IT as driver of digitization:
Failure to keep up is fatal.

The winners of the future are already determined by the degree of digitization today. Companies that pursue a dedicated and consistent digitization strategy can become the market leaders of tomorrow. But without support, many of them fail when it comes to the business transformation.

The competition between businesses can be compared to a Formula 1 race: Only those who start from pole position, who pursue the right strategy and who make few or no mistakes will make it to the top of the podium. Companies as well should try to become or remain the market leaders in their sector – because this is guarantees long-term success. Achieving this goal requires a rethinking. Just as a race car driver can only win with the help of a strong team, digitization is also a team sport – with IT as an integral part of the entire organization. No business developments, process adjustments, new business models, business segments or products are developed without IT. "IT becomes the central and essential driver for value creation in business," is the conclusion reached by business informatics professors Nils Urbach and Frederik Ahlemann in their future vision of a modern IT organization.

Companies are taking advantage of opportunities – but still too hesitantly

The advance of digitization is also confirmed by the third German Social Collaboration Study, which was conducted by Campana & Schott together with TU Darmstadt. 2018 marked the first year in which the surveyed people use more digital than analog work methods to manage their daily tasks. On a scale from 1 to 7, the level of maturity for connected collaboration in the companies rose from 3.28 in the previous year to 3.96. This is very important, as the study confirms: People making frequent use of social collaboration tools work up to 30 percent more efficiently than their colleagues. In addition, innovative power also increases.

Successful digitization projects deliver advantages in the form of increased use of technology, which leads to increased work efficiency. Particularly large companies have spent a lot of time developing and implementing digital strategies in recent years. The small- to medium-sized business sector is lagging when it comes to planning and implementing digitization projects. In addition, there are big differences among the industries: While IT companies (as expected) exhibit the highest level of maturity at 4.9, followed by the chemicals and pharmaceuticals industry (4.2), the values for vehicle manufacturing (3.9) and the health care sector (3.7) are below average. Therefore, it is high time to take advantage of the opportunities offered by digitization.

Kicking off the digitization process

But that is easier said than done. On the way to becoming a digital leader, companies require not just individual tools but an integrated IT strategy. After all, a successful Formula 1 racing team also requires several different areas: people, technologies, data and expertise. Even the best driver cannot win if the car is too slow. And even the best engineers armed with extensive analytical data cannot build a fail-safe and fast car if the development processes are not ideal.

This means for companies: In modern IT, all aspects must be considered and linked so that the digital transformation can be implemented successfully – namely employees, expertise as well as data and technology. The following must be considered:

- **Data & Technology** – IT organizations operate technology (infrastructure and applications) to process data and information and to generate added value for the business. Open, modular platforms allow for the rapid and flexible provision and adjustment of IT services, with the focus on customer orientation and data analysis in order to supply useful information to the business and promote the further development of business models and products.

- **People** – Modern IT organizations become business partners and work with the various divisions to drive the digital trans-

The modern IT framework

formation forward. In this context, providers also become partners who enable rapid innovation. Change management provides the corresponding acceptance and the transformation to a digital mindset among employees and in the organization.

- **Capabilities** – Modern IT organizations provide the right IT management expertise and processes so that VUCA requirements (Volatility, Uncertainty, Complexity, Ambiguity) can be addressed in a structured and plan-based fashion. In this context, particularly security, strategy and architecture must be considered, in order to provide optimum support to employees and business processes.

A vision as the basis

But how can companies achieve such an integrated and modern IT organization? Prof. Dr. Nils Urbach from Universität Bayreuth and the Fraunhofer FIT recommends: "Visionary thinking is a key aspect in this regard. Managers and employees must understand the potential of IT for viable business processes. The idea that business is no longer possible without IT must be internalized. IT is the central and indispensable driver behind value creation in business. Therefore, IT architectures must be standardized, modular, flexible, elastic, cost-effective and secure.
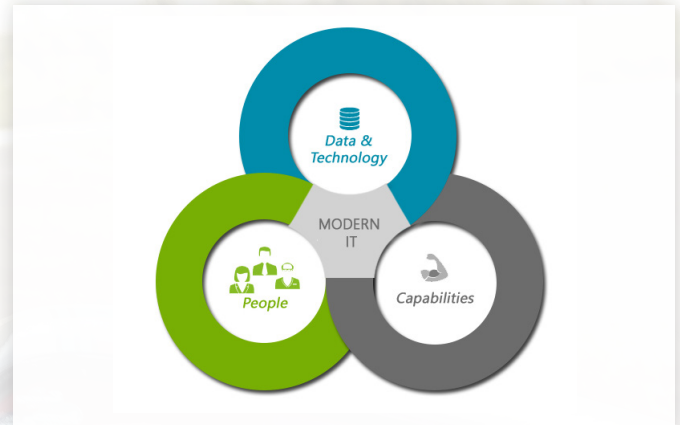
Security and business continuity management represent key cross-sectional functions in this context. A comprehensive and global architecture management system must combine all innovations with the classic services, because otherwise there is the risk that a large, and increasingly unwieldy, number of indi-

viduals solutions will be deployed. Only simple operations, scalability, reliability and a high degree of connectivity enable the highest speed of innovation – even over short time periods, before the emergence of the next innovation."

At the same time, the vision must go beyond agile IT, emphasizes Prof. Dr. Frederik Ahlemann from the Universität Duisburg-Essen: "Moreover, in this new world of work employees become a strategic competitive factor, since they are ultimately how the business differentiates itself from other competitors. More responsibility and flexibility also increase the attractiveness of the workplace. Additionally, strategic cooperations increasingly turn into innovation partnerships. Today, no company should be developing new products behind closed doors. Because there is a real risk that the needs of the market and the customers are not identified and that current technologies or business models are not taken into account."

Start-ups as innovation assistants

A collaboration with start-ups represents an excellent opportunity for digital innovation. In this way, both partners can benefit from new work methods and skills, if they approach the collaboration with realistic expectations. This is confirmed by the Start-up Collaboration Study, that was recently presented by Campana & Schott.
According to the study, 80 percent of the companies receive new inspiration from the creativity of start-ups, closely followed

by their technological and technical expertise as well as their committed way of working. For example, around two thirds of employees in established companies acquired new technical skills and expertise for developing digital products and services. More than half of the companies adopted new forms of work as a result of the collaboration. At almost three quarters of the companies, it helped to drive forward the development of digital innovations.
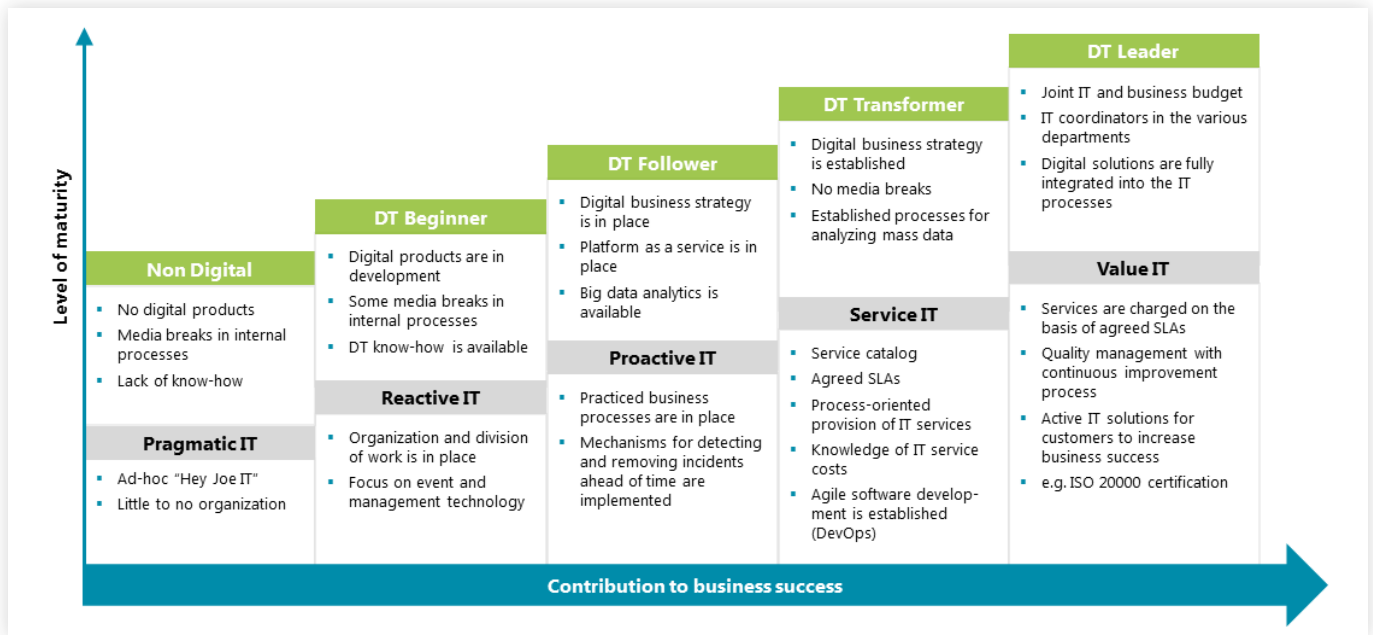
IT Maturity in Digital Transformation

Modernizing step by step

Such a partner also considers the current paradigm shift: In contrast to before, when potential applications were restricted by the existing IT, almost anything is possible today. But often, there is a lack of business ideas and the knowledge of what can be done. Therefore, companies need an expert who develops a rapid understanding of the business and IT challenges and who can act as an interface or interpreter.

And not only that: Because of the steadily increasing importance of IT, the value of business experts who possess digital knowledge also continues to increase. In the future, they will probably become even more important than pure IT experts. Because one must primarily be able to understand and continue to develop the business, and to apply IT in a targeted fashion so that business innovations can be realized and their potential can be fully utilized.

Conclusion

From the classic VW beetle to a modern Formula 1 race car: It is possible with the right process and competent partners in the context of the digital transformation. In that way, companies with agile processes can move ahead of the competition and establish a crucial foundation for their long-term success.

Recommended reading

Urbach, N. and Ahlemann, F. (2018)
IT Management in the Digital Age –
A Roadmap for the IT Department of the Future, Springer, Heidelberg.

Urbach, N. and Ahlemann, F. (2016)
IT-Management im Zeitalter der Digitalis-ierung – Auf dem Weg zur IT-Organisation der Zukunft, Springer Gabler, Wiesbaden.