

McCloy Fellowship Study Project – Final Report

Can Germany's Mittelstand Companies Adapt to Digital Transformation?



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Disclaimer: All opinions expressed in this report are my own and do not reflect the views or opinions of the American Council on Germany or any affiliated organizations.

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Abstract

The author of this paper has been involved in corporate innovation efforts for the past decade, along with a deep involvement in startups and the Silicon Valley tech industry. He became intrigued with the German Mittelstand as they seem to be a cross between founder-driven startups and corporations that have achieved global scale. He plans to soon release a book on corporate innovation, which includes a method to assess an innovation initiative – the Innovation Canvas. This canvas and associated interview questions were used to see if the Mittelstand has similar innovation challenges as the big US corporates. This question is important as the Mittelstand is a large part of Germany's economy, and it may be facing headwinds caused by current and future digital disruptions.

Compared to US corporations, the Mittelstand has different challenges in running an effective innovation program. Family founder leadership is very effective in bringing new ideas to market, which is the key challenge for US corporate innovation programs. On the other hand, the Mittelstand is somewhat averse to outside ideas, especially those involving business partnerships or investments. The key current business challenges are a shortage of skilled workers, government bureaucracy, lack of risk capital, and the inertia associated with a thriving business.

Adapting to digital transformation did not seem to be a major concern for many Mittelstand leaders and it probably shouldn't be – they are already running experiments on how to adapt to new markets and business models. Smaller Mittelstand companies lack the formal innovation programs of bigger corporations. Instead, the company CEO initiates their own solo innovation effort, many influenced by family traditions where each new generation of leaders feels compelled to reinvent their business to ensure sustained success.

Germany's Mittelstand is a unique ecosystem of companies that builds products known worldwide for their ingenuity and quality. It is difficult to compare this ecosystem against others, such as Silicon Valley's tech industry which emphasizes exits that generate financial windfalls. It is even difficult to make generalizations about the Mittelstand within Germany, since there are big differences between companies in founded in the former West and East Germanys.

Apart from the need to be more open to outside ideas and inspiration and becoming less averse to partnerships, this ecosystem also needs more growth capital. Perhaps the answer here is the creation of a Virtuous Circle inspired by the Silicon Valley model, where the descendents of successful Mittelstand companies form family offices to fund and advise the growth plans for the next generation of companies.

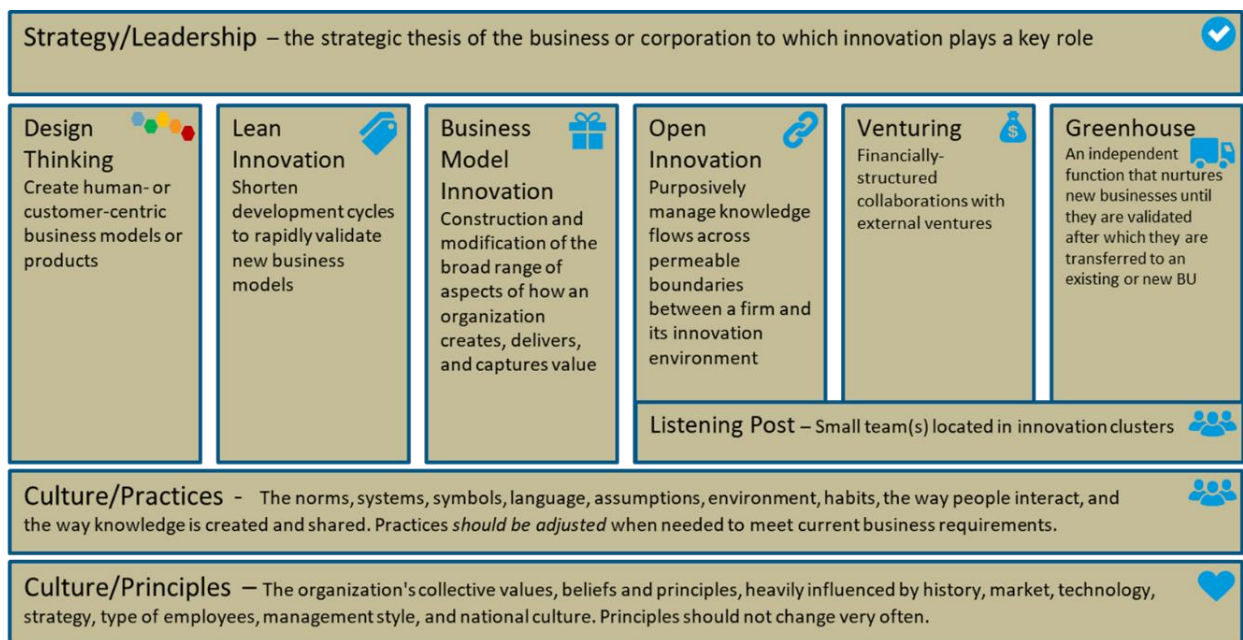
Given its wide diversity and the founder energy of its leadership, the conclusion of this study is that many or most Mittelstand companies will be able to adapt to the coming digital transformation.

Introduction

Background

I am a former software engineering executive that for the past decade has been working as an independent Corporate Innovation scout. Based in one of the world's innovation hot spots, Silicon Valley, I've observed numerous large corporates establish local innovation centers that aim to improve the pace of innovation and business model experimentation by engaging in external partnerships with startups and universities. This year I plan to publish a book, together with local colleague Paul Campbell, former Head of Innovation for Philips, that summarizes the best practices for innovation center activities that create real impact back at corporate headquarters while avoiding useless and costly "innovation theater". The book is titled, "The Innovation Playbook: How to Build a Growth Factory and Avoid Innovation Theater."

While many business books have been published on the topic of innovation, most focus on only one practice (for example, Design Thinking) and/or are written by academics. "The Innovation Playbook" has a more system-oriented focus and is targeted at helping practitioners with practical advice. At the heart of the book's research is the Innovation Canvas (shown below).



Innovation Canvas – Copyright © 2024 Campbell/Bartschat

Paul and I contend that while most corporate leaders focus their energy from the top on innovation strategy and then successfully carry out one or more of the activities listed below the Strategy/Leadership box (e.g. Open Innovation, Venturing, Greenhouse), they often ignore their company's culture, located at the bottom of this canvas. This top-driven focus may be successful in generating new ideas, but the organization's culture (including its principles and practices) presents an impenetrable obstacle that prevents these ideas from scaling into significant new businesses.

In parallel with my work as an innovation scout, I became involved in the startup scene, performing fractional executive roles, providing mentorship, and even small amounts of investment capital for early-stage startups. In early 2021, I came across the book, “Neu Erfinden: Was der Mittelstand vom Silicon Valley lernen kann” by LAUDA CEO Gunther Wobser. (transl.: “Reinvention: What the Mittelstand can learn from Silicon Valley”).

I became intrigued with German Mittelstand companies, as they seem a mix between the two cultures I have been studying: combining the laser-like focus usually found in startups with the global scale and operation found in large corporates.

Digital Transformation: Where is the Mittelstand?

Using computers to run businesses is nothing new, but over the past decade, Internet of Things and Cloud Computing have hastened the integration of digital technology into all aspects of operating a business, including how it delivers value to its customers. The rise of Artificial Intelligence is further accelerating this trend.

Already two decades ago, Watts S. Humphrey coined the phrase, “Every business is a software business.” Today, Microsoft CEO Satya Nadella goes further, explaining: “Every company is a software company. You have to start thinking and operating like a digital company. It’s no longer just about procuring one solution and deploying one. It’s not about one simple software solution. It’s really you yourself thinking of your own future as a digital company.”¹:

This realization, the need to stay relevant in this new age of digitalization, big data, and artificial intelligence, motivated Fortune 500 corporates to begin a process of reinvention, embracing Open Innovation to bring in fresh new ideas (and business models) from outside the company. These companies (the big German automotive OEMs and suppliers were among them) enthusiastically opened up Innovation Centers in Silicon Valley to experiment with new business models and partner with disruptive startups.

But German Mittelstand companies have largely been missing from this movement. Is it possible that their key strengths, including an extreme focus on the customer and a record of continuous, incremental innovation, have turned into obstacles, preventing an adaptation to the faster and more disruptive advancements driven by software and digital technologies?

This question and associated solutions are critical for sustaining Germany’s economic growth. According to Germany’s Federal Ministry for Economic Affairs and Climate Action, the Mittelstand is “a group to which more than 99 per cent of all firms in Germany belong. These companies account for more than half of our economic output and almost 60 per cent of jobs.”²

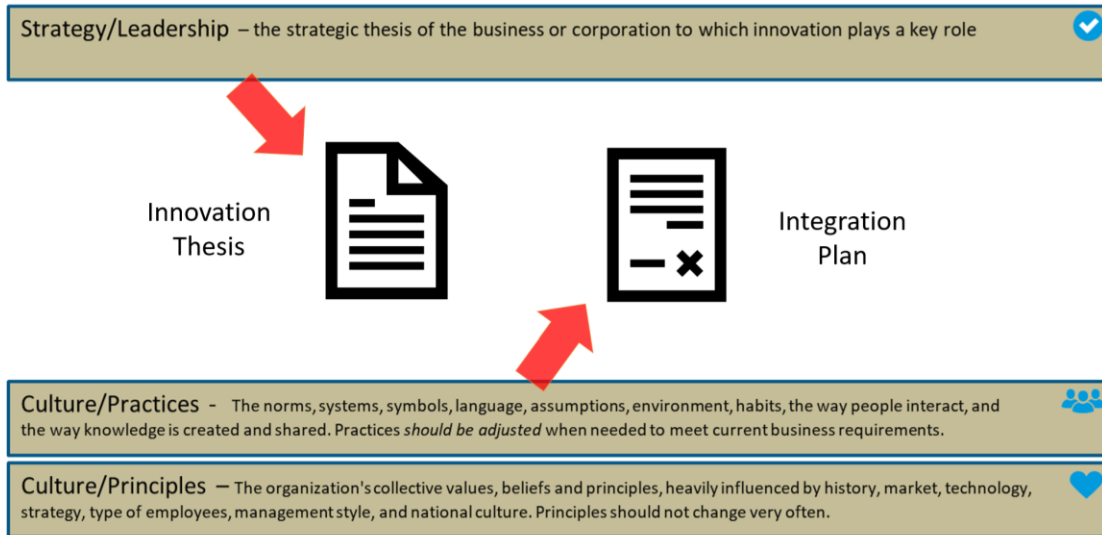


¹ <https://www.microsoft.com/mea/industry/> accessed 5/24/24

² <https://www.bmwk.de/Redaktion/EN/Dossier/sme-policy.html> accessed 5/20/24

Initial Hypothesis: More Focus Needed on Planning, Integration

This study project proposed to dig deeper in understanding the unique barriers that prevent Mittelstand companies from embracing Digital Transformation. For most medium-sized corporates that were analyzed in the research for the book, the key missing ingredients were an Innovation Thesis and an Integration Plan.



The Innovation Thesis lays out the strategic and compelling reasons to embrace open innovation as a means to ensure the survival of the company. The Integration Plan examines the company’s unique cultural and procedural barriers that stymy disruptive innovation and designs specific workarounds. Planning first creates impact later.

Before the study trip, I hypothesized that the Mittelstand sector would benefit from similar prescriptions, but also anticipated that I would uncover additional unique needs and adaptations. I also theorized that some Mittelstand leaders might see Digital Transformation as just another “business fad” that will wane over time.

Project Scope and Execution

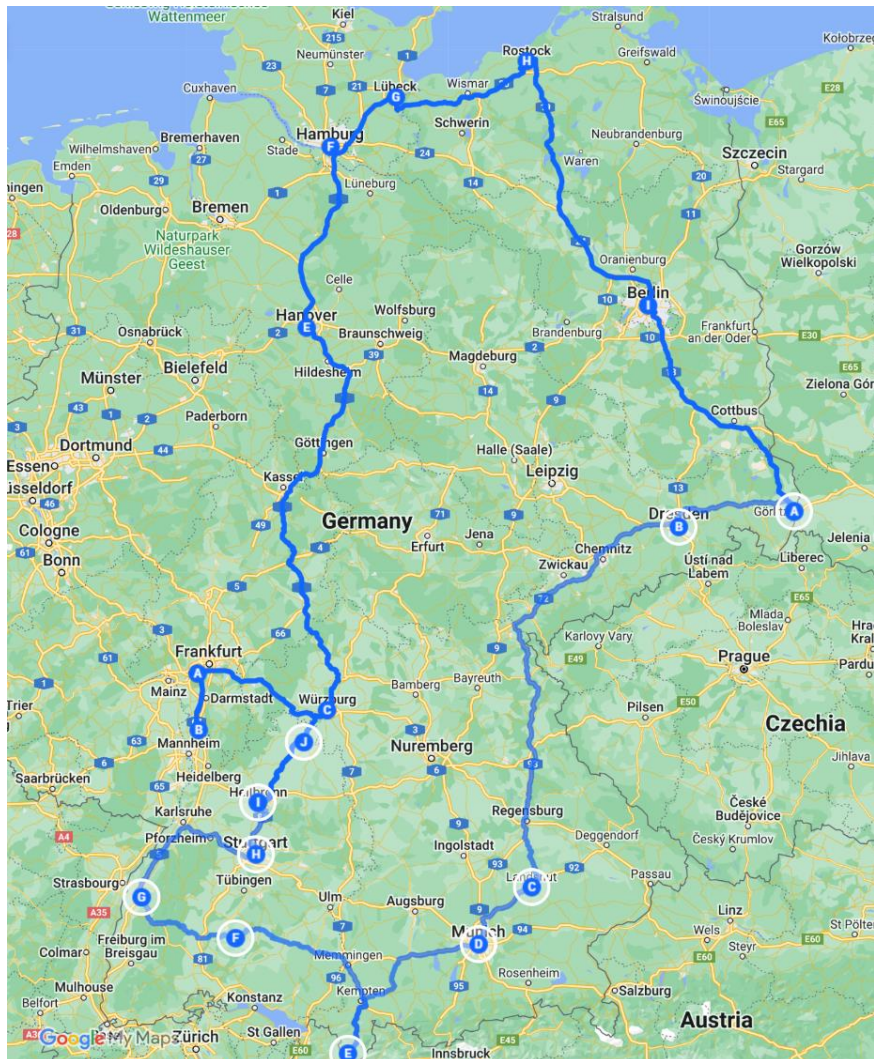
My study trip encompassed 48 meetings over 27 days in 8 major regions of Germany during April / May 2024.

The meeting breakdown was as follows:

- CEOs/Owners and/or Sr. Leadership of Mittelstand companies: 19
- Members of groups representing / helping the Mittelstand: 15
- Lectures presented: 3
- General business conversations: 11

Overall, I conversed with around 120 people on the topic of Mittelstand Innovation.

The regions of Germany I visited included: Würzburg, Heilbronn, Hannover, Lüneburg, Hamburg, Lübeck, Rostock, Berlin, Görlitz, Dresden, Landshut, München, Meßstetten, Offenburg, Stuttgart, and Lauda-Königshofen.



Per the Fiat 500 on board computer:

Distance: 4008.7 km, Travel time: 63:56 hrs, Average speed: 62 km/h, Mileage: 5.6 l/100 km

For each interview, I used the following discussion guide, and made notes as appropriate:

Company profile

- Products, overall revenue/# employees, decision-making processes (large/small), strategic planning (how, how often)
- Corporate culture / founder influences

Business challenges

- Current
- Existential
- Which ones are you currently working on? How?

Innovation initiatives

- For how long? How many employees/type (experienced vs. new)? Where? Which department? Program budget? Who is the sponsor?
- If none, why not? What are the main obstacles? What can help?

Innovation activities and impact

- Overview of the Innovation Canvas
- What is being actively practiced? What has the biggest impact? What might be missing from the canvas?
- Where can more be done (more resources, more effort)? In which area did you get started? Did you perform any benchmarking or planning?

What is your best innovation practice or activity that you are most proud of?

Of course, time was too short to cover all topics, so each interview typically left some questions unanswered, unfortunately.

Each meeting lasted between 60-120 minutes, with 90 minutes being the most typical duration.

Key Findings

Innovation Canvas

The Innovation Canvas presented on page 4 provides a framework that is helpful in assessing overall innovation efforts. This assessment is rolled up into the following categories:

- **All/most** – Either all or most interviewed companies follow this practice.
- **Many** – On average, more companies follow this practice than not.
- **Some** – Less than half the companies interviewed follow this practice.
- **Few/none** – This practice was not followed by most companies I spoke with.

Strategy: All/most

All the executives I interviewed included innovation as a key component of their future strategy. Many noted that their company history included periods of disruption which forced successful adaptations. Only a few see such disruptions on the horizon in the medium term.

Culture: Many

The loyalty and associated tenure of Mittelstand employees has long been considered an advantage, but it might be detrimental to developing fresh new ideas. The quote, “Haben wir doch immer so gemacht” (“we have always done it this way”) might be commonly heard in the production center. But there exists a key antidote to such rigidity, which I found during many of my interviews with Mittelstand company leaders: If an idea is pushed through by the founders (e.g. the family), it is pursued and resourced appropriately by the organization. This generally does not happen in the big corporations, where middle management may assure the CEO that a new idea will be supported and scaled, only to discreetly disregard the directive. Corporate CEOs will come and go, but family leaders are not going anywhere so they cannot be ignored.

Design Thinking: Many

Unlike the big corporations that might have a formal “Design Thinking” practice in place, Mittelstand companies generally do not have such a program in place. On the other hand, it was clear from my conversations with the leadership that a design thinking culture (i.e. seeking to understand the customer’s problem better than the customer) is prevalent at many of the Mittelstand companies I talked to. This might actually be better than a formal program, as Design Thinking can take on near religious fervor with some corporate employees.

Lean Innovation: All/most

This practice, emphasizing “Minimum Viable Products” to rapidly test Product/Market fit for new product ideas is quite congruent with the Mittelstand philosophy of keeping expenses as low as possible. I found that almost all leaders practice the Lean philosophy without necessarily adopting a formal methodology.

Business Model Innovation: Some

This activity is a challenge for most corporates, as it involves seeking new ways to create, deliver, and capture value. It is a difficult conundrum: why risk disrupting the current value chain of a successful business? To my surprise, there seemed to be more appetite for such experimentation within the Mittelstand – almost half the companies I spoke with described projects that examine new business models.

Open Innovation: Some

Open Innovation involves seeking inspiration outside the company for new ideas and partnerships. Open Innovation is a staple of any innovation program within the US, so I was surprised to find that the Mittelstand has a different take on this. In my interviews, only about 1/3 of companies interviewed actively engaged with the outside world for inspiration. “Selber machen” (“We do it ourselves”) is a key philosophy in these circles.

Venturing: Few/None

While there were a small handful of exceptions, Mittelstand companies are generally not interested in investing in other companies. 15 years ago, this was considered the key activity in launching a US innovation program as a way to get attention from the Venture Capitalist and startup communities. However, transferring ideas out of the venture department has shown itself to be extremely difficult, so based on our research, Paul and I no longer consider this to be a critical activity. Therefore the lack of an investing program may not be a big problem for the Mittelstand. We do think it is savvy to make capital investments with existing startup partners in order to take part in the value creation as they scale up.

Greenhouse: All/most (internal)

The notion that initial projects need to be carefully nurtured before being subjected to traditional development processes seems to be universally accepted within the Mittelstand. Note that these greenhouses deal mostly with internally generated ideas, usually emanating from the CEO or senior leadership. By contrast, incubators at US innovation centers generally focus on scaling external partnerships.

Listening Post: Few/None

Another way to establish an innovation program is to open one or more “listening posts” in innovation hubs such as Silicon Valley, Tel Aviv, or Beijing. The idea is to participate in local conversations and report back through the lens of extensive company experience. Mittelstand companies are generally too small to be able to afford the expense of maintaining even a small listening post – instead they might rely on a remote sales office for perspectives – or plug in only in regions close to headquarters. In a few instances the CEO performed this function on a part-time basis by actively seeking external conversation partners, which is a workable strategy.

The following chart summarizes how Mittelstand Innovation efforts contrast with established US corporate innovation centers:

| | US Innovation Centers | German Mittelstand |
|------------------------------------|-----------------------|---------------------|
| Strategy adoption | All/Most | All/Most |
| Culture: eliminate barriers | Some | Many |
| Design Thinking | All/Most | Many |
| Lean Innovation | All/Most | All/Most |
| Business Model Innovation | Some | Some |
| Open Innovation | All/Most | Some |
| Venturing | Some | Few/None |
| Greenhouse | All/most (external) | All/most (internal) |
| Listening Post | Many | Few/None |

In summary, given the Mittelstand’s reputation for focus on continuous incremental improvements, I was surprised to hear about the wider scope of innovation activities, often initiated by the CEO and/or senior leadership. The Mittelstand has a key advantage compared to the big US corporates: new product decisions have a much easier chance to break through the organization’s cultural barriers, compared to the dizzying number of “antibodies” deployed by the average US corporation’s middle management ranks. A key improvement area for the Mittelstand is to open itself up – i.e. look more to the outside for ideas and consider engaging in strategic startup partnerships instead of maintaining complete control internally.

Challenges

These were the top three Mittelstand business challenges identified during my interviews:

1. Fachkräftemangel – nearly everyone lamented the shortage of skilled workers. Some thought the main problem was the relative unattractiveness of their geographic location, but the problem seemed ubiquitous in all regions of Germany. A few noted with irony that at the same time the country is experiencing an influx of migrants who are not granted work permits – and instead are supported by “Bürgergeld”, a form of basic income (currently €563/month) funded through taxes.³

³ The government does issue work permits when an asylum application is granted, but skilled workers may need to pass additional checks, which apparently is not easy for non-German speakers educated in a foreign country. <https://handbookgermany.de/en/work-permit> accessed 5/24/24

2. Bürokratie – Germany is famous for its detailed set of Rules and Regulations that cover all aspects of daily living – both personal and business. The European Union has further increased this bureaucracy over the past two decades. Apart from having to meet a multitude of local regulations, the Mittelstand is currently grumbling about the “EU Corporate Sustainability Due Diligence Directive”, which requires European companies to certify their entire supply chain with regards to preservation of human rights and remediation of environmental risks⁴.
3. Wagnis-Kapital – Obtaining bank loans to expand the business tends to be difficult and expensive, so the Mittelstand has relied on support from government-owned banks such as KfW. This support for the Mittelstand has been reduced as the government has shifted its attention to more urgent matters such as the “Energiewende” (transition to clean energy), compounded by the “Gaskrise” (cessation of Russian gas deliveries).
4. “Noch sind wir erfolgreich” (We are still successful). The Mittelstand can adapt to disruptions – I heard several stories of past family members successfully adapting their business after major disruptions such as the introduction of the automobile or, more recently, the emergence of digital cameras. However, at this stage, business is still doing well or at least, reasonably well. As someone told me, it’s never a good time for innovation in the Mittelstand: “Geschäft geht gut, keine Zeit. Geschäft ist schlecht, kein Geld.” (Business is good, no time; if business is bad, no money)

I was surprised not to hear about Digital Transformation as a key challenge. Many might interpret this omission as proof that the Mittelstand is unprepared for the current disruption. My attitude on this topic shifted during the trip. In the beginning, I might have agreed, but my meetings with top leaders showed that they are well-versed with the current technology trends and readily engaging in experimentation, relentlessly trying to figure out how to incorporate the latest innovations into their product set and/or production facilities. It seems the challenges listed above are more critical to their business, at least in the near-term – or perhaps more worrisome for them since they have limited control over them.



Leuphana Universität Lüneburg - home of the Leadership Garage team bringing Digital Culture to the Mittelstand. (www.leadershipgarage.com)

⁴ While most Mittelstand companies are not immediately directly targeted by this Directive, they will be affected if they are suppliers to larger companies that need to perform the certification. <https://www.eqs.com/compliance-blog/eu-supply-chain-law/> accessed 5/24/24

Additional Observations

Glass Half Full or Half Empty?

Germans are known to be direct in their feedback and their communication can often be interpreted as critical, especially on internal policy matters or judging their ability to keep pace with the competition. For example, any post on LinkedIn about how the German automotive industry is hopelessly behind will receive a boatload of comments from Germans readily agreeing with that assessment.

I had the opportunity to present a few lectures on “The Silicon Valley Mindset” and received the following comments:

1. “Our engineers are so slow compared to the Valley, we won’t keep up in the technology race.”
2. “We don’t have the VC mentality here, our startups can’t grow like yours, there is not enough capital.”
3. “Unlike your startups that aim to change the world, our Mittelstand companies are all niche players. Those niches are nice businesses now, but they will disappear before long.”

All of the above points are accurate, but are they really weaknesses or just differences?

1. German engineers work more slowly, but also more deliberately – the result is high quality and reliability. I saw some incredible products that are being delivered all over the world, even to factory floors in China. Why are Chinese companies importing expensive machines from Germany, when there are doubtlessly cheaper, locally produced versions available? On a production line that runs 24/7, the cost of potential outages far outweighs the higher cost of the machines made in Germany. For many industries, quality counts!



Inspecting equipment at DAS in Dresden - world leader in supplying machines that treat wastewater and gas created during the semiconductor manufacturing process.

2. Yes, Silicon Valley startups have access to more capital, but studies have shown that much of it can be squandered, especially if it is received during the early stages of company formation before Product/Market Fit has been achieved⁵. In later stages, this lack of capital may indeed prevent German startups from eventually achieving unicorn status⁶. With its current funding model, Germany is thus likely to efficiently create a profusion of small or midsize companies – resembling, perhaps not coincidentally, the Mittelstand. Is that a total disaster? Perhaps not – diversity is an effective defense against disruption. In aggregate,

⁵ “Determinants of Early-Stage Startup Performance: Survey Results” by Thomas Eisenmann, Working Paper 21-057 Harvard Business School. https://www.hbs.edu/ris/Publication%20Files/21-057_0c4f5410-3dcb-4c2f-8c4e-6fcbc358b92f.pdf accessed 6/3/24

⁶ Stanford Professor Ilya Strebulaev recently [posted](#) an interesting comparison between top companies in Germany and the US, concluding that “Zero of Germany’s top firms enjoyed VC backing, a stark contrast to the US, where 7 out of the top 10 benefited from venture capital infusion.”

smaller companies can manage more innovation projects more efficiently and more effectively than the large Fortune 500 behemoths.

3. Mittelstand founders are proud of the niches they serve: “Wir wissen was wir können” (we know what we are capable of). They are the world’s experts in their chosen field. But, as I already noted, this pride does not result in blinding the family owners to what is happening in the world around them. They are constantly searching for ways to adapt their expertise to new markets – and if the niche does disappear, they can draw inspiration and confidence from their family’s predecessors that have successfully navigated the big disruptions of the past.

In short, there may be reasons to see the Mittelstand glass as “half full” instead of “half empty”. I should note that the skepticism I heard was usually expressed from observers of the Mittelstand, not the Mittelstand leaders themselves – they prefer to see the world with more optimism, which is typical of company founders everywhere, including Silicon Valley.

Advantage DDR?

As I crossed the virtual border into what are still called the “Neuen Bundesländer” (new federal states, i.e. the states that made up the former communist German Democratic Republic (GDR or in German, DDR), I immediately had a pleasant surprise. The Autobahn was smooth sailing - without those pesky construction projects every 10 kilometers - and navigating within the cities was also easier, as there were none of the road closures found in Munich and Stuttgart due to massive sewer or water projects that create massive traffic jams every day⁷. The 1960-era infrastructure in West Germany is crumbling and in need of renewal – but the “Neuen Bundesländer” infrastructure was renewed in the 1990s, right after the reunification.

Apart from better infrastructure (and even an energy surplus in cities such as Rostock!), there may be additional advantages for the businesses that are located here. The entrepreneurs and employees seem a bit hungrier to establish and expand their companies here, as are the local governments in providing subsidies, and there seems to be plenty of space available for expansion. Most of the Mittelstand companies here are headed by first-generation owners since the concept of private company ownership did not exist during the communist period. This is both an advantage and a



Lunch stop in Pirna: no "Baustelle" in sight.

disadvantage. As an advantage, the owners of these companies have direct memories and experiences dealing with the ultimate disruption – losing their country. They will have more confidence that they can survive an existential crisis than their second or third generation family leader counterparts in the western portion of the country. The disadvantage is that these first-generation companies have not had

⁷ These never-ending traffic jams even inspired a 2017 episode of the popular Tatort TV crime series, [Tatort: Stau](#), where the murderer was stuck in an hours-long traffic jam immediately after committing the crime, providing a convenient way for the detectives to round up their suspects. This episode was re-broadcast during my stay, and I must say, nothing seems to have improved in Stuttgart since the episode was filmed in 2017....

a long time to grow, and thus far less capital has been accumulated when compared to communities in Western Germany.

Heilbronn is Hopping

There is some interesting energy at Heilbronn. There is a lot of construction here also, but here the cranes are building new office buildings and apartment buildings, instead of replacing aging sewer lines. In partnership with the Dieter Schwarz Stiftung, the city has already expanded its university to include a large startup incubator, a partnership with TU Munich, and an international software coding school. There are plans to build a giant AI innovation campus on the outskirts of the city. The focus is to not only expand opportunities for the current inhabitants of Heilbronn – each of these institutions is working hard to attract *new* residents, and not just from within Germany: English is the common language within Campus Founders (startup incubator) and 42Heilbronn (coding school). All they need now is a Statue of Liberty to welcome the new arrivals...



InnovationsFabrik Heilbronn (already the home for the 42 coding school) is expanding its footprint to create meeting/maker spaces open to anyone.

Recommendations

There is a phrase we use often in Silicon Valley when we advise growing startups: “What got you here, won’t get you there.” (Marshall Goldsmith). It is also a good mantra for Mittelstand leaders that want to make sure their company stays relevant in the age of digital transformation. Below are three key elements that should be a part of the adaptation:

Seek Outside Ideas and Inspiration

Apart from meeting with the family owners and key leaders at Mittelstand companies, I also met with leaders who advise and support the German Mittelstand. In those meetings, I consistently heard that the Mittelstand should broaden its perspectives to encompass more of the outside world. Apparently, many companies are quite insular when it comes to decision making, only seeking consultation within the family or a small circle around the family. As was already noted, one of the strengths of the Mittelstand is the loyalty of its work force (and the employer’s commitment to them), but this can also lead to insularity – preventing the injection of new ideas from the replacement workers that would otherwise need to be hired.



The slogan at Interstuhl: "Geht nicht, gibt's nicht" - i.e. nothing is impossible. The company has recently spun out two tech startups,

But I did not get this impression of isolation when I met with the family owners and leaders. Every one of them seemed driven to inform themselves about trends both inside and outside their company’s area of interest, and they also projected as eager change makers, ready to experiment. Could it be that the advisors I talked to had the wrong impression? I don’t think so – it may be an instance of selection bias on the part of the people that agreed to meet with me. My outreach was initiated about 3-4 months ago, and I would

estimate that about one third of the people I contacted agreed to meet with me. It’s probable that the remaining two thirds of people who were not interested in a meeting were also less likely to seek outside ideas and perspectives.

Overall, I was quite impressed with the leaders that I did meet – I considered them to be solo innovation departments, performing the tasks of an entire innovation department at a larger company, while also running the day-to-day business! This is an excellent strategy to stay relevant, but it only works for those CEOs that have a broad range of interests. Others may be more interested in and suited for running effective day-to-day operations – in this case, they should ensure this attitude is present in another person on the leadership team. The Germans have a term for this, “Queerdenker”, i.e. someone who thinks laterally to come up with unconventional and innovative ideas. This term has become a bit controversial these days in national political circles, but within the context of Mittelstand operations, every company should have at least one “Queerdenker” – with appropriate support of course so that they can run some experiments. Establishing a listening post in an innovation hub is also a great way to regularly inject outside ideas into company operations – it literally forces the leadership

to pause their focus on the day-to-day business in order to evaluate the steady flow of new ideas and concepts emanating from the listening post.

Finances are always tight within a Mittelstand organization, so it can be difficult to justify spending some money to gain outside perspective and/or run experiments. A good first start may be engaging with the local Wirtschaftsförderung team (economic development) which can also help secure additional grant funding for certain research projects. These teams are publicly funded but operate as private corporations, and I was impressed with their capabilities and experience. Bigger companies (> 250 employees) are more on their own. These companies may benefit from a shift in mindset – are innovation activities really a discretionary expense? Businesses already pay various insurance premiums to guard against future calamities. These premiums are considered non-discretionary expenses. A modest innovation budget could also be considered a non-discretionary insurance premium, ensuring that the company’s product offerings stay relevant far into the future.



Mario Leupold at Wirtschaftsförderungs-GmbH für Stadt und Landkreis Lüneburg is ready to help!

Explore Partnerships

I did notice a nearly universal aversion to collaboration with other companies. Mittelstandlers may be happy to partner with universities or institutes for research or development, but in the end, they prefer to maintain 100% ownership of the developed product and its business opportunities. As I mentioned in the Key Findings section, exploring partnerships (and therefore sharing in the resulting business opportunities) is considered a fundamental component of any innovation program conducted by US corporations, so this may be a key exposure for the Mittelstand.

What may be driving this reluctance to partner is “Fixed Pie” thinking – the idea that resources are finite, thus shifting the focus of any business transaction on getting the largest slice of the (fixed) pie as possible. Resources were indeed quite finite in Germany during and after World War II, so this strategy worked for most of the second half of the 20th century. Americans tend to be more optimistic as they have never experienced similar resource constraints – and Silicon Valley probably has the highest amount of optimism in the country. At Stanford University, students are taught to practice a Growth Mindset as originated by Stanford Psychology Professor Carol Dweck⁸. Dweck posits that we should shift our views about what we are personally capable of, as well as our organizations. Instead of “fixed pie” thinking about our abilities, we should engage in continuous learning, which also means celebrating our mistakes as this is when a lot of learning takes place. Similarly, at an organizational level, Dweck urges us to work together on creating a bigger pie vs. carving up the existing one.

For the Mittelstand, this culture shift toward exploring partnerships will not be easy, as it requires giving up some control over business operations – but it is necessary in an age of specialization, where one company can no longer deliver the entire solution to a customer’s problem. Co-operation with technology startups will not reduce the relative slice of pie for a particular Mittelstand company – instead it may drastically increase its size by opening up new market and application areas.

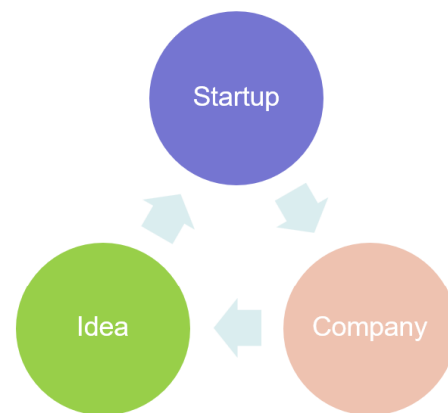
⁸ “Mindset: The New Psychology of Success”, Carol Dweck et. al.

Expand Capital

There is a lack of growth capital available to German startups and Mittelstand companies, especially when compared to what is available in the US. Mittelstand company owners prefer to raise capital via debt (at favorable interest rates through government support), since debtholders do not gain any control of the company (as long as the debt is repaid, of course...). Interestingly, early-stage Silicon Valley startup founders have a similar aversion to giving up control to investors – either preferring to “boot-strap” (i.e. self-funding) or issuing convertible notes (debt that can convert to equity later). Of course, at some point, these entrepreneurs realize that they need to give up some control in order to grow faster and they will reluctantly begin to sell equity in their company. Founders losing control isn’t as bad as it seems. While this is not a popular sentiment in Silicon Valley, where founder control is cherished even at companies as large as Meta and Google, it turns out that, on average, startups create more value when its founders release some of their control by adding investors that provide independent board oversight.⁹

Absent the government changing course to re-establish its prior levels of support to the Mittelstand, its leadership may also need to resort to sourcing at least a portion of their capital needs via investors. Just as with Silicon Valley’s startups, where the right investors can provide not just growth capital but also valuable advice and connections, Mittelstand family offices can provide similar support to other Mittelstand companies in need of growth capital. I find this model intriguing because it reminds me of the Virtuous Circle that has been running in the Silicon Valley over the past five decades: entrepreneurs turn ideas into startups, which grow into companies. After their exit, these entrepreneurs use their wealth to fund new startups, either on their own or as angel investments, and the cycle begins anew. There really are two virtuous cycles here, one involving money, the other knowledge and experience.

There already exists a virtuous cycle of knowledge sharing among the Mittelstand community, but moving around capital is more difficult because Mittelstand founders generally don’t experience a financial windfall since they never exit their company. And when they retire, they pass their business on to the next generation. But perhaps after retirement there is an opportunity to apply some of the generated wealth as an active “angel” investor in other Mittelstand companies – or perhaps other family members have an interest in making investments as opposed to sharing power with the siblings that have leadership roles running their family’s company...



The Virtuous Circle in Silicon Valley: Spinning for over five decades!

⁹ “The Founders Dilemma” by Noam Wasserman, Harvard Business Review February 2008. To dig further, Prof. Wasserman expanded this article into an entire book, “The Founders Dilemmas: Anticipating and Avoiding The Pitfalls That Can Sink a Startup.” All of his advice is backed up by data.

Conclusion & Next Steps

This study began with the question, “Can Germany’s Mittelstand companies adapt to Digital Transformation?” I started out as a pessimist on this topic, but my interviews convinced me to become more optimistic: instead of answering “a few or some will adapt”, I now conclude that many or most can adapt. Granted, I base my conclusions on the selective bias of those Mittelstand leaders that chose to make their limited time available for an interview. Of those I interviewed, I believe all of them will adapt – adaptation is part of their companies’ histories, and the CEOs have a relentless desire to keep their business relevant through exploration and experimentation.

I did find a key difference in the approach and challenges to innovation between Mittelstand companies and the big US corporations that run Innovation Centers in Silicon Valley. In the US, ineffective innovation programs are usually the result of a lack of planning, specifically in how to integrate a new idea into the organization so it can effectively scale up. The Mittelstand does not have this challenge due to the different leadership dynamics in its corporate ranks. The Mittelstand’s key challenge is to open up and be prepared to give up control in exchange for a partnerships that make the addressable market bigger for everyone involved.

Innovation thrives on conversations that involve a diverse community, including the big innovation hubs. I would like to continue my work to build innovation bridges between the German Mittelstand, corporates, startups, and the Silicon Valley. This work might occur under the auspices of existing organizations, some of which I mentioned in this report, or could involve the creation of a new entity. If you enjoyed this report and have ideas on how to sustain such an effort, please drop me a line via email: steffen@hill88.com

About The Author



Steffen Bartschat is the CEO & Founder of Hill88 and a Silicon Valley veteran for over thirty years. At Hill88, he has completed global engagements for a wide variety of established consumer and industrial companies, including Bissell, Faurecia, Cisco, and THX, as well as notable startups including Blickfeld, gestigon, LUMO BodyTech, Edlink, and WiederTV.

As Strategic Advisor for tier one automotive supplier Faurecia (now known as Forvia), Steffen drove the startup scouting activities for the company in Silicon Valley, while also contributing to the adaptation of the innovation pipeline into its overall R&D process.

As interim COO of wearable startup Lumo BodyTech, Steffen built its engineering team and assembled a global supply chain to ship initial product, while building and monitoring the company's 3 year business plan, helping to raise successful Seed and Series A investment rounds.

As Head of Business Development for Lübeck-based gesture recognition startup gestigon, Steffen closed business deals with local corporates, uncovered new markets in Virtual Reality, and represented the company at pitch days and conferences. gestigon was successfully acquired by Tier One global automotive supplier Valeo.

Steffen is a member of Sand Hill Angels, serving as co-chair of its Consumer Screening Committee. He served as Board Member for Diatomix, a Sand Hill Angels portfolio company.

Earlier in his career he managed global engineering teams at Roxio (digital media), Broderbund (consumer productivity), Electronic Arts (computer gaming), and IBM Corporation (AI enterprise).

Steffen holds BS and MS degrees in Electrical Engineering from Carnegie Mellon University as well as an MS Management degree from Stanford's Graduate School of Business.

He is a member of the teaching team for Stanford Business School Executive Education's signature online program, Stanford LEAD, which encompasses nine courses taken over the course of a calendar year.

Steffen was born and raised in Gehrden, Germany, a small town outside Hannover. His family emigrated to the USA when he was a teenager. He still speaks fluent German and, honoring his heritage, maintains a healthy dose of skepticism about technology trends as he issues his scouting reports from Silicon Valley.

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