

A blueprint for digitalisation

How M&A and clear strategic planning
can help German companies build a
digital future



In cooperation with:



Noerr



Foreword

German businesses have a digitalisation issue. Europe's most powerful economy is currently in ninth place in the Global Innovation Index, behind nations such as Finland, Switzerland and the Netherlands.¹ Meanwhile, a 2017 study by the Organisation for Economic Cooperation and Development (OECD) ranked Germany 27th out of 37 developed economies with the highest mobile broadband penetration.²

Chancellor Angela Merkel herself is acutely aware of the situation. At the World Economic Forum in Davos in 2018, she noted that Germany was far behind the digital curve. "We see that countries such as Estonia are far more developed than a country like Germany, which is not at the top of the European league as regards digitalisation."

At a time when every business is under increasing pressure to become a more digital business, successful German corporates, many of which originated before the age of digitalisation, need to build their digitalisation strategies or they risk getting left behind. However, digital transformation is not straightforward: setting an agenda for strategic change that goes beyond superficial improvements is challenging. True transformation requires more than just the launch of a couple of new apps or a platform: the greatest benefits will come from wholesale change, requiring businesses to rethink their entire business models and build new value propositions.

With that in mind, Noerr, in association with the Technical University of Munich and Mergermarket, has commissioned an exclusive survey and in-depth analysis of the German M&A market between 2013 and 2018 to determine what makes a successful digitalisation strategy and how German businesses can move forward on that journey. The research assesses the progress made so far by companies on building deep-rooted and holistic strategies for digital transformation. It considers the business areas where digitalisation has the greatest potential to deliver positive impact. And it reflects on what is needed now to secure a step change in the rate at which transformation is being achieved.

Some transformation will be possible from organic development. Inevitably, however, many companies are looking to M&A activity to accelerate their digitalisation, with German companies pursuing transactions for this reason now representing an increasingly significant chunk of the M&A market. How, though, to drive transformation most effectively through M&A – and how best to integrate acquisitions for digital success? This study begins to answer these questions.

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¹ <https://www.globalinnovationindex.org/analysis-indicator>

² <http://www.oecd.org/sti/broadband/broadband-statistics-update.htm>

Key findings

A clear digitalisation strategy is key

- 68% of companies say that digital transformation now plays a central role in their strategy, but 45% do not have a clear digitalisation strategy or do not know whether they have such a strategy.
- 71% of companies agree that acquiring digital firms plays a central role in their strategy, especially as almost half of the companies surveyed say access to new business models is very important (48%).
- As 95% of companies plan to make investments in the next two years to increase digitalisation, those with a clear rationale for digitalisation are more likely to be successful in achieving superior returns on investment.
- With cutthroat competition and rapidly changing technology, the need for speed in digital transformation to stay at the top is essential.

Management needs to adapt to digitalisation

- Upper management or an internal panel of experts is mainly responsible for digitalisation activities, but only 23% of companies have noticed a change in the decision-making processes of their boards.
- Although companies are increasingly using adaptive strategy and planning processes, too few are harnessing the power of advanced digital tools to drive planning and strategy through improvements to managerial processes (Big Data/language analytics, AI). This suggests that the benefits of digitalisation are not yet flowing through into the decision-making processes employed at the top of the company.

Digital transformation of businesses is still developing

- Businesses with a clear rationale for digitalisation have been much more engaged in transformational activities such as M&A, R&D, and the establishment of accelerators/incubators to become more digitised businesses. Acquisitions are the prime vehicle to become a more digitised business.
- While businesses are very active in using digital technologies for front-end customer-facing or operational functions, they have not fully reaped the benefits for M&A decisions or compliance improvements.

M&A driven by digitalisation

- The share of German deals with a digitalisation element has risen from 19% to 25% over the period 2013-2017, with 63% of these deals being cross-border (in- or outbound).

Success factors for digital dealmaking

- There is no one-size-fits-all approach to successful digital transactions. The motivations for deals that enhance digitalisation are very diverse. Aspects such as target identification, deal execution and integration need to be viewed through the lens of the company's key deal drivers.
- Companies with successful digital M&A transactions are more likely to have used advanced analytics for valuation and/or portfolio optimisation.
- Companies say that the biggest challenges of digital M&A are data protection in the transaction and data room (cyberattacks) and know-how/IP transfer.
- A deal's success strongly rests on the ability of the buyer to integrate organisational structures and cultures, as well as management information systems, and to retain key employees (not necessarily founders) of targets.

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1. Building a digitalisation strategy

Our research finds that organisations understand the importance of a concrete digitalisation strategy but, in many cases, they are not giving it their undivided attention

1.1 Strategic thinking

German businesses have been slow adopters of digitalisation. For example, according to the OECD, only 16% of companies use cloud services³ – this compares with an average of 25% overall and as much as 57% in more innovative countries such as Finland. However, the tide may well be changing. Our research suggests German companies now regard digitalisation as crucial to their future direction and growth prospects. When asked the extent to which they agree with the statement “we have a concrete digitalisation strategy”, the mean answer was 3.61 where 5 was strongly agree (figure 1).

Meanwhile, more than two-thirds of the businesses in this survey (68%) say that digital transformation now plays a central role in their strategy (figure 2). The CEO of one such business explains: “The emergence of digital technology has created a fundamental disruption in the value chain – digital transformation is a necessity now if our business is to grow.”

1.2 Defining digital

In practice, however, digitalisation means different things to different organisations. At a high level, the technology analyst Gartner defines digitalisation as “the use of digital technologies to change a business model and provide new revenue and value-producing opportunities”. In other words, it is the process of moving towards a more digital business. Still, the nature of that journey varies. Some businesses are focused on digitalising their customer-facing activities, exploiting new sales channels such as online and mobile. Others are more intent on using digitalisation to improve internal processes and operational effectiveness and efficiency, particularly when com-

bined with technologies such as automation, artificial intelligence and the generation, accumulation and analysis of big data. Digitally mature businesses are embracing transformation on many fronts.

Indeed, in some cases, digital transformation is now changing the very nature of organisations’ value proposition. Consider how some manufacturers, for example, are shifting from simply making one-off sales of their equipment to ongoing service and maintenance contracts that leverage sensor equipment and the internet of things in real time. Or take the entertainment industry, where music and film businesses have moved entirely digital, targeting customers with personalised services based on data-enabled knowledge about their preferences built from their purchasing histories and the rest of their digital footprint.

1.3 The need for speed

However, organisations must decide what they want to achieve: in other words, to develop and articulate a clear strategy for digital transformation. The evidence of this research is that many businesses have not yet arrived at this point: there are a high proportion of companies that say either that they do not have a concrete digitalisation strategy (13%) or that they do not know whether they have such a strategy (32%) (figure 2).

For many businesses, the process of digital transformation is at a relatively early stage. It may be that many of the companies in this study have yet to settle on a holistic strategy for transformation, experimenting instead with a range of new ideas across different aspects of their businesses in order to understand what works best. In which case, their over-arching strategy will not yet be set in stone.

Another possible explanation is that German companies have not yet felt the imperative to

³ https://www.oecd-ilibrary.org/docserver/sti_scoreboard-2017-29-en.pdf?expires=1549457308&id=id&accname=guest&checksum=0C9CD52997641AA5F290C46ACE17EB3C

transform. The relative strength of the German economy in recent times – and indeed the global economy for international businesses – may have left companies in a comfort zone where growth has been achieved without any need for definitive digital transformation. However, such complacency carries significant risk – and businesses may find themselves left behind.

As Chancellor Merkel said in May 2018: “We’re at the start of a fundamental development, like the beginning of industrialization. Now we have the duty to extend our great industrial strength into the digital era. That’s not trivial.”

1.4 Acquisitions at the heart of strategy

In the race to embrace these different forms of digitalisation, organic growth is one option, with many businesses building on their early forays into the digital space, continually adding new capabilities through innovation and recruitment. In many cases, however, this is not delivering the step change that the leaders of these organisations now require – and certainly not at the speed needed. Increasingly, therefore, they are turning to merger and acquisition (M&A) activity, accelerating their digitalisation by buying the functionality and innovation they have targeted.

Figure 1

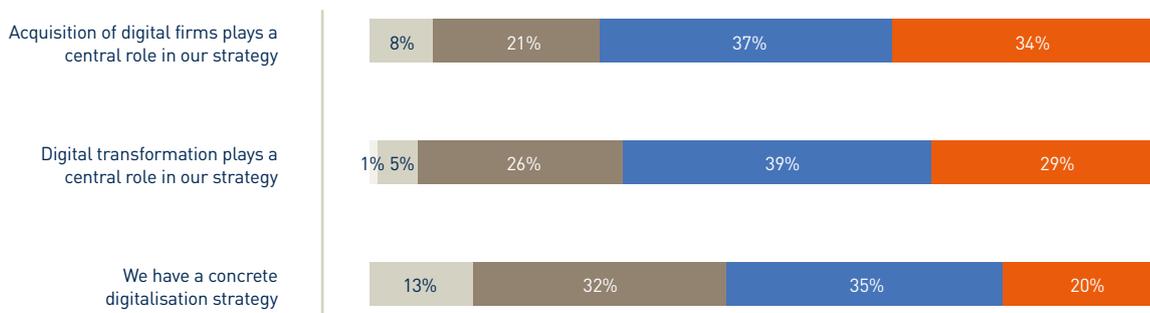
To what extent do you agree or disagree with the following statements?
(5= strongly agree, 1= strongly disagree) Mean shown



Note: n = 150

Figure 2

To what extent do you agree or disagree with the following statements?



Strongly disagree Disagree Neither agree or disagree Agree Strongly agree

Note: n = 150

“Acquisitions have become our priority for digitalisation,” says the CEO of one respondent in the study. “By acquiring the right target with superior digital technologies, we get direct access to capabilities that would otherwise take years to develop.”

Indeed, when asked the extent to which they agree with the statement “acquisition of digital firms plays a central role in our strategy”, the mean answer was 3.97 where 5 was strongly agree. And nearly three quarters (71%) actively agree with the suggestion that acquiring digital firms now plays a central role in their strategy.

1.5 Taking responsibility

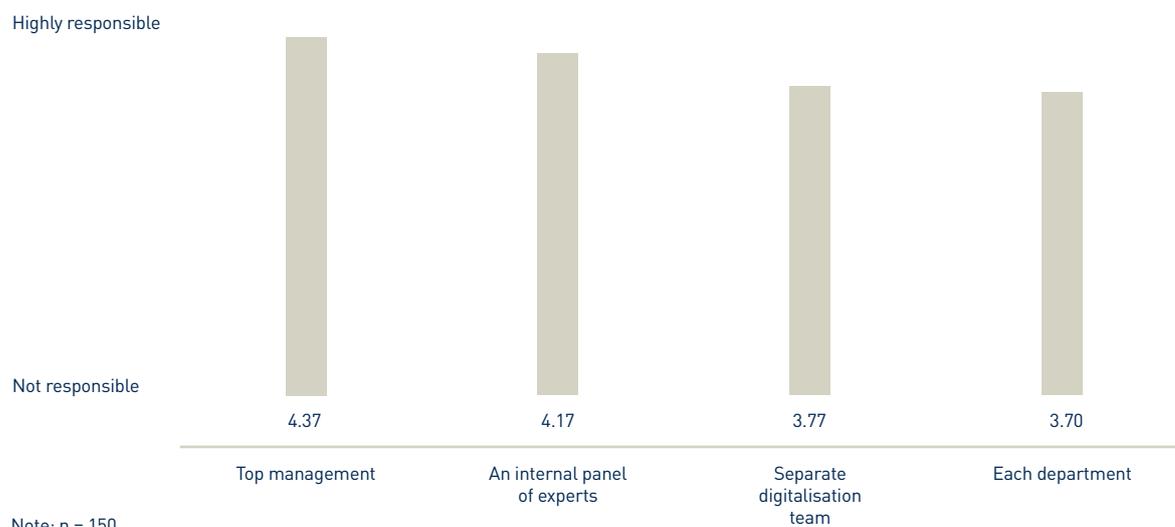
How, then, do businesses step up their transformation efforts? One positive step forward will be to set out much more clearly who is responsible for driving the digitalisation agenda. Figure 3 shows that companies are most likely to regard transformation as the responsibility of top management or an internal panel of experts, with fewer opting to drive change through a standalone digitalisation function. This finding tallies with a recent study by Berlin’s University of Applied Sciences which stated that at least 40% of Germa-

ny’s biggest corporations including VW, Bayer and Allianz, have created a senior executive role to address the challenge of digitalisation.⁴

Such an approach is valuable in that it reflects the prioritization of digital transformation by businesses. Certainly, the C-suite should be playing a significant role in driving change, leading the way on digitalisation initiatives throughout the business and across each of its functions – and definitely establishing the case for change.

The arguments for establishing a digital function, led by a chief digital officer with a mandate from senior management, are very strong. Given the backing of senior leaders, such a division has the power and the ability to cut across functional silos, looking beyond entrenched interests and attitudes. It brings digitalisation expertise and experience to every area of the business, rather than only in certain functions. And it provides a means with which to embed a new mindset throughout the organisation – the chief digital officer and their teams can constantly push for a move to a different type of culture, in which digital-first becomes an automatic instinct for the business, rather than an afterthought or an issue to be faced further into the future.

Figure 3
Who is responsible for digitalisation activities in your firm?
(5 = very responsible, 1= not responsible) Mean shown



⁴ <https://www.bloomberg.com/news/articles/2018-06-12/germany-needs-to-reengineer-to-thwart-digital-obsolence>

Still, there is no magic formula for transformation. One respondent in our study says: “Our digital organisation has evolved and more or less functions on its own, with a clear understanding of what we want to accomplish and how to achieve our digital goals, plus the power to choose a digital model in tune with our company and capabilities that can be embedded strategically throughout the business.” By contrast, another respondent states that they are further behind in their journey: “Digitalisation

is a complex phenomenon and we have not yet evolved to a level where it can be decentralised.”

1.6 The imperatives for investment

Establishing a digital function led by a C-suite executive will also give the business an important focus of accountability. This is crucial given the substantive investments so many businesses now plan on making in digital initiatives.

Figure 4

Are you planning to make investments in order to increase digitalisation in the next two years?



Note: n = 150

Figure 5

Which budget are you planning to allocate for digitalisation efforts in the next two years?
(Open question)



Note: n = 150

With 95% of the companies in this study saying they expect to increase investment in digitalisation over the next two years, it is vital that they are focused on maximising return on investment (figure 4). Businesses without mechanisms for tracking investment, monitoring performance against targets and focusing on delivery may be disappointed by the transformation dividends they are able to achieve.

Again, a shift of mindset may be an important part of the endgame for those driving the transformation agenda. In this study, 52% of businesses say their investment in digitalisation will come from the company's technology budget, as seen in figure 5. This is understandable but may create the wrong sense of what transformation can ultimately achieve – for leading companies, the technology of digitalisation is simply a means to an end, as they work towards the ultimate goal of changing the value proposition and unlocking new sources of revenue.

Currently, only 11% of companies have set aside budget specifically for digitalisation, perhaps reflecting

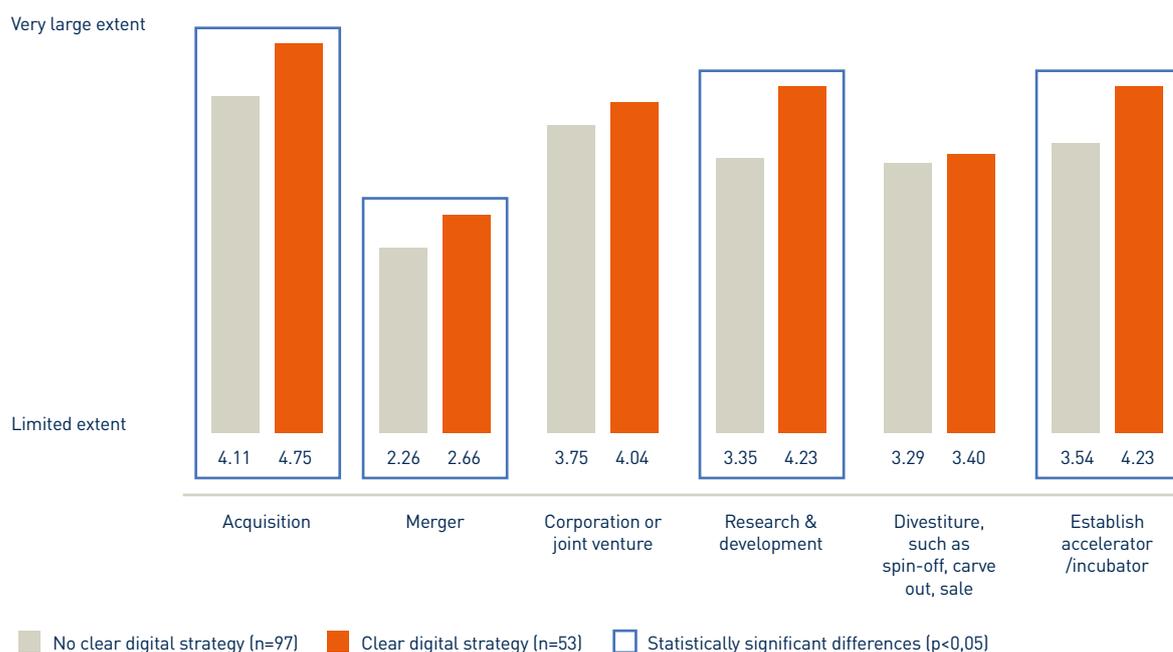
the way in which their transformation initiatives are the responsibility of the management team as a whole, rather than a separate and distinct digital function. By moving towards such a function, with budget allocated accordingly, it may be possible to focus more directly on transformation – and to hold digital budget holders accountable for return on investment.

1.7 Clear strategy; multiple solutions

The bottom line here is that strategic investment in digital transformation requires careful preparation, planning and execution. In practice, those businesses with a clear rationale for digitalisation are more likely to be successful in achieving superior returns on their investment.

Establishing that rationale at the outset is therefore crucial, providing a lens through which the value of all digital transformation initiatives can be assessed – as well as a platform from which to launch change. Figure 6 shows that companies with a clear

Figure 6
To what extent has your firm been engaged in the following activities to become a more digitised business in the last 24 months? (5= to a very large extent, 1= not at all) Mean shown



digital strategy are significantly more likely to have engaged in a range of activities linked to transformation. That includes M&A activities as well as divestments. By divesting underperforming or non-essential parts of the business, organisations can use the additional capital to invest in digitalisation in their core area of expertise.

In addition, companies should focus on research and development, and other initiatives such as the establishment of accelerators or incubators through which digital endeavours can be supported and developed without formal dealmaking.

Such initiatives reflect the fact that there will be many routes towards achieving transformation – and that these should not be considered mutually exclusive. “Our digital capabilities are improving consistently, and we are doing everything possible to ensure our digital skills and abilities are better than those

of our competitors,” says the chief digital officer of one respondent to this survey. “It is a tough competition and to manage it is not easy for us.”

Increased investment in R&D can help businesses achieve change organically alongside their M&A efforts, which bring new capabilities and functionality into the business more quickly. Meanwhile, incubator and accelerator initiatives represent an opportunity for businesses to work with start-up businesses, entrepreneurs and other innovators, collaborating to develop new ideas with commercial applications while maintaining separate cultures and operating methods. These smaller businesses need the capital investment support of larger companies, while the latter benefit from the agility and entrepreneurialism of the start-ups.

1.8 The different attitudes of listed and unlisted firms

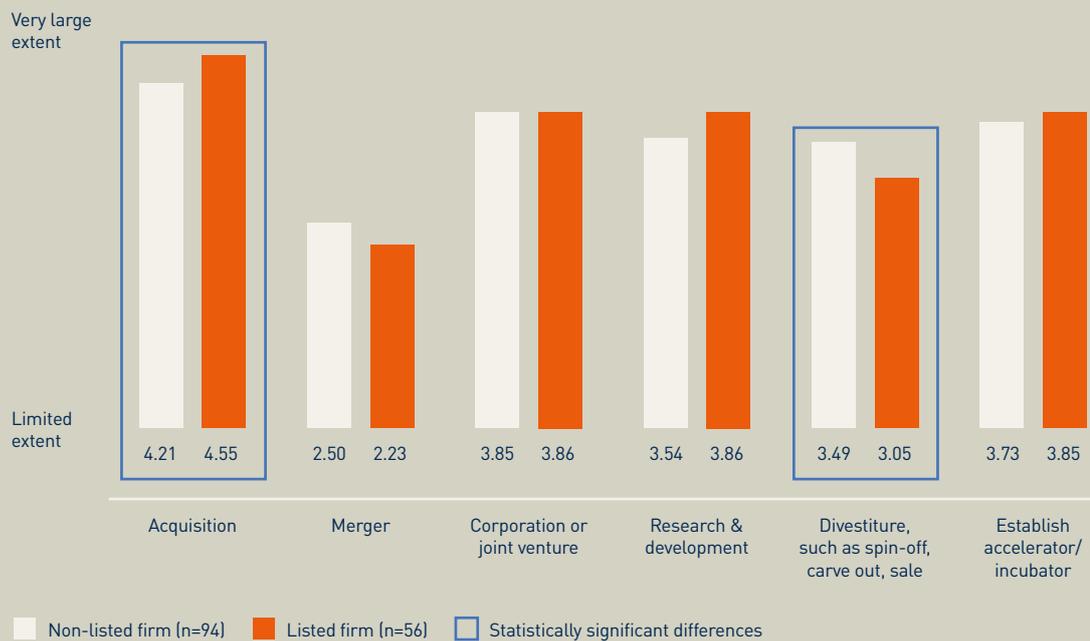
Publicly-listed businesses in this study are more likely than their unlisted counterparts to have made an acquisition as they have pursued their digital ambitions. By contrast, the unlisted businesses in the research are more likely to have divested as they have sought to digitise (see figure 7, below). To some extent, this difference reflects scale, smaller unlisted businesses may lack the firepower – their propensity to have divested may suggest they see a more focused and targeted company as the optimal route to

transformation. In contrast, listed businesses are more likely to be bigger, with significant resources, meaning that acquisitions are within their grasp. For these companies, it is more cost effective and time efficient to buy rather than build digital capability.

Nevertheless, it is clear that both listed and unlisted businesses are pursuing digital transformation – and that M&A activity is part of the story for companies in both cohorts.

Figure 7

To what extent has your firm been engaged in the following activities to become a more digitised business in the last 24 months?
(5= to a very large extent, 1= not at all) Mean shown



2. How digitalisation powers process

While companies and their boards are engaging with new technology to build more digitised businesses, there are still a number of areas that need to be optimised

2.1 Customers come first

In practice, digitalisation spans both a broad range of technologies and a spread of activities. The evidence of this study is that some areas are receiving more attention than others from German companies – even those with a concrete strategy for transformation in place.

In particular, the businesses in this research are more likely to have adopted digital tools they can apply to front-end, customer-facing functions, and to have focused on those functions rather than other parts of their businesses (see figures 8 and 9).

In many ways, this is understandable. In a digital world, customers increasingly expect to be able to deal with businesses at a time of their choosing and through a range of different channels. Organisations have therefore had to invest in front-end functionality to meet this demand – and not only in the consumer space.

The pressure is intense, says the head of strategy at a technology, media and telecoms (TMT) business. “Competition is cutthroat and if any product or service attracts the interest of customers, the other players in the market immediately have to develop something similar to prevent customers leaving them for their competitors.”

2.2 Don't ignore the back and middle

Equally, however, a focus on the front end to the exclusion of other parts of the business is risky. For one thing, it may not be possible to deliver on the enhanced customer proposition without digitalisation of other parts of the business – in logistics and supply chain, for example. Indeed, operational efficiency, underpinned by transformation, will increasingly become a key differentiator for leading businesses.

Moreover, where transformation is too narrow, businesses will miss valuable opportunities to improve in areas ranging from product development to production and even strategic decision-making. Such companies will fall behind as rivals with processes that are digitalised from front to back are able to pivot more quickly to emerging trends and changing demand.

“Technological change is an opportunity only if we are able to adapt to the new technologies,” says the chief digital officer of one company in this study. “This requires changing our existing systems, bringing in new skills and changing processes so we can provide customers with a seamless service.”

2.3 Technological engagement

The businesses in this study recognise many of these arguments and are making attempts to explore the potential of a broad range of tools and technologies. The vast majority have engaged with all of the technologies in the study, at least to some extent.

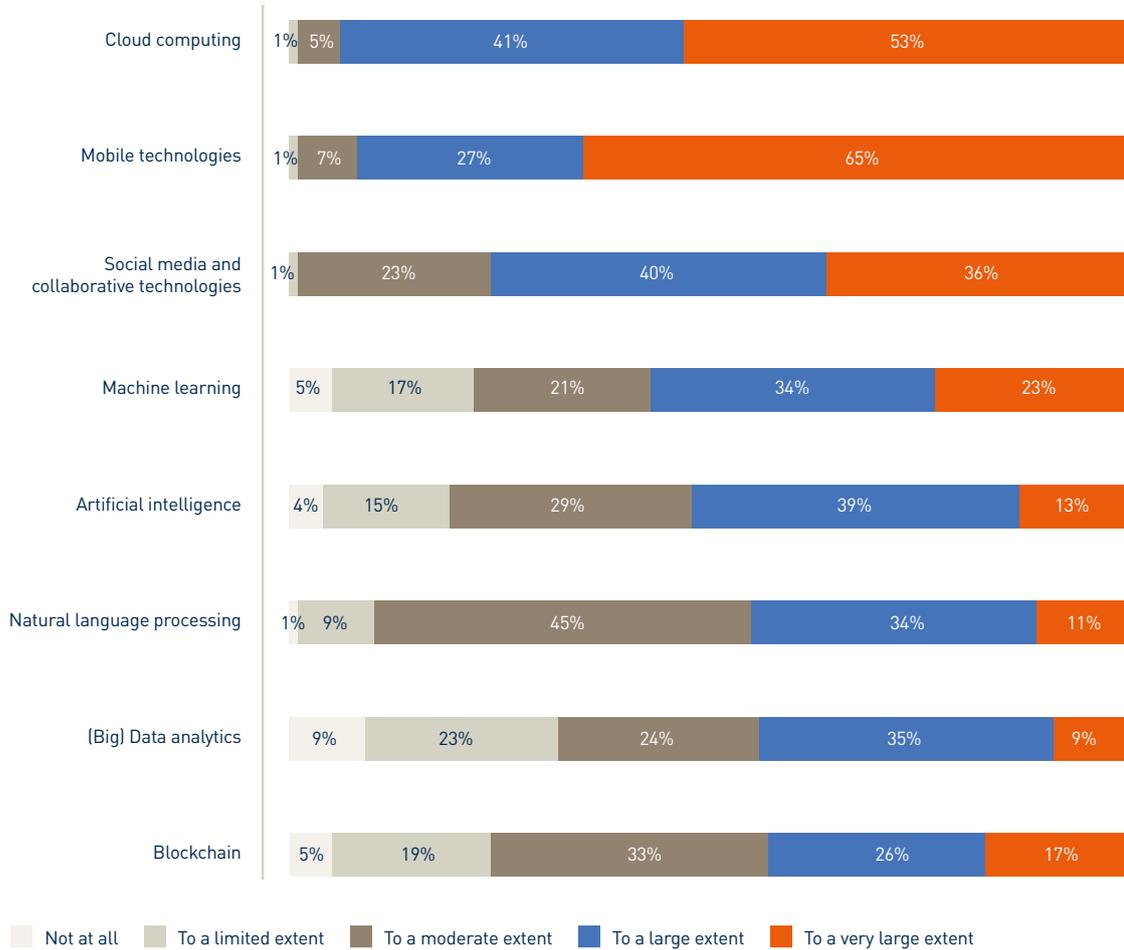
Still, certain technologies stand out. Almost two-thirds (65%) of companies say they have engaged to a large extent in mobile technologies – 12 percentage points ahead of cloud computing, the next most significant area of interest (figure 8).

The focus on mobile may well be part of the front-end story: the growth of mobile, particularly in the consumer market, as an important sales channel, has been rapid and significant in recent times. As for cloud computing, the move towards these technology offers businesses a much more agile means with which to flex and scale, switching on capacity and additional services as customers demand them.

Other technologies will figure more prominently over time, as adoption rates increase and tools mature. Already, however, more than 90% of companies say they have engaged with natural language processing, while artificial intelligence (81%)

Figure 8

To what extent are the following digital technologies used in your firm?



Note: n = 150

and machine learning (78%) are also attracting significant interest. For many businesses, increasing their capabilities in these areas, increasingly seen as the next wave of digital transformation, is now a clear priority.

2.4 Tech's guiding hand

In the meantime, however, the technologies attracting the greatest interest reflect the areas of business where companies are digitalising fastest. For example, while 84% of respondents to this study say they are already using digital technologies to a large extent in their support processes, including customer support, this figure falls to only 50% in the area of compliance. Operational processes (83%) have seen widespread digital penetration, which suggests many companies are now starting

to go beyond purely customer-facing functions, but other areas of interest, such as the analysis of unstructured data (72%) are also heavily biased towards front-end activities.

Meanwhile, fewer companies are yet harnessing the power of digital technologies to improve the way they make decisions about their future. Only 70% say digital technologies are employed to a large extent as part of the strategic decision-making process. This figure falls to just 59% when it comes to decisions about M&A activity, which might be considered ironic given the digital drivers underpinning so many of these transactions. When asked the extent to which they use digital technologies for M&A decisions, the mean answer was 3.56 where 5 was to a large extent and 1 was not at all (figure 9) – demonstrating that more progress needs to be made.

Figure 9

To what extent are digital technologies used for the following activities of your firm?
(5 = to a large extent, 1 = not at all) Mean shown

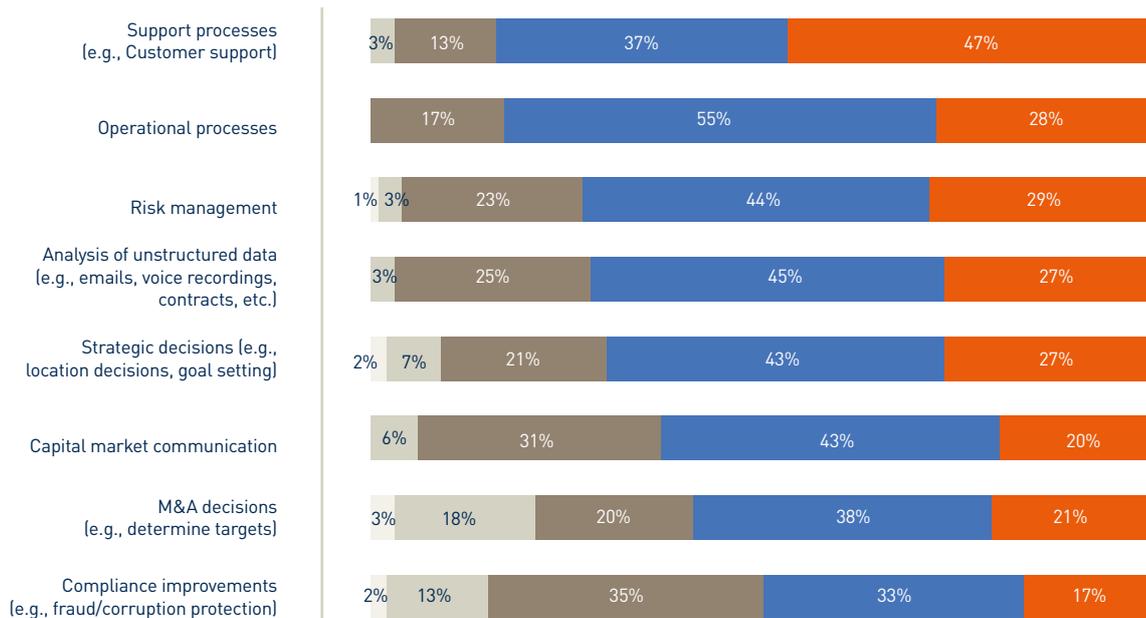


Note: n = 150

□ = statistically significant difference to other answer options

Figure 10

To what extent are digital technologies used for the following activities of your firm?



Not at all To a limited extent To a moderate extent To a large extent To a very large extent

Note: n = 150

2.5 Motivating management

One area in particular where there is scope for many businesses to do more is in harnessing the power of digital tools – including advanced analytics, big data and cloud apps – to drive planning and strategy through improvements to managerial processes. Too few companies recognise the potential of digitalisation to enhance the way their organisations are managed and led, as well as to improve the value proposition.

Some strides in this regard are now being made. The greatest progress has been achieved in harnessing digitalisation to move towards a more adaptive strategy and planning process (figure 11). This is important – digital transformation should provide businesses with the means to institute a con-

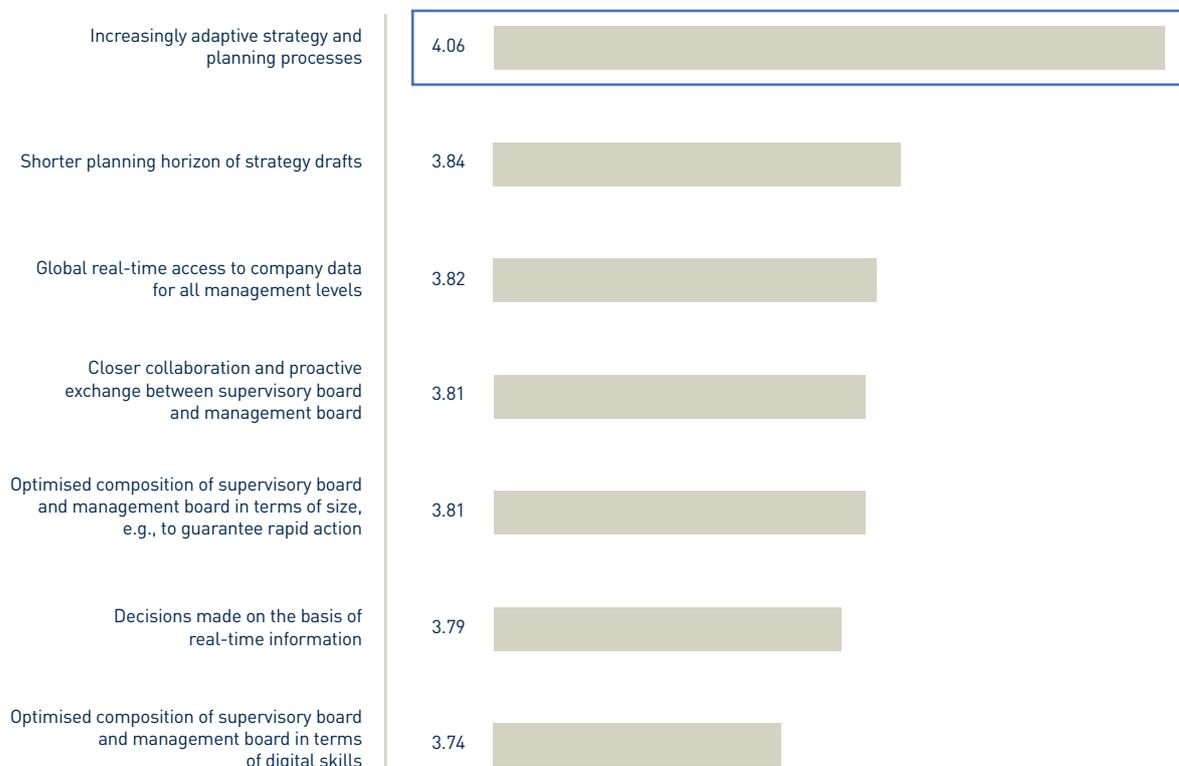
tinuous feedback loop where decision-making is improved and accelerated thanks to real-time business insight. Indeed, many businesses in this research point to a shortened planning cycle and the value of real-time access to company data.

Elsewhere, however, progress has been slower. Businesses are less likely to be pleased with the way in which digitalisation has improved collaboration at senior levels of the company. There is also a lag in the number of businesses making decisions on the basis of real-time information.

Overall, moreover, many companies are not yet seeing clear impacts from digitalisation on the decisions of their executive or supervisory boards. This suggests the benefits of digitalisation are not yet

Figure 11

Please indicate how digitalisation changed the organisation and processes of managerial activity in your firm? (5= to a very large extent, 1- not at all) Mean shown



Note: N = 150

□ = statistically significant difference to other answer options

flowing through into the decision-making processes employed at the top of the company – or even that some boards have yet to grasp the importance of the transformation agenda.

Some companies are doing better. “Digitalisation has closed all the gaps, especially the ones caused by physical distance, lack of communication and so on,” says one respondent to the study. “Increased transparency and availability of data has helped the board to make decisions quickly.” Another respondent adds: “Our board has led our digitalisation efforts and always understood the importance of transformation; now their decision-making is also significantly driven by digitalisation.”

Nevertheless, other businesses have a gap they need to fill. Right now, only 23% of the companies in this research say they have noticed a change in the decision-making processes of their boards. The remaining 77% are missing an opportunity to make faster and smarter decisions – and therefore risk falling behind their more nimble and agile competitors.

3. Digitalisation in the German M&A market

While it has been noted that German businesses have lagged behind their international rivals in terms of digitalisation, the figures show that many are using M&A to catch up

There is no doubt that German companies' desire to pursue digital transformation has become an increasingly powerful driver of M&A activity. Over the past five years, the proportion of M&A transactions where digitalisation was at least one factor in the deal – that is the acquirer was at least in part focused on the need for some form of digital transformation – has risen consistently and markedly. By 2017, one in four deals involving a German party involved some element of digitalisation, more than ever before.

The TMT sector understandably sits front and centre in this trend towards M&A predicated on digital transformation. But other sectors are relying on M&A in their digital transformation efforts too. Financial services companies, for example, are increasingly determined to harness the potential of digital technologies.

In addition, German companies are looking far and wide for the digital capabilities and assets they now require. Over the period 2013-2017, some 63% of digital deals involving German companies were cross-border deals. Companies are realising that the digital know-how they need is not always going to be found on their doorstep.

In other words, digitalisation is becoming a fundamental element of M&A transactions involving German companies. In absolute terms, the number of digital deals has increased every year since 2013 (figure 13). As a proportion of total German M&A, the number of digital deals has also risen consistently.

3.1 Digital deals versus overall deals

On the whole, German M&A volumes have been on the increase since 2013, albeit with a small decline in 2015 (figure 12). However, the value and

volume of M&A involving an element of digitalisation has been increasing even more quickly.

Between 2013 and 2017, 23% of all deals involving a German bidder or target company featured digitalisation; by value, the figure was 14% suggesting such digitally-predicated M&A is less focused at the mega-deal end of the market.

Each year has seen an increase in the proportion of total M&A accounted for by digital deals, with the figure reaching 25% – the equivalent of 337 deals – in 2017. This was also the busiest year for German M&A overall in the study, with 1,359 transactions, up 7% on 2016.

While digital deals represented a higher proportion than ever of German M&A in 2017, they accounted for only 12% of their value, meaning these types of transaction tended to be smaller than average. By contrast, in 2013 and 2015, digital deals peaked at 21% of the total value of all German M&A; however, these were relatively quiet years for M&A transactions, with around €81bn of total market activity in both years, compared to €197bn at the peak of the market in 2016.

The increasing number of digital deals year on year demonstrates how digitalisation is becoming a key element in transactions. The rising importance of M&A in the digitalisation process is echoed by a number of respondents in the survey. "Acquisition has always been our priority regarding digitalisation," says one. "By acquiring the right target which has superior digital technology, this has given us direct access to digital technology which otherwise would have taken years to develop."

Another extols the virtues of joint ventures as a means of digitising the business: "Acquisitions or joint ventures have been our top priorities in the last two years to become a digital organisation. We completed two acquisitions to build our digital capabilities," he says. "These targets had proven digital capabilities. Joint ventures have also been highly effective for us. We were able to develop our capabilities further and also share the risks."

Figure 12
German M&A 2013-2017

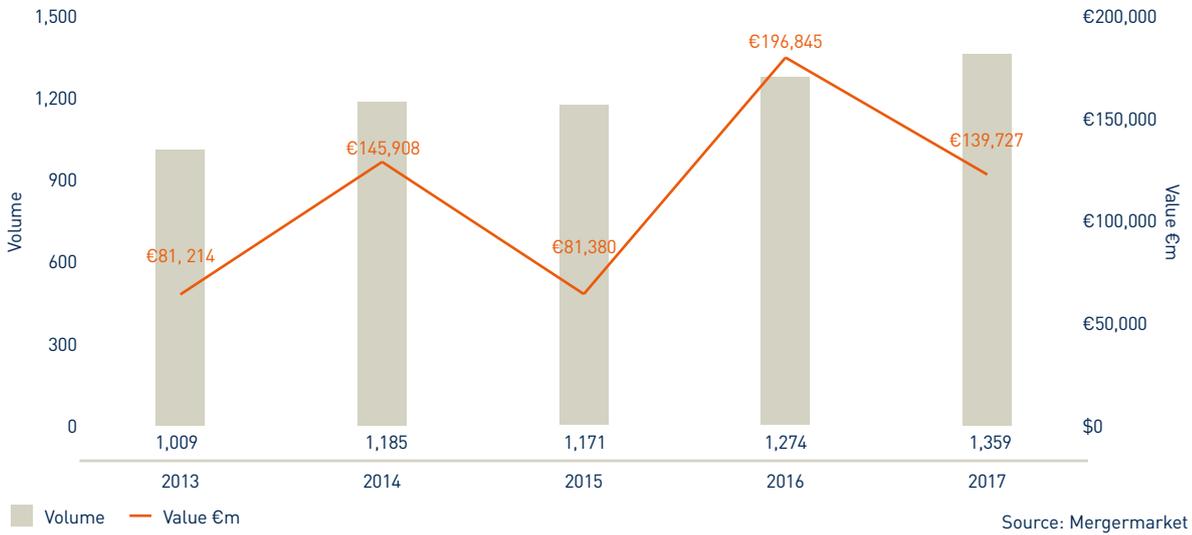


Figure 13
German deals with a digitalisation element 2013-2017

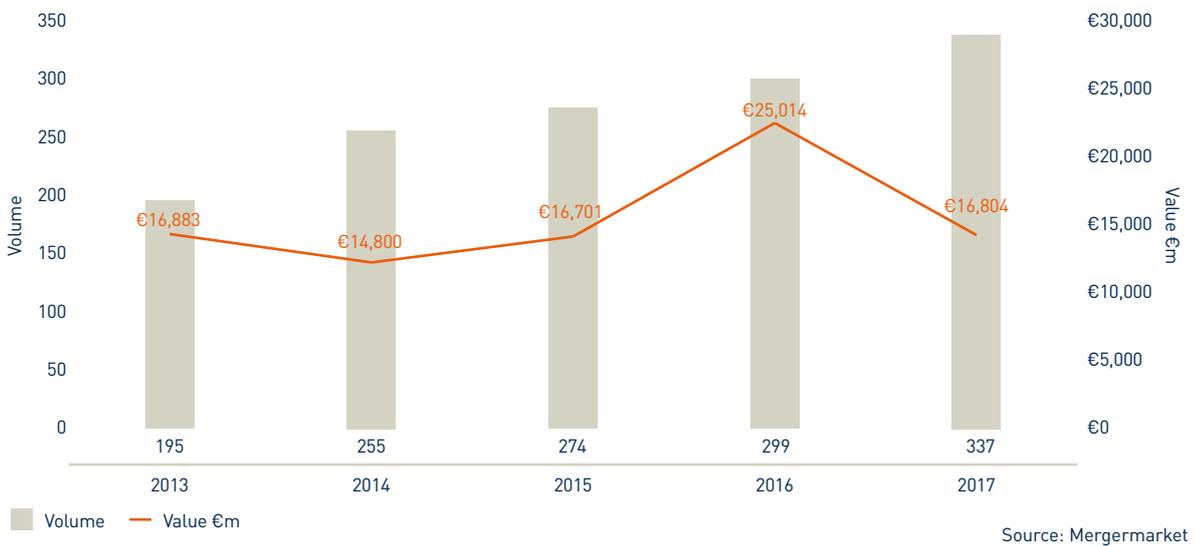


Figure 14
Proportion of German digital deals by sector 2013-2017

	Volume	Value €m
TMT	84%	64%
Defence	40%	n/a*
Business Services	39%	42%
Leisure	13%	9%
Financial Services	10%	8%
Industrials & Chemicals	7%	6%
Consumer	7%	19%
Pharma, Medical & Biotech	5%	4%
Transportation	4%	n/a*
Energy, Mining & Utilities	1%	n/a*

*None of the deals had disclosed deal values
Source: Mergermarket

3.2 Digital deals by sector

The TMT sector has consistently been a hotbed of digital dealmaking. Some 84% of M&A deals by volume between 2013 and 2017 involved some element of digitalisation, significantly ahead of any other industry. The proportion by value, at 64%, was also higher than in any other industry.

Given the nature of TMT companies' activities, this data makes sense. In many cases, buyers have targeted the sector specifically to add a digital asset to their portfolio. In large parts of the TMT sector, companies' business models are built on a value proposition that would not be possible without digital functionality.

Elsewhere, however, digitalisation is an important theme too. In the business services sector, for example, 39% of all deals between 2013 and 2017 involved some element of digitalisation. This figure hit 41% in both 2016 and 2017. Measured by value, digital deals accounted for 77% of all transactions by 2016, though this slipped back to 37% in 2017.

Moreover, as more German companies accept the need to embrace digital transformation, other sectors will see digital transaction rates increase. This may begin with consumer-oriented industries such as retail and leisure, given the evidence that German businesses' digitalisation efforts have initially focused on the front end, but all sectors will

eventually be affected as more companies move on to back- and middle-office functionality.

3.3 Cross-border versus domestic deals

By volume, the number of deals with a digital element was consistent across domestic (23% of all deals), inbound (23%) and outbound (22%) transactions between 2013 and 2017. By value, however, the picture was markedly different. Digital deals accounted for 27% of all domestic M&A over the period, but where German companies were involved as the buyer or target in a cross-border transaction, this fell back to 12% and 11% respectively.

Given that domestic deals are likely to typically have been smaller than the larger cross-border transactions, this is another signal that digital transactions have been concentrated at the smaller end of the M&A spectrum.

However, cross-border dealmaking involving a digital element is on the increase. By 2017, such deals accounted for 25% of international transactions involving a German company, up from 19% in 2013. By value, this percentage has fluctuated year on year, again suggesting that smaller deals may be more common.

Figure 15
Proportion of domestic, inbound and outbound M&A with a digitalisation element 2013-2017

	Digitalisation Deals		All Deals		Proportion of domestic, inbound and outbound M&A which have a digitalisation element 2013-2017	
	Volume	Value €m	Volume	Value €m	Volume	Value €m
Domestic	492	28,078	2,164	104,294	23%	27%
Inbound	495	32,565	2,147	273,682	23%	12%
Outbound	373	29,559	1,687	267,098	22%	11%

Source: Mergermarket

Figure 16
Share of cross-border deals which have digitalisation element 2013-2017

	Digitalisation Deals		All Deals		Share of cross-border deals which have digitalisation element	
	Volume	Value €m	Volume	Value €m	Volume	Value €m
2013	114	7,955	591	52,476	19%	15%
2014	165	11,765	755	133,128	22%	9%
2015	161	11,674	744	64,912	22%	18%
2016	206	17,009	843	165,264	24%	10%
2017	222	13,721	901	125,000	25%	11%

Source: Mergermarket

Overall, in 2017, there were 222 inbound and outbound digital deals worth €13.7bn involving a German company, 8% up by volume on 2016, but down 19% by value. Largely, this mirrored the trend overall in cross-border German M&A year on year, with total volumes up 7% but total value down 24%. Nevertheless, the trend towards a greater proportion of both domestic and cross-border digital deals is clear.

3.4 Target regions: German companies scour world

The increasing number of digitally-driven cross-border transactions involving a German buyer suggest German companies are increasingly looking for targets in international markets – though the more modest value figures suggests these targets often tend to be smaller.

Figure 17

Proportion of deals by target by region with a digitalisation element 2013-2017

	Digitalisation Deals		All Deals		Proportion of targets by region with a digitalisation element 2013-2017	
	Volume	Value €m	Volume	Value €m	Volume	Value €m
Middle East	9	1,017	20	6,444	45%	16%
North America	95	19,561	291	139,404	33%	14%
Germany	987	60,643	4,311	377,976	23%	16%
Western Europe (excl. Germany)	201	4,436	991	102,363	20%	4%
Africa	5	354	25	844	20%	42%
Asia	28	1,573	146	5,563	19%	28%
Central and Eastern Europe	27	2,517	148	8,319	18%	30%
Latin America and Caribbean	8	101	66	4,161	12%	2%

Source: Mergermarket

One out of three (33%) deals between 2013 and 2017 which saw German businesses acquire North American companies had a digitalisation element (more than nine in 10 of these deals took place in the US). Examples include the 2017 deal that saw the German manufacturer of measuring instruments and membrane filters Sartorius acquiring Essen BioScience of the US for €304m.

Meanwhile, the Middle East has also been an attractive region for digital deals. There were 20 deals overall in the region during the period, but almost half (nine) had a digitalisation element. Six of these deals targeted Israeli companies, including listed German automotive manufacturer Continental Aktiengesellschaft's purchase of cyber security specialist Argus Cyber Security, for €387m.

Elsewhere, Western Europe represents a key area of focus for German companies seeking to secure digital transactions, but Asia is likely to become an increasing priority too, particularly in China. Already, almost one in five (19%) German acquisitions in Asia between 2013 and 2017 were digital transactions, or 28% by value; as the region's digital maturity accelerates, these figures are likely to rise.

4. Digitalised dealmaking

From key decision through targeting and due diligence and all the way to integration, digitalisation is transforming the M&A process. And our survey reveals that companies that have completed successful deals are more likely to use digital tools as part of the process

M&A is always a risky business. The harsh reality is that some deals fail either because the transaction was a poor fit in the first place, or because the integration was bungled. Companies making acquisitions with digital objectives are as vulnerable to these risks as other types of acquirer.

Indeed, there may be additional risks with digital deals. New technologies – or applications of them – may not be fully proven. The scope for culture clashes, particularly where a large business is buying an innovative start-up, is extensive. Or the fast-mo-

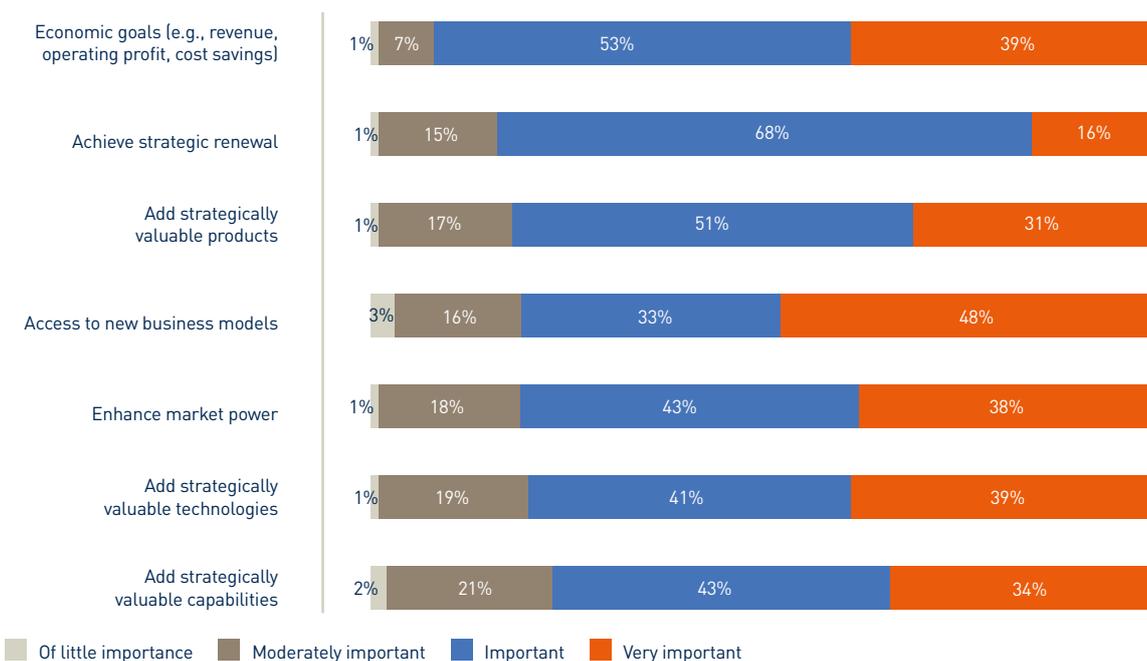
ving pace of digital development may simply render a particular strategy out of date.

It is therefore imperative that digital dealmakers are alert to these dangers from the outset – both the challenges posed by all M&A and the issues thrown up particularly by digital deals. Equally, there is no reason to be intimidated by digitalisation; new digital tools can provide the key to unlocking value during the M&A process, as early adopters are already finding.

4.1 Digital deal drivers

The most successful M&A is executed from an absolutely clear perspective of what the buyer hopes to achieve with a transaction, enabling it to identify the right potential targets and then to execute the transaction with clear end goals in mind.

Figure 18
How important were the following motives for your transaction decision?



Note: n = 150

Importantly, there is no one-size-fits-all approach to digital transactions. Companies engaged in digital deals may actually be pursuing very different goals – and they are also aware that the ground is constantly shifting. “The rapid pace of technology change makes it very challenging to predict how our business will be affected in the coming years,” says the chief information officer of one company. “There are so many emerging technologies that will further disrupt the market and change the way companies function, interact and progress in the future.”

For example, as we see in figure 18, 48% of businesses say their desire to access new business models was a very important motivation for their most recent digital deal; such buyers are effectively pursuing transformational goals through their M&A activity. By contrast, 39% say the need to add strategically valuable technologies was a very important motive; their efforts are more likely to focus on integrating new tools into their existing business. Meanwhile, 39% of respondents also described economic goals as very important; their priority will be to hit the commercial targets set in their deals.

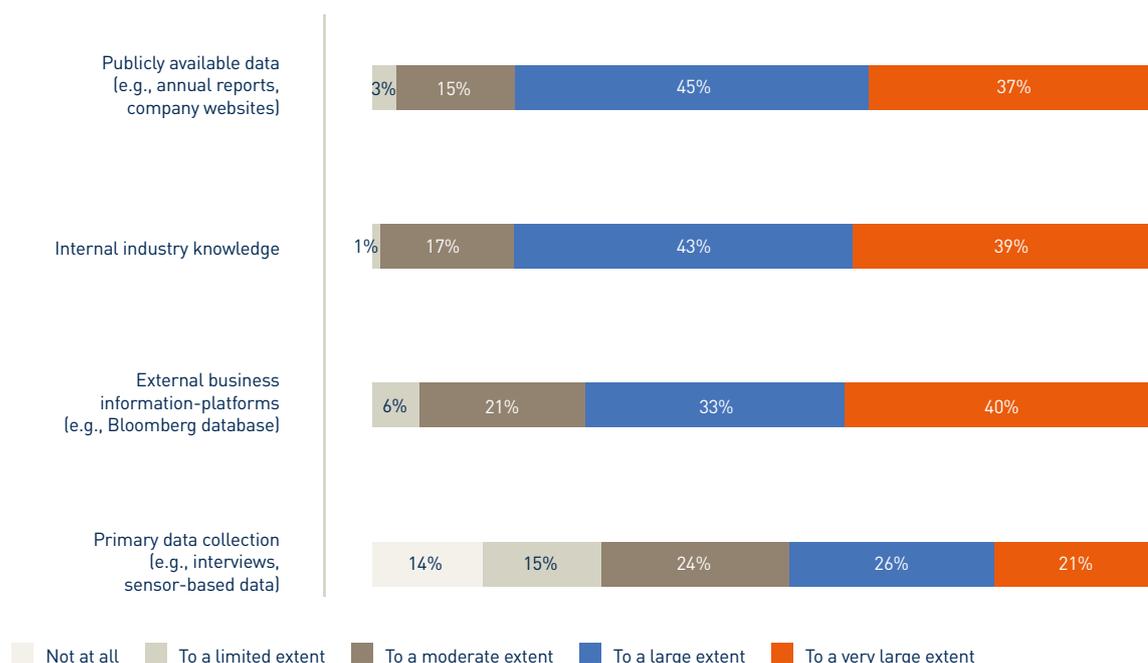
In each of these cases, the identification of bid targets, the work to execute the deal and the subsequent integration work needs to be viewed through the lens of the most important deal drivers. An acquirer seeking to use M&A to drive cross-business transformation is unlikely to be successful if it subsequently keeps its new asset operating on a standalone basis at arm’s-length from the rest of the company.

4.2 Target acquired

When it comes to identifying and selecting prospective new additions, many German companies in this study are already making good use of a wide range of tools, including digital functionality. Some 40% of respondents make extensive use of business information platforms, for example, while 37% collect publicly available data. This information augments their own knowledge, secured through primary research or existing industry information (figure 19).

Importantly, however, there is considerable scope to apply new digital tools to this data, streamlining the collection process and generating better-quality

Figure 19
To what extent did you use the following channels to obtain information on potential targets?



Note: n = 150

insight from the information available. Those businesses able to use these tools most effectively will build richer intelligence on potential bid targets, enabling them to make better strategic decisions about which opportunities to pursue with the greatest enthusiasm.

“Digitalisation can give you a macro vision,” says the head of M&A at one company in this study. “That gives you more time to assess your strategy and make the right decision accordingly.”

4.3 Digital steps to M&A success

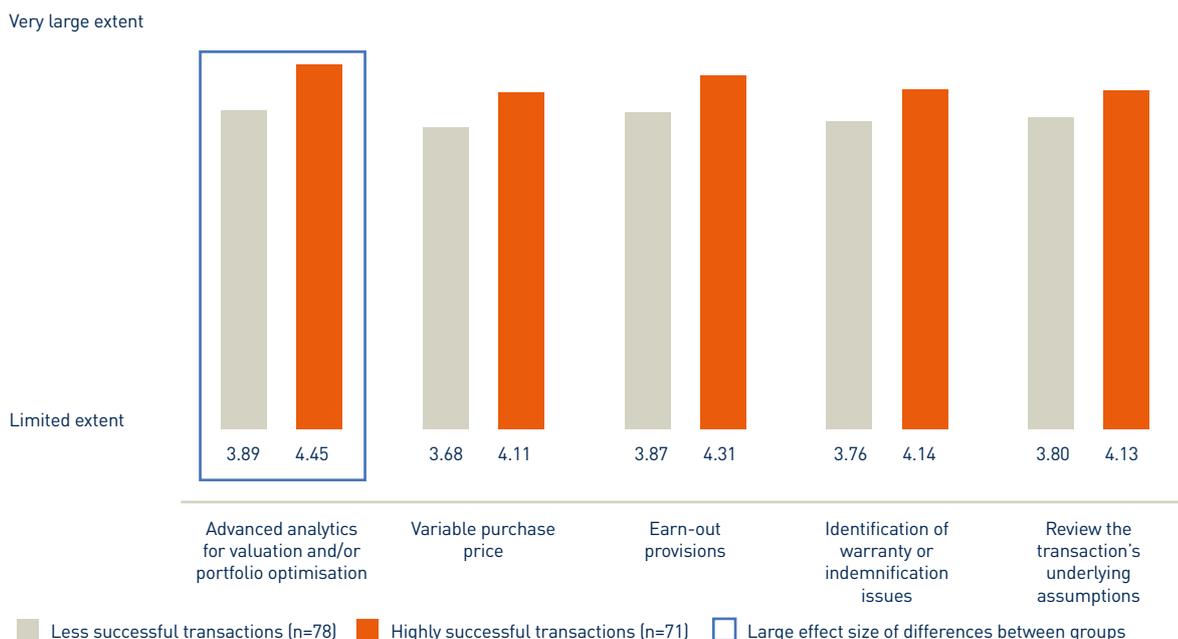
Many of the companies in this study are doing exactly that – and reaping the rewards. Businesses that have completed successful M&A transactions are more likely to have used tools such as advanced analytics to enable them to reach a more accurate assessment of bid target valuations, as well as for portfolio optimisation. As figure 20 shows, while successful digital deals are more likely to have seen a range of methods employed, nowhere is the comparison between the high-performing transactions and less successful deals as stark as on the use of advanced analytics.

More opportunities of this type are becoming available all the time. As data is increasingly standardised and methods for interrogating that data become more sophisticated, it will increasingly be possible to automate large parts of the due diligence process, for example. In addition, by using big data accumulation and analysis the buyer may gather – outside the due diligence data room (as prepared by the seller) – information on the target and its industry, competitors, market from all publicly available sources, and not just top-line and actual data, but all historical data. Thus, the basis on which to ground the acquisition decision or the content of the purchase agreement is much broader and better.

Other digital tools may come into play during the integration process. One obvious area of opportunity is social media, as well as the increasing number of internal communication platforms, to improve collaboration between teams working in different locations. As cross-border transactions grow in number, with more German companies seeking to leverage international digital opportunities, this could prove crucial.

Figure 20

To what extent does your firm apply the following methods regarding digital M&A?
(5 = changes to a very large extent, 1 = no change at all) Mean shown



All group differences are statistically significant (p < 0.05)
Order based on effect size (Cohen's d)

4.4 The challenges of digital dealmaking

However, digital deals will become instantly more straightforward as these new tools are employed. Digital transformation may offer new ways to cope with traditional M&A challenges, but transactions with a digital element also bring their own issues.

The businesses in this study highlight their biggest concerns in figure 21. One worry is the question of how to protect data during the due diligence phase of an M&A transaction. In an era where cyberattacks are more prevalent than ever before – and heightened regulation such as the European Union’s GDPR – this will become an even bigger preoccupation over time.

Another fear for many businesses is that they will not be able to realise the full benefits of the deal following its completion because of difficulties with transferring know-how. With so many transactions predicated on the need to acquire new capabilities, skills and knowledge, this is a serious concern. Any failure to transfer knowledge will un-

determine the deal’s prospects of success where this is the objective.

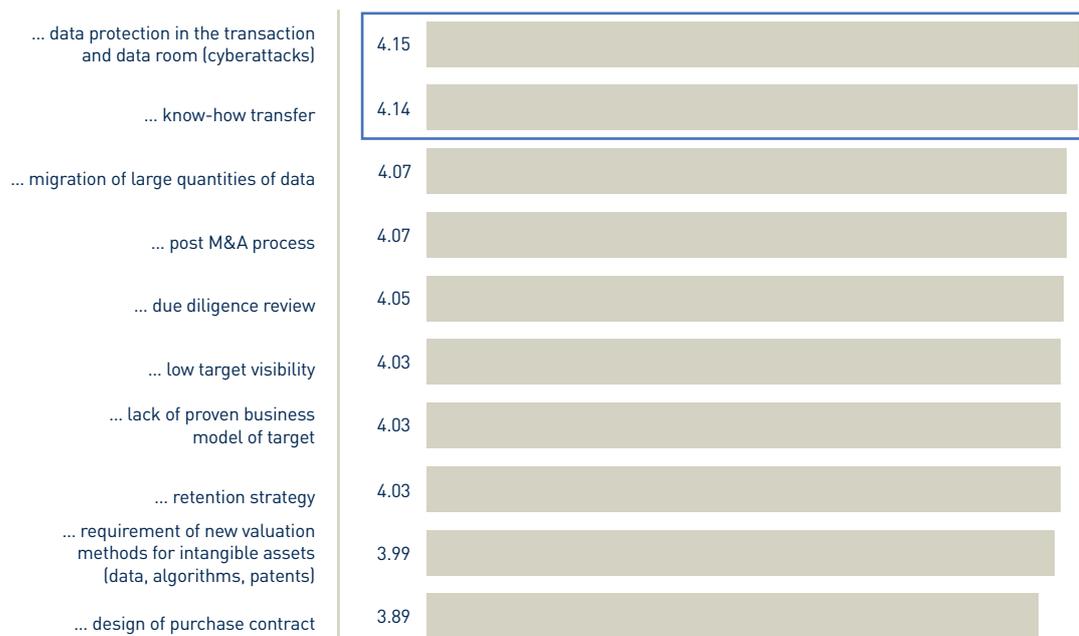
Other challenges high up the list of concerns range from the question of how to migrate large volumes of data to anxiety about whether bid targets really have a proven business model. Then there are more traditional M&A anxieties, including the issue of talent retention.

The success of M&A often rests on the ability to bring two disparate organisations together, uniting them in pursuit of common goals rather than fostering alienation and discontent. This is difficult for all organisations, but in digital deals, the challenge may be particularly tough given the very different cultures of large and traditional organisations compared to smaller digital businesses only recently launched.

Nevertheless, it is crucial that acquirers tackle the culture question head on. That may require specialist deal implementation teams experienced in balancing these questions. “We realised the

Figure 21

To what extent do you agree with the following statements? Compared to traditional M&A, a big challenge of digital M&A is... (5= strongly agree, 1= strongly disagree)



Note: n = 150

□ = statistically significant difference to other answer options

Figure 22

Please indicate the degree to which the following items or areas were integrated or combined as a result of the acquisition.
(5 = very large extent, 1 = no extent at all) Mean shown



■ Less successful transactions (n=78) ■ Highly successful transactions (n=71) □ Large effect size of differences between groups
All group differences are statistically significant (p < 0.05)
Order based on effect size (Cohen's d)

importance of digital early on and have changed our business accordingly,” says the CEO of one company in this study. “That includes having a dedicated team that oversees digital development and the integration of new businesses as they join the company – that team gets the support and budget it needs from management.”

Indeed, this study shows that the most successful acquisitions are very often those where integration of different types has been greatest. Highly successful transactions are associated with deals where the acquirer has been able to integrate, to a greater extent, organisational structure and culture, as well as management information systems that ensure everyone is talking the same language (figure 22).

However, this doesn't have to mean moving all employees of the combined organisation into a single office or imposing one culture on a diverse range of

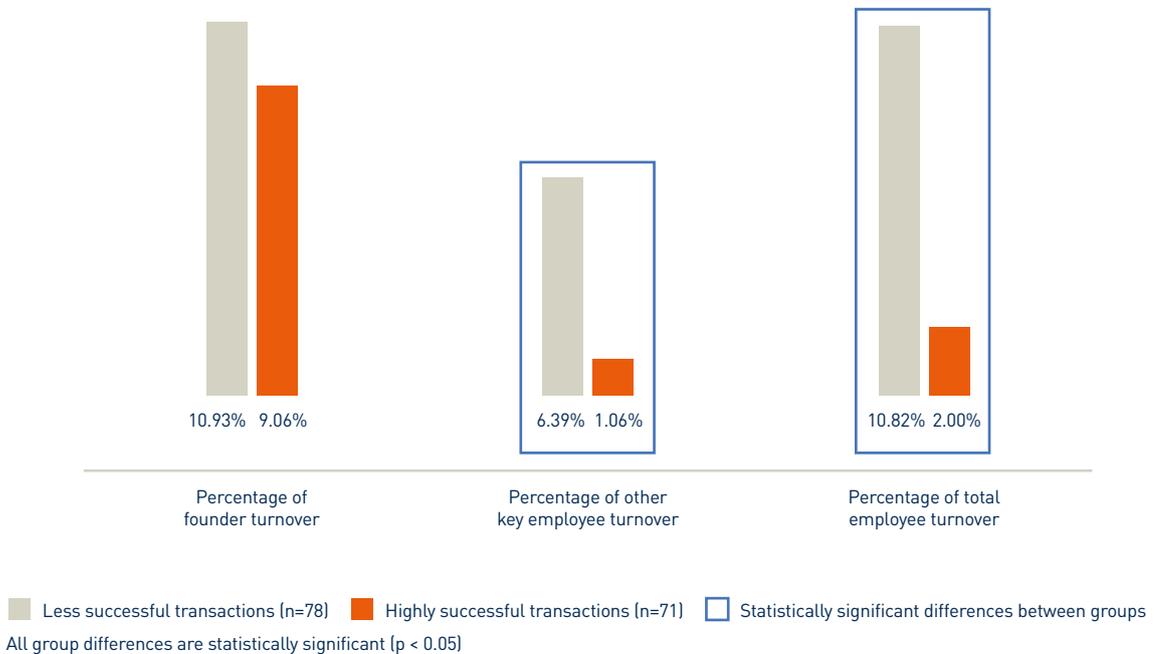
employees. Instead, agile acquirers build structures that accommodate people's differences, taking account of their diverse working cultures, while still fostering a sense of collegiate endeavour.

The fact that strategic planning is more likely to be highly integrated following a highly successful M&A deal speaks to this point: where employees of both the acquirer and the target feel they have a stake in setting the vision of the business moving forward, they are more likely to work collaboratively. Integrated personnel and management practices can help build collectivism – but that doesn't necessarily mean treating everyone in the same way.

The practical consequences of integration will differ according to the nature of the deal and the parties involved. It is possible, for example, to bring two organisations together, harnessing the potential of both sides, while ensuring the acquired company retains a sense of autonomy.

Figure 23

What percentage of the founders of the firm, other key employees of the target firm and employees of the target firm left over the course of the integration process? Mean shown



Those organisations that execute on these goals most successfully are more likely to retain the human capital that generally constitutes such a large part of the value of digital businesses. As figure 23 shows, five times more key employees left the acquired business in the case of the least successful M&A transactions compared to those that were more successful.

One nuance here is that turnover rates among founders are much more aligned across successful and unsuccessful deals – the former were almost as likely to see the founder of the target company depart as the latter. In practice, it may sometimes simply be inevitable that the founder of a successful digital business will want to move on once it has developed to a level of maturity where it becomes a bid target – a determination compounded by a lack of desire to work for someone else having previously been in control. If so, it may be impossible to retain the founder – and not even necessarily desi-

table – while keeping turnover rates among other key staff very low following an acquisition.

In the final analysis, the most successful integrators will almost certainly be those that are able to bank on tapping the expertise and skills of the talent at the businesses they are acquiring. This, after all, is very often the imperative that lies at the heart of the deal in the first place, with much of the value of digital companies tied up in human capital and intellectual property. Those businesses able to retain this asset base will have a better chance of overcoming some of the difficulties of digital dealmaking – knowledge transfer and integration in particular – and successfully pursuing their transformation agendas.

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About TUM

The Technical University of Munich (TUM) is one of Europe's top universities. It is committed to excellence in research and teaching, interdisciplinary education, and the active promotion of promising young scientists. The University also forges strong links with companies and scientific institutions across the world. TUM was one of the first universities in Germany to be named a University of Excellence. Moreover, TUM regularly ranks among the best European universities in international rankings. Since 1927, 17 Nobel prizes have been awarded to TUM professors and alumni. Prof. Dr. Isabell M. Welpé holds the Chair for Strategy and Organization at the TUM. The research interest of Isabell Welpé is in the domains of strategy, leadership, innovation and the digitalisation of business and society.

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Methodology

The survey

Noerr, in partnership with Mergermarket and The Technical University of Munich, surveyed 150 senior executives from Germany-based companies. All these companies had made at least one acquisition which included a digital element (for example, a digital business model or ownership of digital technologies) in the period 2013-2017. Target companies involved with a wide variety of digital technologies qualified for inclusion examples of which include: automation, cybersecurity, e-commerce, machine learning, mobile technologies, software, sensors and quantum computing. Job titles surveyed included Chief Information Officer, Chief Data Officer, Head of M&A, Head of Corporate Development or the equivalent.

Respondent companies

Prior to their transactions, 65% of respondent companies had 5,000 employees or fewer, while among those with more than 5,000 employees some 26% had 5,001-50,000 while 9% had more than 50,000 employees. Their activities comprised: mainly B2B - 58%; mainly B2C - 22%; both - 20%. Some 63% of the companies were unlisted while 37% were listed.

Dataset

The German acquirer companies which we surveyed were drawn from a dataset of M&A transactions with a digitalisation element. In all such deals, digitalisation formed part of the rationale for the deal. All deals in the dataset had a Germany-based target or bidder and all deals were announced during the period 2013-2017. This dataset and comparisons to overall M&A with a German target or bidder company forms the basis of the analysis in Chapter 3.



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