LEADERSHIP IN TIMES OF CHANGE

A study by Staufen AG
and the Federal Association of the German Aerospace Industry (BDLI)
Table of Contents

04 EDITORIAL

06 ARTICLES FROM EXPERTS
06 Making the Start-Up Culture a Mentality
Marco Wagner, Member of the Management Board, Airbus Germany and Christoph Heine Partner, Aerospace & Defense, Staufen AG

09 Digitization Challenge: Don’t Give Stagnation a Chance
Dr. Christian Abegglen, Managing Director St. Galler Business School

12 ABOUT THE STUDY

14 THE RESULTS
15 Necessary Change – Many are Lagging Behind
16 Favorable Review, Optimistic Outlook
18 Soft Digitization Factors are Underestimated
19 New Competitors from China
20 Prerequisites and Obstacles for Digital Change
21 Leadership Culture: Between Theory and Practice
24 The Top Problem at the Top
28 Digitization and Leadership

30 CONCLUSION
Despite tough global competition, the German aerospace industry is in a great position. Driven by world-wide growth of air transport and in an age, in which aerospace is becoming increasingly more commercialized, our industry – from the major companies to the SME/SMB have been experiencing above-average growth over the last few years. In every passenger aircraft delivered today anywhere around the world, we can find technology “made in Germany.” Our medium-sized suppliers are not only the “hidden champions” of our industry but are truly also global players, because they have not only seen success with Airbus but also among OEMs outside of Europe, and the tendency is growing.

How can aerospace in Germany continue to advance its success story going forward? Among the current challenges are digitization with its associated disruptive technologies as well as an export policy, the structure of which requires a set of common rules. It is with great concern that we are observing an increase in unequal global conditions that could lead to market forces becoming inadequate in their ability to sustain Germany’s innovation and competitive advantage. The overall goal pursued by our civil aviation industry is low-emission flying: As an industry, we are focusing our efforts on creating a largely emission-free aircraft. How well is our industry set up in this complex environment? In order to get a response to this question as well as additional ideas, BDLI teamed up with Staufen AG to conduct a survey among the top managers of our member companies. Core questions included: How agile are the companies in the German aviation and aerospace industry? How effective are their executives and how willing are they to implement change? As a whole, how interested are organizations in becoming digitized?

I hope you enjoy reading the study!

Volker Thum,
Managing Director,
Federal Association of the German Aerospace Industry
(BDLI)
The economic environment of the aerospace industry is much more dynamic today than it was just a few years ago – even this industry is greatly affected by the fast acceleration of technological developments. Companies in the aerospace industry should see this as an opportunity.

Disruptive innovation is playing an increasingly important role, and not just for the evolutionary enhancement of existing products and services. This kind of innovation is typically assigned to young companies and start-ups. Yet, even established companies can become disruptors. However, to do so, they must actively advance digital transformation and consistently align their value creation. It is not enough to simply concentrate on technologies. Digitization also means a change in how work is performed and in the corporate culture.

Agility and “lean” are important topics. So many companies are now using agile methods, yet its implementation oftentimes can be characterized as experimental in nature. This is due to the fact that agility does not correspond well with a method that has been in practice for decades, in which each step in a workflow must be documented and receive multiple approvals from management.

In response to the challenges by disruptors, companies should look into a new solutions. And this is already happening. Some airlines and transport companies are showing us how it’s done. They are developing new applications and business models that are already being tested in practice. Our intention with this study is to offer an orientation tool in times of change for your company and the companies in the industry.

Wilhelm Goschy,
Member of the Board of Directors,
Staufen AG
Airbus Labor Director, Marco Wagner, (Member of executive management of Airbus in Germany) and Staufen Partner Christoph Heine (Branch Manager Aerospace & Defense) explain in an interview the approaches that are already available today in the German aerospace industry for a modern leadership culture and where potential has yet to be seized.
Mr. Wagner, there is hardly any term that is so omnipresent these days than “agility.” How well do the aerospace industry, which traditionally long-cyclical in nature, and agility get along? Are Airbus and agility even a good fit?

**Wagner:** Innovation cycles are becoming shorter and shorter, even in the aviation industry. This kind of acceleration also brings changes to our research activities. For example, in many areas we are specifically working with start-ups in order to be able to learn from their maneuverability.

What exactly does this kind of collaboration with start-ups look like?

**Wagner:** We give these typically young entrepreneurs an opportunity to test their concepts in the aviation industry. While doing so, in some cases we provide them with the financial support they need. The goal is always a win-win situation. Not only do we want to see the specific results of the tests, but it is also important that we carry over the mentality of a start-up culture into the thought processes of a “giant” such as Airbus.

Mr. Heine, are these kinds of collaboration something for medium-sized aerospace suppliers to consider as well?

**Heine:** The necessary structures for this are definitely available to do so. Start-ups are able to solve partial tasks for Airbus just as well as they can for suppliers, and often they are much quicker and much more focused in the process than the company itself. However, this only works if executives identify the relevant tasks and delegate them consistently to start-ups. Fitting in this vein is one of the core findings of the study presented here (see p. 28), which is that the key to agility, new work and co. is clearly in executive management.

Can management learn the necessary amount of open-mindedness to practice new leadership methods? Or is this a quality that one has to be born with?

**Heine:** Of course, a certain innate curiosity for new things is a prerequisite. However, what is ultimately the deciding factor is that companies provide enough space for this kind of curiosity in the day-to-day. This is easily said but not always that easy in practice. Often we need to balance resources and overcome actual and perceived obstacles. Coaching can be a helpful instrument for this.

**Wagner:** Allow me to briefly clarify how something like this is practiced at Airbus. For example, we have teams headed by a manager, but who only steps in if the work method that the team developed on its own clearly puts the results at risk. Other teams have alternating bosses – one project is supervised by colleague A, another project by colleague B.

How are these kinds of freedoms and flexible structures compatible with the time and delivery pressures that many projects are subject to?

**Wagner:** Here as well, leadership skills are a necessity. Even in high-pressure situations, leaders must take a step back and scrutinize the current approach instead of forging ahead with a blunt ax unchecked. This ability to pause and review reveals a lot about the manager’s experience. And managers can only gather experiences and transfer them into the teams if the company consciously allows them to do so.

How do you motivate your executives to actually use this freedom?

**Wagner:** One thing that I do is to hold a large event with up to 400 executives once a year. Here, successful examples are presented on a large stage by managers from this circle on how leadership and collaboration are already being innovatively re-thought.
Heine: Of course, what is important here is cultivating an error mindset that does not stigmatize negative experiences, but instead understands them as a part of a learning company.

Wagner: Exactly right, because looking back, every experienced executive learned much more from their failures over the course of their carrier than from their successes. And only if an executive is able to openly discuss mistakes with the team and has the courage to work together to find a solution, can trust be developed.

Do these approaches also work in a timed production?

Wagner: Yes. Because, of course, even if in such a scenario we cannot spontaneously turn everything around, there are also problems that can only be solved within the team and with a sufficient amount of time. Just for the sake of clarifying: This new work environment – no matter whether it is in research or in production – does not mean that everyone can do whatever they want.

What are the three core skills that an “ideal Airbus manager” must have in the new working world?

Wagner: First off, our managers need to be excellent communicators so that priorities and goals are clear and unambiguous across all hierarchical levels. In addition, they must also have the capability to (self) reflect – especially, as already mentioned, in tense operational phases.

And thirdly, an executive must be able to inspire and convey a sense of purpose. So, they must be able to breakdown targets in such a way that every employee can recognize his or her contribution in achieving the objective.

Heine: I can only underline this profile, because the freedoms associated with the term agility require not less, but instead more communication. And we are not referring to the infamous annual performance review in which employees are given feedback that has “accrued” over the last twelve months. We are talking about weekly or even daily feedback meetings. I know some extremely economically successful companies, in which the middle management spends 50 to 70 percent of their working hours communicating.

Wagner: We have also done away with annual performance reviews. We prefer to speak in “people time.” Every department works out for itself the best cycles during which meetings should be held.

Don’t employees have to be trained differently for this kind of leadership and communication?

Wagner: Absolutely! What is important here is that both sides drive change. For example, instructors should no longer be feeding trainees what they need to learn, but instead be their learning companions. At our site in Hamburg, aircraft mechanics are being trained based on a new teaching approach. They develop solutions for our internal customers in our plants, which require them to acquire specific skills and the learning companions convey what these skills are. Our newest group of trainees have completed their first year and we have received extremely positive feedback. As a result, our foremen in the workshops are thrilled that the trainees now no longer have to ask so many questions and are taking more responsibility and are more focused on the customers in their work, while generally participating much more.

Heine: Examples of this kind especially, in my opinion, show that in order to improve the leadership culture, company-wide initiatives can make a lot of sense in the aerospace industry. Small to medium-sized businesses especially seem to have difficulties structuring a cooperative training program that fits their ideas and their needs. However, this would be an opportunity to bring SMEs to an entirely new level.

Wagner: Even if in case of doubt we compete with these other companies for the same employees, we at Airbus are very open to such initiatives. Especially since we can most likely learn much more from these “small” companies, who are often world leaders in their fields, than the other way around.
Digital transformation should by no means be considered a sure-fire success. Even German flagship industries and technology integrators, such as the automotive industry, the electrical industry, the aviation and aerospace industry, but also the mechanical engineering industry have yet to show any substantial benefits from the new opportunities. Although the tremendous need for action has been recognized, and initial success can be celebrated, by and large, however, measurable productivity gains and really successful digital business models are the exception. As the study “Aerospace 2019 – Leadership in Times of Change” has confirmed, management teams and top management often find it difficult to develop their own company in a targeted manner into the future in an increasingly networked and digitized world.

Dr. Christian Abegglen,
Managing Director
Founding Director and President
of the Administrative Board of
St. Galler Business School
Consequently, there are very few systematic digitization measures, piecework remains fragmented, or the organization begins to stagnate. The aerospace industry in particular, with its already highly complex products and processes, is currently facing a radical change. With regards to products, innovation and life cycles are increasingly under pressure, while requirements relating to safety and reliability are also becoming more stringent. An intelligent networking of products combined with sophisticated algorithms for data analysis, however, also offer new opportunities to significantly increase the use efficiency. In the area of operations, widely distributed IT systems must be harmonized and renewed in day-to-day operations in order to provide reliable and up-to-date data at any time and any place.

It is imperative and urgent that leadership and management be urged, encouraged and, if necessary, given the skills to face the current challenge and to structure their companies based on sustainable business models. These business models may require radical reconfiguration in order to allow companies to move forward into a successful future. This is essential because the opportunities offered by increasing digitization and networking can put success factors of past business models and their controlling leadership philosophies rapidly to the test and devalue them.

So, for those who respond too slowly or not specifically to the changes taking place may quickly lose their competitive advantage.

There are no patented remedies to deal with the current wave of digitization, nor are there any instructions on correct leadership in times of disruptive upheavals. However the holistic and dynamic St. Gallen approach, for example, which has been available for a while now, offers a suitable reference architecture and an adequate framework for thinking to combat stagnation. It has demonstrated its strength as a reliable compass for successful navigation, especially in times of change and great complexity.

The current challenges as well as the current findings of the joint study between Staufen and BDLI now finally place the long-known principle of self-organization into the focus of the discussion, this time under the term “new leadership.” In order to quickly adapt to new technologies and needs, they generally aim towards independent change processes. Foreign control, rigid hierarchies, “Command & Control” from top to bottom, rigid measuring madness, etc. must be replaced with processes that rely on self-control and self-structuring. Knowledge transfer, cross-functional and cross-hierarchical collaboration, flat hierarchies, error culture, networks, monitoring and coaching are all keywords associated with this.
On the other hand, within this leadership mentality, there are proven mindsets, methods and tools based on the St. Galler approach, which, thanks to their process, iterative and feedback-oriented concept, ensure commitment, implementation and continuous adaptation. The goal is to systematically teach and train leadership to take on this mentality. This requires that leadership is continuously developed and filled systematically. Simply setting up a suitable operation room that is staffed depending on the actual “threat assessment”, where key leadership groups and teams can continuously work on corporate development in terms of integrated management, has proven to be an effective instrument in practice.

There are also instruments to systematically indicate a company’s current life cycle phase and what challenges are associated with that particular phase (“reinvent or optimize?”). The St. Galler Stagnation Barometer, for example, is just one of the tools available that can be applied to determine to what extent and in what form there is resistance within the organization to consistently acting against stagnation. It shows what specifically needs to be done to successfully clear up blockages. Practical experience with the instrument has shown how a common tangible understanding of the future and goals can be achieved, how commitment can generated and how such visions can subsequently be broken down into specific strategies and activities, which are then consistently communicated.

In fact, is it primarily about iteratively developing common values and overall objectives using feedback loops, which are then embodied and maintained by upper management, irrespective of any difficulties. This way, the intention of leadership, and thus the willingness to take responsibility, is visible and tangible. This in turn creates confidence among the staff, to themselves also take on responsibility and structuring, thus enabling work in virtual agile teams, open feedback and the means to properly deal with mistakes and errors. This form of de-hierarchized, network-oriented work, yet still guided by jointly created values and ideals for the future, is capable of convincing other staff members as well as customers and network partners. In other words, delegation principles while at the same time a leadership standard by creating meaning. The most significant factors have always been, are and will remain, among other things: courage, will, attitude, passion, appreciation, decisiveness, and assertiveness.

Emphasize the need for integrated leadership principles, make use of the many suitable thought instruments and methods that can be systematically tested and applied by companies and their staff. They help to adequately face what is undoubtedly an enormously complex new concept – both progressively and observantly at the same time.

Author:
Dr. Christian Abegglen is the Managing Director, Founding Director and President of the Board of Directors of St. Galler Business School, which is one of the largest and most renowned suppliers of open management seminars for upper-level management in the German-speaking area. He, together with Prof. Knut Bleicher, is also a joint founder of the St. Galler Association for Integrated Management.
For the study "Aerospace 2019 – Leadership in times of change," the consulting company Staufen together with the Federal Association of the German Aerospace Industry (BDLI) surveyed a total of 72 executives from the aerospace industry in Germany in early 2019. Every second respondent in the study comes from top management, meaning an owner, director or executive manager.
For many years, the aerospace industry has been very successful, achieving maximum sales figures and attracting the best employees. Is it any wonder, then, that the number of global airline passengers has more than doubled over the past 15 years? The current political environment pertaining to security, which could not be any more complex and multi-faceted, has been emphasizing the relevance of the aerospace industry for national sovereignty again and again. Moreover, space travel, especially business closer to Earth, has developed to a veritable growth market. There are to date, for example, thousands of satellites in service orbiting the Earth. Nonetheless, the industry’s success is no coincidence, but instead has been hard-won from the high-wage country Germany in a difficult global competitive market. Currently, young entrepreneurs from start-up-like companies are the driving force behind innovations in the industry, after new company formations were difficult for a long time due to the high investment costs and the technological entry barriers. At the same time, though, the race for so-called air-taxis has begun; however, it is still unclear when they will actually be operated on a commercial scale. The industry is looking forward to an exciting and at the same time challenging future.

ECONOMIC SUCCESS

All in all, the industry is showing continued success and will continue to grow in the coming years. In 2019, worldwide sales from airline passengers will exceed the $600 billion mark for the first time ever. In comparison: In 2004, the mark was at $294 billion, so less than half! Most recently, the world’s 12 largest aircraft manufacturers and engine builders earned more than $366 billion combined, including military technology.

This number conceals the approximately 1,800 civilian aircraft delivered, of which every sixth was assembled in Hamburg, from where they were shipped to customers all over the world. The industry is very strong in Germany: Hamburg is one of the three largest locations worldwide for aircraft development and aircraft construction. In every global aircraft delivered we find cutting-edge technology “made in Germany” – the success of the supplier industry, the “hidden champions” of the industry, whose roots can be traced to almost everywhere in Germany. Net income figures for all industries combined has been consistently at EUR 40 billion for the past two years. This number marks an all-time record in sales.

Depending on how you count, here in Germany there are around 300 to 500 companies that belong to the industry, of which around 250 are members of the Federal Association of the German Aerospace Industry (BDLI). The entire sector directly employs 111,500 employees. The industry is an important player in the digitization of the manufacturing industry. For example, engine manufacturers are pioneers in the use of 3D metal printing or in the field of AI-based, predictive maintenance. Automated production methods based on the concept of Industry 4.0 as well have been realized by manufacturers and are in initial stages among management within the global supply chains.

INITIAL DIGITAL BUSINESS MODELS

The industry is also adapting new digital business models. For example, Airbus has heavily invested in its platform Skywise. It is intended to be a reference platform, which will be used by all major players in the aviation industry, allowing them to improve their operational performance and operating results. In the future, the Group plans to not only develop and product aircraft, but also integrate, among other things, predictive maintenance. Lufthansa Technik with its Aviation Data Hub platform is also investing in data as a business concept.

However, individual pioneers concentrating on the use of digital technologies and business models does not mean that the industry is actively undergoing change on a broad front. Many companies simply have not yet created the proper conditions; what is still lacking is a leadership culture and work organization that is future-proof, which can be seen in the joint study by Staufen AG and BDLI. At the beginning of the year, a total of 72 executives in the aerospace industry in Germany – about half of which were owners, directors and executive managers – provided detailed statements on the adaptability of their companies.

Germany is a leading space-faring nation and has competencies from the launcher sector to applications such as earth observation, satellite communication and navigation to astronautical space travel and space exploration, which was developed in close co-operation between institutions such as DLR and ESA with the industry. Adequate budgeting of the national program and ESA contribution, which keeps pace with international ambitions, also continues to be essential.
Although just a few of the top performers of the aerospace industry are driving digital change, there is still overall a great need for action – many companies are lagging behind. In the study, only six percent of the surveyed companies self-critically attest to belonging to the top performers.
NECESSARY CHANGE – MANY ARE LAGGING BEHIND

Almost two thirds categorize themselves somewhere in the middle, while 26 percent define themselves as stragglers. All in all, a rather moderate self-assessment. The industry seems to be having a hard time especially in the area of business models.

A more detailed view into the self-assessment of companies’ ability to change shows that German companies are technologically very strong. In contrast, for example, US competitors are far more productive in developing new business models. Offers that consistently are conceived by customers are immensely promising. One example: Airlines offer their passengers seamless travel. Passengers at home and abroad can switch between bus, train, taxi and airline, without having to wait on the platform or in a terminal – an instrument that customers can integrate with several additional services long before embarking on the trip. New and lucrative business models are also available to manufacturers and suppliers, the majority of whom, though, have yet to tackle.

Just how versatile are aerospace companies with respect to their basic technologies, system technologies and business models?

<table>
<thead>
<tr>
<th></th>
<th>Belong to the top performers</th>
<th>Are a fair average</th>
<th>Range in the lower mid-field</th>
<th>Lagging behind</th>
<th>Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic technologies</td>
<td>17%</td>
<td>45%</td>
<td>20%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>System technologies</td>
<td>20%</td>
<td>36%</td>
<td>33%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Business models</td>
<td>1%</td>
<td>44%</td>
<td>32%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Nonetheless, a certain amount of change seems to have taken place, because a review of the past few years is positive. For example, three fourths of companies assess developments within their own organization as favorable over the past three years. With respect to customer processes, as much as 70 percent note a positive trend. The assessment for the near future is similarly favorable: Almost 90 percent of the companies are approaching the next three years with optimism.

To what extent has your company undergone change over the last three years?

<table>
<thead>
<tr>
<th></th>
<th>Very favorably</th>
<th>Favorably</th>
<th>Not at all</th>
<th>Unfavorably</th>
<th>Very unfavorably</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Within your own</strong></td>
<td>15%</td>
<td>69%</td>
<td>13%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td><strong>organization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Customer processes</strong></td>
<td>10%</td>
<td>60%</td>
<td>24%</td>
<td>6%</td>
<td></td>
</tr>
</tbody>
</table>

FAVORABLE REVIEW, OPTIMISTIC OUTLOOK
In total, what kind of change are you expecting in your company over the next three years?

![Chart showing the distribution of expected changes.]

The overall optimistic outlook shows that the businesses are hardly affected by airline bankruptcies and the discontinuation of the A380 production line. Here, multiple parallel developments are intertwined: On the one hand, many airlines are planning regular and foreseeable replacement and expansion investments. On the other hand, aircraft undergo frequent maintenance, during which numerous components or entire modules must be replaced. In both cases, for suppliers this means an appealing market, which is consistently boosted by the boom in air travel.

In the military aviation industry there are several promising development projects; however, the situation continues to be tense. One of the reasons for this is the changing global security environment, which could not be more complex and multi-faceted. In addition to the European MALE RPAS and TLVS programs, the joint development and procurement of the Future Combat Air System (FCAS) as a European Community project are essential, which will contribute long-term to maintaining and expanding technological expertise for future technologies in Germany.

Space travel will overcome the challenges in a continuously changing market over the next few years, but it will still have to develop solutions for the increasing socio-political challenges within the traditionally institutional market. These include topics such as broadband from space as well as security-related Earth observations, plus how to deal with cybersecurity and increased networking.

With the increasing demands of modern societies and the commercialization of space, there is great potential in this area. Communication via satellites, Earth observation, security management and careful use of resources are only some of the core topics.

Placing emphasis on the successful European aerospace industry shows the importance of space infrastructure for our society and economic development. It is important to stress from an industry perspective that commercialization of space does not mean that national space travel will be replaced, but will instead complement such developments. Commercial space travel solutions can usefully complement government needs and be the driver for economic development, but cannot assume any safety-relevant or scientific tasks. State and commercial space travel are therefore on an equal footing and, in view of the increased competition and the special significance of the dimension of space, should be further developed in close relations between government programs and scientific and commercial investments. For this space travel, for example, still needs sovereign support, in particular in areas such as infrastructure (launchers) and technology funding in order to be able to compete in the global market. Investment-friendly framework conditions must be established for this, while simultaneously setting up an ambitious state space travel strategy.
Numerous changes are being planned both in the aviation industry as well as in the economy overall. The various trends relating to digital change also have impact here: Networking within the company, changes in relationships to customers and suppliers, new business models, adjustments in the management structure and new work models.

Although companies generally do recognize the importance of digitization (86%), even less than two thirds expect major changes in business models, leadership structures and work organization. This reveals the huge gap between the hard and soft factors of digitization.

How strong will the changes be with regards to …

Responses from participants who indicated in a preliminary survey that they expect changes (favorable/unfavorable) for their company:

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Very favorable</th>
<th>Strong</th>
<th>Rather weak</th>
<th>Very weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>...digitization and networking within the company?</td>
<td>43%</td>
<td>43%</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td>...customer and supplier relationships?</td>
<td>19%</td>
<td>57%</td>
<td>22%</td>
<td>2%</td>
</tr>
<tr>
<td>...the business model?</td>
<td>14%</td>
<td>45%</td>
<td>38%</td>
<td>3%</td>
</tr>
<tr>
<td>...organization / management?</td>
<td>3%</td>
<td>57%</td>
<td>38%</td>
<td>2%</td>
</tr>
<tr>
<td>...the work environment (qualifications, location time, compensation)?</td>
<td>4%</td>
<td>55%</td>
<td>41%</td>
<td>0%</td>
</tr>
</tbody>
</table>
NEW COMPETITORS FROM CHINA

More and more competitors are entering the stage. For example, the Chinese COMAC (Commercial Aircraft Corporation of China) recently presented the C919, the first medium-range aircraft ever that was fully developed in China. Initially, the engines will be purchased, but they too will soon be replaced by products developed domestically. Also for other modules such as chassis and air-conditioning systems, the manufacturer is still procuring European products.

The project is of great importance to the Chinese government. It intends to offset major investments by means of purchase obligations in state-owned airlines. Primarily, the C919 is geared towards the Chinese domestic market, which will have a demand for around 6,000 aircraft by 2035. As of 2021, it will be put into service for the first Chinese customers. By mid-2018 there were already more than 800 commitments and pre-orders – a respectable achievement. Russia and India also continue to strive for “their” share of the world market. In brief: European manufacturers are now facing competition that must be taken seriously, particularly because it is being funded by the state.

Developments such as these make urgent change a necessity. Increased efficiency is certainly one good solution; resounding competitive advantages can especially be achieved with disruptive business models. However, to achieve this, additional change is required within the companies themselves. They must adapt their leadership structure and their work organization to the requirements of the future.
According to the surveyed companies, open-minded leadership and staff are the key to success for implementing changes (see also guest article by Dr. Christian Abegglen on page 9.) Consequently, 93 percent demand executive managers to be role models of change, while 73 percent demand that employees contribute to this path to change. Interestingly enough, structures and processes as well as financial resources for research and development are considered less important. Executives themselves feel a duty to drive change – presumably also, because they simply cannot find qualified specialists in the market, who they could support in making the changes.

What do companies need in order to be able to handle change well?

- Executives are open to change – they are role models: 93%
- Employees are open to change and support it: 73%
- Exchange with customers, suppliers and scientists about the latest trends and innovations: 64%
- Next-generation staff, further education and expertise transfer: 51%
- Sufficient staffing and time resources: 49%
- Structures and processes are clearly defined: 36%
- Sufficient financial resources for research and development: 34%
The theory does not hold up in the day-to-day, because when taking a look at their own leadership structure, only around every second company confirmed that executives were sufficiently open to change. Even the assessment of companies’ own employees is only marginally better. The greatest obstacle in the area of digital change is, however, that 71 percent of the companies do not have sufficient staffing and time resources.

In your company, for which of the following topics do you see potential for improvement?

- Sufficient staffing and time resources: 71%
- Executives are open to change - they are role models: 51%
- Next-generation staff, further education and expertise transfer: 47%
- Employees are open to change and support it: 46%
- Exchange with customers, suppliers and scientists about the latest trends and innovations: 42%
- Structures and processes are clearly defined: 29%
- Sufficient financial resources for research and development: 19%
One well-known obstacle on the path to a digital economy is the traditional management structure based on the “Command & Control” principle. The managers surveyed also recognized this problem; two thirds (67%) find the associated rigid hierarchical structures to be a major obstacle. Yet, only less than a third (30%) recognize this problem in their own company. Overall, the very consistent distribution of responses (multiple answers were possible) shows that on average, every company has three “construction sites” and thus is struggling on several fronts at the same time.

In general, what are the greatest obstacles for a company’s adaptability?

- Lack of resources due to high capacity utilization: 74%
- Executives act according to the "Command & Control" principle: 67%
- Measures remain stuck at middle management level: 62%
- Staff fears changes: 62%
- Lack of next-generation talent: 50%
- Lack of qualifications among managers and employees: 48%
- Political and/or labor-law related barriers: 36%
Which of the following obstacles is your company struggling with?

- Lack of resources due to high capacity utilization: 70%
- Staff fears changes: 42%
- Lack of next-generation talent: 42%
- Measures remain stuck at middle management level: 35%
- Lack of qualifications among managers and employees: 33%
- Political and/or labor-law related barriers: 33%
- Executives act according to the "Command & Control" principle: 30%
Almost every manager surveyed (98%) is aware that managers have to act differently during digital change. The need to be more of a mentor than a traditional boss. However, implementation is only being intensely addressed by every second company (33%) or even very intensely (17%). Consequence: Only in around every third company (35%) are modern managers the rule.

How often can “mentor executives” be found in your company?
A very important indicator for a modern management is how mistakes are dealt with. Even if traditionally fault management is strongly underlined in the aviation and aerospace Industry due to the high level of safety awareness, 50% of surveyed companies still certify that their error culture could be expanded.

For example, transferring analysis into long-term learning processes seems to be difficult, and in addition, only one third avoids assigning blame to an individual when dealing with mistakes. As watertight as the implementation of safety requirements within the companies may be, where error culture is concerned, there is obviously still some catching up to do, which, by the way, also applies to the use of additional modern management tools.

How are mistakes dealt with in your company?

<table>
<thead>
<tr>
<th>31%</th>
<th>44%</th>
<th>50%</th>
<th>62%</th>
</tr>
</thead>
<tbody>
<tr>
<td>In our company, criticism and feedback are also asked for from the bottom to the top</td>
<td>Improving error culture is an important part of our leadership development</td>
<td>In our company, clear and binding processes are in place for failure/error analysis, so that we can sustainably learn from them</td>
<td>Mistakes are never blamed on an individual</td>
</tr>
</tbody>
</table>
How is good leadership encouraged within your company? Which tools are already in place?

<table>
<thead>
<tr>
<th>Tool</th>
<th>Already successfully implemented</th>
<th>In progress</th>
<th>Planned</th>
<th>Non-existent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program for systematic leadership development</td>
<td>44%</td>
<td>28%</td>
<td>16%</td>
<td>12%</td>
</tr>
<tr>
<td>Forward-thinking succession planning for senior executives</td>
<td>30%</td>
<td>37%</td>
<td>24%</td>
<td>9%</td>
</tr>
<tr>
<td>Manager coaching or supervision</td>
<td>39%</td>
<td>25%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>eLearning (in some cases with success monitoring)</td>
<td>32%</td>
<td>25%</td>
<td>10%</td>
<td>33%</td>
</tr>
<tr>
<td>Use of Shop Floor Management</td>
<td>37%</td>
<td>14%</td>
<td>7%</td>
<td>42%</td>
</tr>
</tbody>
</table>

Almost every third company uses special measures such as Shop Floor Management, coaching or eLearning for the further development of management. Overall, almost half have a program for systematic leadership development in place and another fourth is currently establishing one. Almost just as important is forward-thinking business succession planning for executives.
Most companies are self-critical when it comes to leadership and see a need for action. What is noticeable, for example, is that feedback discussions are viewed as an unpopular ritual and not seen as an active communication culture (58%). In addition, the leadership culture suffers in a large number of companies subject to traditional structures. Far too often target agreements and compensation are only based on traditional KPIs, knowledge transfer within the departments and between hierarchical levels hardly ever occurs and moreover, many executives resist introducing new forms of corporate management. The level in the company that likely has the most to lose as a result of flat hierarchies and improved communication: middle management.

Which topics in the area of leadership is there still room for improvement in your company?

Feedback discussions are often a dictated ritual instead of an active communication culture

Target agreements and compensation systems are mainly based on “hard” KPIs

Knowledge transfer hardly ever occurs

Many executives resist new management forms and methods

Lack of diversity on management level (gender, nationality, training, etc.)

Younger generations (Y and Z) and current executives do not converge

Management positions are mostly filled internally, while shunning “fresh ideas”
The digital transformation is in full swing; the economy and society are changing immensely. Although examples are well known, here is just a brief highlight: In the past, a concept like home office was entirely unknown, because even in office jobs, employees had to use all work resources at the employer’s location. Today however, thanks to fast networks and ultra-light notebooks, tablets or smartphones, mobile working is technically no longer an issue. But, has the leadership culture kept pace with these developments?

The digital transformation of the economy and society is in full swing. What impact does digitization have on the topic of leadership?

### DIGITIZATION AND LEADERSHIP

**The digital transformation will automatically change the leadership culture**

- **Applies:** 41%
- **Likely applies:** 45%
- **Less likely to apply:** 12%
- **Does not apply:** 2%

**A conscious change in the management culture is an indispensable prerequisite for the successful digital transformation of a company.**

- **Applies:** 36%
- **Likely applies:** 50%
- **Less likely to apply:** 11%
- **Does not apply:** 3%

**Executives without proven digital expertise will no longer stand a chance in just a few short years**

- **Applies:** 20%
- **Likely applies:** 53%
- **Less likely to apply:** 16%
- **Does not apply:** 11%

**In less than five years, the majority of purely operational decisions will no longer be made by executives, but instead by intelligent machines / robots**

- **Applies:** 19%
- **Likely applies:** 43%
- **Less likely to apply:** 36%
Companies are also calling for these kinds of development, because, for example, more and more employees are requesting a home office rule. The leadership culture must also change as a result. In addition, the responsibility of employees and their expectations for being able to work independently is also increasing.

How do your executives feel about the topic of digitization?

<table>
<thead>
<tr>
<th>51%</th>
<th>49%</th>
<th>26%</th>
<th>21%</th>
<th>16%</th>
<th>2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have already firmly anchored the topic of digitization in our leadership organization (for example, with a Chief Digital Officer)</td>
<td>We consciously rely on a mix of executives with a lot of digital expertise and executives that have other strengths</td>
<td>The consistent expansion of digital expertise is an integral part of the target agreements with our executives</td>
<td>We no longer hire any executives without digital expertise</td>
<td>We offer special training on the topic of “leadership and digitization”</td>
<td>Our executives help out young tech companies</td>
</tr>
</tbody>
</table>

Here, there is also a gap between how the situation is assessed and the reality in their own company. For example, when filling new positions in upper management, only just about 80 percent of companies seek to specifically find executives with digital expertise. In addition, there is little incentive for executives to acquire digital knowledge, because only a quarter (26%) of the company provides for this in target agreements for managers and only just about one sixth (16%) of the companies organizes special leadership and digitization training for the various hierarchical levels.

This form of automatism is also seen in the companies, almost 90 percent approve. Similarly high level of approval is found with the idea that a conscious change in the leadership culture is an important prerequisite for digital change.

Obviously, many companies in the aviation industry are attempting to tackle digitalization by applying a savings plan. Accordingly, only every second company (51%) has completely anchored the topic in their leadership organization. In addition, in many cases, there will most likely be one Chief Digital Officer (CDO), who alone is responsible for digitization. This role is double-edged: It anchors digitization in the C-level and ensures only a minimum of “digital leadership”. However, it can also be used as a fig leaf, merely representing simulated change.
Conclusion
The aerospace industry in Germany is a very important economic factor with impressive results. It has enabled Germany to participate in the world’s continuing boom in the field of aviation. German components and systems can be found in many aircraft, even in such manufactured in China. Yet, as in other industries, this strong position comes with a risk: Companies tend to rest on their laurels.

The joint study between Staufen and BDLI clearly shows that several challenges lurk behind holding the top position as a technology company. The leadership culture would not be able to keep up with the rapid development of digitization. In spite of the good prospects and their optimism, companies should seize the opportunity that digital change brings now and shape their leadership culture on the basis of digitization.

**TRADITIONAL LEADERSHIP CULTURE WITH WEAK DIGITAL LEADERSHIP**

**GERMAN COMPANIES IN THE AEROSPACE INDUSTRY**

- Have a hard time anticipating digital change, in particular because of their economic success,
- Initially hesitate to try new service and business models,
- Do not have enough executives with digital expertise,
- Are more often then not still convinced of the effectiveness of “Command & Control,” and
- Too rarely apply tools such as Shop Floor Management, coaching or eLearning to promote digitization.

**THEY SHOULD**

- Make digital expertise a requirement when hiring executives,
- Provide current employees and executives with further education programs featuring digital background knowledge designed specifically for their needs,
- Reduce the number of hierarchical levels within their company,
- Rely on a collaborative approach and improve the error culture,
- Encourage all employees and executives to work on new business models and innovative products and services,
- Make use of management tools such as Shop Floor Management or coaching and supervision, and
- Provide sufficient staffing and financial resources for innovations and digitization.
About Us

We believe that in every company there is an even better one.

Staufen AG is a lean management consulting firm and academy. We have been consulting and qualifying companies and their employees worldwide for over 25 years. Our goal is to make every company a better one and to advance our customers. Our special approach is to quickly set the right changes in motion and to establish a long-lasting change culture.

Our Awards
Numbers Data Facts

- 25 Years of experience
- 65 Million euros in sales
- > 500 BestPractice attendance p. a.
- > 5,000 Seminar participants p. a.
- > 70 BestPractice Partners
- > 90 Active trainers and coaching experts
- 320 Employees
- 50 Different Lean and Six Sigma Training Programs
- > 90 BestPractice-Partners
- 17 Languages
- 170 Million euros in sales
- ISO 9001
- FS 29990
- Certified according to AZAV
Studies and White Papers

You can find all studies and white papers online at
www.staufen.ag/studien
Imprint

EDITOR
STAUFEN.AG
Consulting.Academy.Involvement
Blumenstrasse 5
73257 König, Germany

PICTURE CREDIT
iStockphoto / Staufen AG

GRAPHIC DESIGN
www.weberfink.de
IN EVERY COMPANY
THERE IS AN EVEN BETTER ONE.