense and Germany's role in this effort.

"We are currently discussing the new defence concept with our NATO partners. Therefore, it is important that we act decisively together as an alliance and not as individual foreign ministers. It is important to be together during the process," she told a joint news conference with Lithuanian Foreign Minister Gabrielius Landsbergis.

"If NATO decides that [the battalion] shall be reinforced to the level of a brigade, we, as the Federal Republic of Germany, will significantly contribute to that. I've understood that there is a necessity, there is a need, and Germany will take respective actions," Baerbock added.

"NATO battalions were deployed in the Baltic countries and Poland in 2017 as a way to deter Russia. Germany leads the multinational battalion in Lithuania and has around 1,000 troops deployed in the country. Countries on NATO's eastern flank seek to reinforce those battalions to the level of a brigade in response to Russia's military invasion of Ukraine.

"NATO's current strategy of deterrence was no longer suitable in the Baltic countries, Baerbock said, adding that the alliance had to be ready to combat a potential threat and defend itself immediately in this region."

But how in fact will Germany be able to do so?

German ground capabilities as provided by infantry armored vehicles, or ground artillery pieces, can be moved by the CH-53K with its unprecedented external lift capabilities, while carrying support elements inside the aircraft at the same time.

And the addition of the F-35 along with the current operation of the C-130Js provides the German forces with the same kind of insertion package which the Marines are working with to enable significant movement of insertion forces throughout the expanded battlespace.

The Germans have acquired C-130Js for among other reasons, to be able to refuel, fixed wing and rotorcraft, and are working with the Marines in training to operate their C-130Js in a variety of mission roles. It certainly is clear that the Marines operate their C-130Js in a wide variety of missions, and by training with the Marines, the Luftwaffe can easily transition to training for a similar range of mission options.

With the Germans operating the same three aircraft as the USMC, the Germans can train with them to provide for an ongoing common force insertion concept of operations.

And as both forces will operate throughout the Nordic, Baltic, Polish and East European regions, such common capabilities provide for a force multiplier for both the German and U.S. forces involved in

European direct defense. Certainly, pooling of supplies and of maintenance capabilities could be worked as well.

In an earlier article, I focused on the question of why the CH-53K was a much better choice for the German Armed Forces than the CH-47. That article was published in 2020, at the time when Germany seemed to be moving towards a downselect of a lift helicopter. What I wrote then is only bolstered by Russian actions in Ukraine, and in Europe, more generally.

This is what I highlighted in that article.

Recently, there have been a number of articles which have directly raised the question of how the Chinook compares with the CH-53K which suggested that the venerable though legacy Chinook is good enough to consider treating the CH-53K as an outlier to both U.S. Army modernization and for the German armed forces.

For example, Loren Thompson wrote a piece published on July 22, 2020 for Forbes which is entitled, “Why Boeing Believes it Will Win the competition to Supply Heavy-Lift Helicopters to Germany and Israel.” This is a good place to start.

Thompson noted that “Boeing, builder of the rival CH-47F twin-rotor Chinook, has other ideas. It thinks it can displace the CH-53 from both the German and Israeli markets by offering an upgraded version of its own heavy lifter that meets all customer performance requirements at considerably less cost.”

We should note at the outset that the CH-53K is a heavy lift helicopter; the Chinook is not—it is a medium lift helicopter, based on weight that each can carry. But putting aside that point, the argument boils down to the notion that the CH-53K is built to support unique Marine Corps missions which the Germans will not need, and that Chinook is more than adequate for German needs.

“Although King Stallion is a bigger aircraft than Chinook, Boeing notes that the size of their cabins is virtually identical. In fact, it says that due to weight limits on the CH-53K’s wheels, the CH-47F can “oftentimes carry more weight internally than the CH-53K.” Since Germany and Israel do not conduct the kind of ship-to-shore maneuvers practiced by the U.S. Marine Corps, Boeing figures that the greater external lifting power of King Stallion isn’t worth the additional cost to either country.”

Then Thompson highlights that Boeing believes that the “CH-53K is so new that its future reliability and maintainability are not yet proven.” And associated with this is that there is a higher level of risk in buying a new helicopter and in the potential challenges of customization of the aircraft for Israeli and German needs. Boeing ignores that the block upgrade that they offer in their medium lift Chinook is a development and not production program.

But the core point of comparison highlighted by Boeing is the question of cost. “Boeing contends that the cost of procuring and operating the latest version of Chinook is far below that of King Stallion. In an apples-to-apples comparison, it calculates that ‘CH-47F aircraft cost is about half the CH-53K.’ The higher price-tag for King Stallion could be justified if it were a markedly better fit for German and Israeli performance requirements, or more reliable and maintainable, but Boeing doubts that a case for either claim could be made convincingly.”

This presentation highlights why the legacy aircraft has perceived advantages over a new, 4th generation aircraft, but does not really answer the question of how Chinook fits into the new demands being placed on the German armed forces not how it relates to the overall modernization strategy of German defense.

*If this was the Cold War, where the primary focus was really upon moving support around Germany to reinforce the direct defense of Germany, then there might be a compelling case for the legacy Chinook. But that is not what Germany is facing in terms of the return of direct defense in Europe. In our forthcoming book, *The Return of Direct Defense in Europe: Meeting the 21st Century Authoritarian Challenge*, we focus on the major challenges facing the allies in terms of defense against the Russians in terms of the Poland-to Nordic arc. Within this arc, the challenge is to move force rapidly, to reinforce deterrence and to be able to block Russian movement of force.*

Germany faces the challenge of reinforcing their Baltic brigade, moving rapidly to reinforce Poland, and to move force where appropriate to its Southern Flank. In the 2018 Trident Juncture exercise, German forces moved far too slowly to be effective in a real crisis, and it is clear that augmenting rapid insertion of force with lift is a key requirement for Germany to play an effective role.

This is where the CH-53K as a next generation heavy lift helicopter fits very nicely into German defense needs and evolving concepts of operations. The CH-53K operates standard 463L pallets which means it can move quickly equipment and supply pallets from the German A400Ms or C-130Js to the CH-53K or vice versa.

This is not just a nice to have capability but has a significant impact in terms of time to combat support capability; and it is widely understood that time to the operational area against the kind of threat facing Germany and its allies is a crucial requirement.

With an integrated fleet of C-130Js, A400Ms and CH-53Ks, the task force would have the ability to deploy 100s of miles while aerial refueling the CH-53K from the C-130J. Upon landing at an austere airfield, cargo on a 463L pallet from a A400M or C-130J can transload directly into a CH-53K on the same pallet providing for a quick turnaround and allowing the CH-53K to deliver the combat resupply, humanitarian assistance supplies or disaster relief material to smaller land zones dispersed across the operating area.

Similarly, after aerial refueling from a C-130J, the CH-53K using its single, dual and triple external cargo hook capability could transfer three independent external loads to three separate supported units in three separate landing zones in one single sortie without having to return to the airfield or logistical hub.

The external system can be rapidly reconfigured between dual point, single point loads, and triple hook configurations, to internal cargo carrying configuration, or troop lift configuration in order to best support the ground scheme of maneuver.

If the German Baltic brigade needs enhanced capability, it is not a time you want to discover that your lift fleet really cannot count on your heavy lift helicopter showing up as part of an integrated combat team, fully capable of range, speed, payload and integration with the digital force being built out by the German military.

It should be noted that the CH-53K is air refuellable; the Chinook is not. And the CH-53 K's air refuellable capability is built in for either day or night scenarios.

A 2019 exercise highlighted the challenge if using the Chinooks to move capability into the corridor. In the Green Dagger exercise held in Germany, the goal was to move a German brigade over a long distance to support an allied engagement. The Dutch Chinooks were used by the German Army to do the job. But it took them six waves of support to get the job done.

Obviously, this is simply too long to get the job done when dealing with an adversary who intends to use time to his advantage. In contrast, if the CH-53K was operating within the German Army, we are talking one or two insertion waves.

And the distributed approach which is inherent in dealing with peer competitors will require distributed basing and an ability to shape airfields in austere locations to provide for distributed strike and reduce the vulnerabilities of operating from a small number of known airbases.

Here the CH-53K becomes combat air's best friend. In setting up Forward Operating Bases (FOBs), the CH-53K can distribute fuel and ordnance and forward fueling and rearming points for the fighter aircraft operating from the FOBs.

Being a new generation helicopter it fits into the future, not the past of what the Bundeswehr has done in the Cold War. It is not a legacy Cold War relic, but a down payment on the transformation of the Bundeswehr itself into a more reactive, and rapid deployment force to the areas of interest which Germany needs to be engaged to protect its interests and contribute to the operational needs of their European allies.

From an operational standpoint, the K versus the E or the Chinook for that matter, offers new capabilities for the combat force. And from this perspective, the perspective of the two platforms can be looked at somewhat differently than from the perspective presented in the Thompson article.

Next generation air platforms encompass several changes as compared to the predecessors which are at least thirty years old or older, notably in terms of design. Next generation air platforms are designed from the ground up with the digital age as a key reality.

This means that such systems are focused on connectivity with other platforms, upgradeability built in through software enablement and anticipated code rewriting as operational experience is gained, cockpits built to work with new digital ISR and C2 systems onboard or integratable within the cockpit of the platform, materials technology which leverages the composite revolution, and management systems designed to work with big data to provide for more rapid and cost effective upgradeability and maintainability.

Such is the case with the CH-53K compared to its legacy ancestor, the CH-53E or with the venerable legacy Chinook medium lift helicopter. Comparing the legacy with the next generation is really about comparing historically designed aircraft to 21st century designed and manufactured aircraft. As elegant as the automobiles of the 1950s clearly are, from a systems point of view, they pale in comparison to 2020s automobiles in terms of sustainability and effective performance parameters.

To take two considerations into account, the question of customization of the German and Israeli variants and the question of sustainability both need to be considered with next generation in mind.

With regard to customization and modernization, digital aircraft provide a totally different growth path than do a legacy aircraft like the CH-53E or the CH-47. Software modifications, and reconfigurations can provide for distinctive variants of aircrafts in a way that legacy systems would have to do with hardware mods. And with regard to security levels of information flows, software defined systems have significant advantages over legacy systems as well.

With regard to sustainability, NAVAIR and the USMC have taken unprecedented steps to deliver a sustainable aircraft at the outset. The logistics demo effort at New River has taken the new aircraft and worked through how to best ensure sustainability when the first squadron is deployed.

With the data generated by the CH-53K, the “smart” aircraft becomes a participant in providing inputs to a more effective situational awareness to the real performance of the aircraft in operational conditions, and that data then flows into the management system to provide a much more realistic understanding of parts performance. This then allows the maintenance technicians and managers to provide higher levels of performance and readiness than without the data flowing from the aircraft itself.

Put in other terms, the data which the aircraft generates makes the aircraft itself an “intellectual” participant in the sustainment eco system. This is certainly not the case with legacy aircraft which were not birthed in the digital software upgradeable world.

The next generation system which the CH-53K represents brings capabilities to the challenges which Germany faces in terms of getting force rapidly to the point of attack or defense required by the Bundeswehr. It is no longer about defending against breakthroughs in the Fulda Gap; it is about moving force rapidly to make a difference in a time urgent combat setting on Germany’s periphery and flanks.

Much has happened since I published that article, but what has happened since simply reinforces the points which I made in that piece.

First, the Israelis chose the CH-53K over the Ch-47 and did so for the reasons which I highlighted about range and capability.

Second, the CH-53K has progressed smartly through the acquisition cycle to the point where the first USMC operational CH-53K squadron has flown its first flight.

Third, the capabilities of the aircraft have been validated throughout the entire test and evaluation process and have clearly underscored for the operating force how important this aircraft will be for the USMC and the joint force.

When I visited 2nd Marine Air Wing in July of last year, where the CH-53K is entering the force, the CG of 2nd MAW, Major General Cederholm underscored how important he saw the CH-53K to the coming of his North Carolina based Marines: “I was amazed at the automation that’s built into the aircraft. To be honest with you, I can’t stop thinking about what the different possibilities are of how we can make this platform support our operating concept on the battlefield of today; but not just today, but on the battlefield of the future.”

The German MoD has a clear choice one that builds towards the future while providing a significant contribution to the current force, or operating in a legacy framework no longer adequate to the direct defense challenges of today's Europe.

The CH-53K and Transformation of the USMC and the IDF

02/27/2022

By Robbin Laird

The CH-53K comes into the USMC and into the Israeli Defence Force as both are in the process of transformation.

The two forces are on different transformation paths with different adversaries as focal points, but this platform is coming to both forces as they are working new ways to operate and evolving their concepts of operations.

And the two forces clearly interact with one another and will certainly cross-learn thereby taking lessons being learned about using the new aircraft as they shape their evolving concepts of operations approaches.

Last year, I did an interview with a Marine who indeed spent time in Israel training with the IDF. And notably, this Marine was working directly on the USMC transformation process. This is what I have written in my new book on the USMC transformation path about our conversation.

“II Marine Expeditionary Force supports service and Combatant Commander’s initiative as required. At the same time, II MEF is in transition and must focus on preparing for future operations and shape new ways to do so while being able to operate now. This is hardly an easy challenge, but one which II MEF must meet head-on. At the command, the head of G-35, Future Operations is Colonel Ryan Hoyle.

“He noted in our discussion that for the command, a look ahead in an 18-to-24-month period is the focus of future operations.

‘But as we discussed, the focus on change was coming through exercises but also working ways to rework the Marines’ ability to integrate with the Navy and with allies to shape evolving capabilities for the future fight. His background is diverse, and very impressive. I mention this because if you want someone to work through how to work a way ahead with the force in being, it is clearly an advantage to have someone with wide-ranging experience with the current force and enough experience in working with non-Marine joint and allied forces focused on change. Among other experiences, he has been aide to camp to the Deputy Chairman of the NATO Military Committee, Amphibious Staff Officer and exercise planner at NATO’s Special Operations Headquarters.

“And he has a Master of Science in Political Science from the Israel National Defense College. There is probably no force in the world which has work joint integration in a more challenging political and military environment than the Israeli Defense Force (IDF). He brings this experience to the current challenging task of transitioning and preparing for the future fight while reshaping the force in being. How do you do this? And how is II MEF approaching this challenge?

“The Israelis provide an interesting case because post–Abraham Accords, they are focusing on their ability to have a strategic reach to be able to deal with threats on their periphery. It is no surprise than that the IDF is operating a core USMC capability, the F-35, and are adding the latest capability, namely, the CH-53K. The IDF is increasingly focused on becoming more mobile and expeditionary, which brings them closer to the USMC trajectory of change as well.”

For the Marines, the CH-53K will be a key element for working mobile basing for the expeditionary force, a focus of my series on mobile basing as a strategic capability and the subject of book in progress.

For the IDF, the flexibility of the CH-53K is clearly important and part of their working an enhanced combat capability for distributed operating teams as well.

The ability of the CH-53K as a digital aircraft to manage data in the context of operations and operate either as a provider of information or a user of information is crucial to what the IDF is looking for in its focus on a force which can deploy in a distributed manner but be integratable through C² and ISR systems or what we have focused on as kill web enabled concepts of operations.

Ed Timperlake and I have focused on these concepts of operations in our forthcoming book entitled *A Maritime Kill Web Force in the Making: Deterrence and Warfighting in the 21st Century*.

In his assessment of the transformation of the IDF, Avi Jager quoted Benny Gantz, then serving as Israel’s alternative prime minister with regard to that transformation:

“[T]he purpose of [these changes] was to create a smaller yet deadlier army, capable of confronting non-state adversaries in complex environments and on multiple fronts. . . . The ability to be a smaller yet deadlier military depends primarily on the ability to obtain accurate intelligence, process and analyze it effectively, and transfer it to the combat forces in real time.”

Jager went on to underscore that the focus of the transformation was away from countering direct adversary occupation threats to Israel to countering specific adversary threats wherever there are located in the broader perimeter of the air-ground-maritime environment of Israel.

As he noted: “The IDF’s missions no longer were to occupy vast adversary-state territory but, instead, to gain operational control over geographically limited hostile areas and eliminate localized threats....” This led to establishing brigades as independent battle groups instead of operating as division-sized formations.

He added that “The driving forces behind these changes were fire support. To allow better control and coordination between the different battalions, groundbreaking innovations in military each brigade

battle group was technology. given its own command-and- control headquarters. These headquarters were in continuous communication with other field forces, as well as with parallel forces and the senior commander. Brigades were now responsible for managing their own logistics, rearmament, and tactical extractions.” (Avi Jager, “The Transformation of the Israeli Defense Forces,” Naval War College Review,” (Vol 74 (2021), No. 2. <https://digital-commons.usnwc.edu/nwc-review/vol74/iss2/4/>)

These changes were made starting in 2011 to deal with the dispersed threats from the Hezbollah and Hamas.

Now innovations enhancing the combat power of a CH-53K enabled force package can draw directly on the C2/ISR capabilities of the F-35 as well upon the capabilities over time for the CH-53K to evolve its ability to work with various autonomous systems and weapons through its onboard digital management capabilities.

And the ability of the aircraft to manage itself with the significant automation onboard allows the flight crew to take on broader tasks of mission management, rather simply being spending much of your cognitive capabilities on simply operating the aircraft effectively and safely.

This is especially important given the key role reserves play in the IDF. With the shorten training cycle to operate the K versus the legacy CH-53 and the ability to learn the new capabilities delivered by the aircraft through software upgrades on the new simulators, the reserve force becomes much more rapidly a frontline capability for the IDF.

And given the twin impacts of the [Abraham Accords](#) and the evolution of the [Iranian threat](#), an ability to move combat formations to specific areas of interest rapidly is of increasing significance.

With the Abraham Accords, the IDF has more potential locations from which to operate, and that, in turn means, that they need to move support for an insertion force, as they will have to use General Carlisle’s famous phrase, “places not bases” from which to operate.

And with the growing threat from Iran, not only are they facing a diverse range of operating bases for missiles, and the potential for marrying that to a nuclear payload, but the Iranians operate through surrogates all around the periphery of Israel. And air strikes are not always the most effective means to eliminate pockets of Iranian operational capabilities.

In short, the CH-53K will both benefit from the USMC and IDF transformation processes and contribute to them.

And both experiences can be significant for the German military as Germany deals with the impacts of the Russian invasion of Ukraine on its own defense and its ability to move force to deal with its proximate neighbors most threatened by direct Russian actions in the future.