SPOTLIGHT

Telco Mergers and Acquisitions

Strategic Backgrounds, Use Cases and Future Developments



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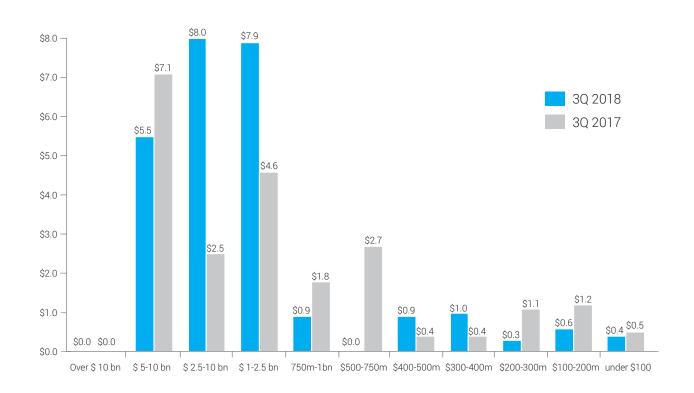


What is it all about?

For years, we at Detecon have been actively supporting our clients in acquiring and integrating other organizations within the telecommunications industry. Thereby, our consultants have been observing worldwide transaction trends and mergers & acquisitions activities (M&A) in the global telecommunication markets. This "Telco Mergers and Acquisitions Spotlight" will highlight these observations from the past year and provide strategic insights into the most recent market developments, present selected use cases and explain the underlying rationale of those mergers. Finally, it will provide an outlook for possible M&A activities in 2019 and beyond.

Mergers and acquisitions can be a valuable lever in building new digital business models or facilitating digital transformation. Furthermore, they are commonly used to generate growth, create synergies and reduce risk through diversification. Hence, it is not surprising that during a time characterized by increasing market uncertainty, the year 2018 has seen fewer transactions than in previous years. However, it was a record year for high-value M&A deals which can be seen in a comparison between 2017 and 2018 (Figure 1: Average deal value (\$bn), 3Q17 vs. 3Q18 (Source: Ovum: "Communications Provider M&A: 3Q18 Review & Outlook"). In the past, we have seen the consolidation of smaller telco providers. The focus has shifted to larger deals in 2018.

Figure 1: Average deal value (\$bn), 3Q17 vs. 3Q18 (Source: Ovum: "Communications Provider M&A: 3Q18 Review & Outlook")



A look back reveals that there are currently **3 dominant trends** which may provide an explanation for this phenomenon: the rise of 5G, consolidation into multi-play and investments in adjacent industries.

Most notable is the rise of **5G wireless technology**, which promises faster connection speed, lower latency and the possibility of network slicing in order to accommodate for recent technological developments like the Internet of Things (IoT) or autonomous driving.¹ Network operators are trying to acquire the expertise and infrastructure necessary in order to secure a better position in the race for 5G rollout. Consolidation in this area is likely to focus on fiber and cable companies as they own much of the network infrastructure, which will play a crucial part in the rollout of 5G technology.

Another trend, which could be observed during 2018, was the **consolidation into multi-play** and converged services. This entails e.g. the integration of network operators with complementary capabilities such as fixed and mobile in order to serve customers with more fully. The driver are customers who increasingly demand seamless connectivity at home as well as on their mobile devices.²

Lastly, 2018 showed increased **investments in adjacent industries**. This effort to diversify the product portfolio and simultaneously increase the customer base has been the underlying reason for many acquisitions in the area of IoT, software and applications, advertising platforms, analytics, cybersecurity, and health care.

This demonstrates that telecommunication operators actively use mergers and acquisitions as a lever to reduce the risk triggered by the increased market uncertainty. Additionally, telcos use M&A's to improve their position in the worldwide struggle for market share, growth and in the endeavor to ensure lasting profitability.

Especially, since 2018 showed a shift to low-volume and high-value transactions, a closer look into the M&A landscape is worthwhile. This Detecon Spotlight edition elaborates on the 3 major M&A trends in the telecommunications industry and it explains exemplary transactions for each trend highlighting the strategic rationale behind the mergers.

Telco M&A Trends

Consolidation into Multi-Play

In Europe, the classical consolidation of MNOs (Mobile Network Operator) has been slowing down in recent years due to competition concerns. As the European Commission wanted to avoid any player becoming too dominant, it has been rather restrictive on approving transactions where one MNO acquires another within the same market. While the general regulatory environment has not changed much, the nature of M&A activities has shifted.

Instead of a pure market player reduction, one of the most prominent current Telco M&A trends is the ongoing consolidation into multi-play, meaning a bundled offer consisting of e.g. broadband internet, fixed and mobile telephony and TV. This also entails an increasing integration of players with complementary capabilities, such as fixed and mobile.

The driver behind this development is consumer demand. Today's consumer becomes more and more technology agnostic and demands converged services and seamless connectivity experience across devices, systems, and apps. They do not want to be bothered by what technology is used. Customers do not understand why they are getting several bills from their telecoms provider. They increasingly ask for flexible and tailored products and services. In fact, the relationship with consumers has become more decisive than ever and service providers are striving to integrate consumer data from diverse sources in order to understand their customers better.

The following figure 2 depicts a selection of transactions, which are detailed in the text below:

Figure 2: Example of completed multi-play driven consolidation deals³



One of the recent European examples for consolidation into multi-play was the acquisition of the Dutch operations of Tele2 (Tele2 NL) by T-Mobile Netherlands (TMNL).⁴ In the Netherlands, KPN and Vodafone Ziggo, have been dominating the market with converged products. Therefore, it was a logical step for the third and fourth operators to merge their complementary assets. While TMNL traditionally had its strengths in mobile operations, Tele2 NL focused on fixed services. TMNL now gets access to the fixed infrastructure from Tele2 NL including broadband as well as its attractive business customer base. Additionally, TMNL's mobile network was enhanced by additional frequencies acquired from Tele2 NL.

The newly formed enterprise, approved by the European Commission without conditions, will allow TMNL as the majority stakeholder to further strengthen its position as the best mobile network provider and, with the help of Tele2 NL capabilities, will enhance its service portfolio. 5 TMNL is therefore expected to offer more converged products in the future and will use them to cross and upsell to an increased customer base in order to attack the existing duopoly of KPN and Vodafone Ziggo. With a combined 4.5 million mobile users and 0.5 million fixed-line users, the new company will serve \sim 7% of the broadband market, and \sim 23% of the mobile market.

A Swedish example of consolidation into multi-play is the transaction between Com Hem Holding AB (Com Hem) and Tele2 AB (Tele2).

Tele2 and Com Hem both provide telecommunications services in Sweden. While Com Hem, a cable company (CableCo), is mainly focused on fixed telecommunications and TV, Tele2's main activities are related to mobile telecommunications. As Com Hem only played a marginal role in mobile, and Tele2 had a limited presence in fixed telecommunications, the two companies were not perceived as direct competitors. Therefore their combined capabilities can be regarded as highly complementary without marginalization effects for fixed or mobile competitors in the market.⁷



The acquisition positioned Tele2 better to face competitors on the Swedish market. Especially, Telia and Telenor with their fixed and mobile capabilities were already offering a more converged product portfolio before the deal. As one company, Tele2 and Com Hem became able to offer a portfolio of truly integrated services, from which customers can benefit.⁸ Enlarged Tele2 plans to provide a wide range of complementary connectivity and digital services trying to win customers in an increasingly integrated market.⁹

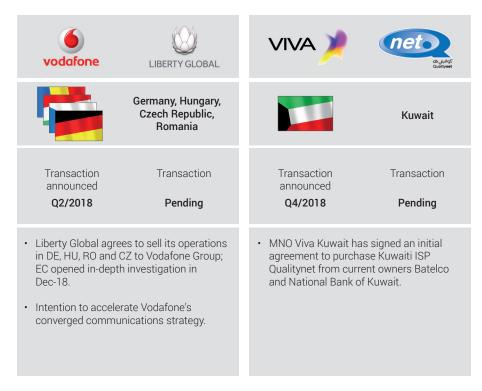
A Norwegian example for M&A transactions driven by convergence is the acquisition of GET and TDC Norway by Telia Company.

Telia Company, second largest mobile network operator in Norway acquired GET's TV and fixed network capabilities in order to create a strong challenger to Norwegian's incumbent operator Telenor. In 2018 GET had more than 0.5 million fiber customers and more than 1 million private and business customers using TV and broadband services. Telia and TDC have been already cooperating before the transaction. Now the newly formed company will have about 2.3 million mobile customers, and about 1.8 million broadband and TV subscribers.

By the means of the transaction, Telia Company also wants to position itself as a leading converged operator and offer both consumers and enterprises better-integrated products and services. Beside churn reduction and cost efficiencies the company is striving for cross- and upselling to its enlarged customer base. 12

Besides the transactions, which have already been approved by the competition authorities, there are other examples for consolidation into multiplay, which are currently being negotiated. Two of these are depicted in figure 3.

Figure 3: Example for uncompleted multi-play drove consolidation deals



Among the most notable transactions in Europe is Vodafone's acquisition of Liberty Global's cable operations in Germany, the Czech Republic, Hungary and Romania. This deal would make Vodafone one of the leading next generation network owners in Europe with over 50 million of on-net cable and fiber homes and a total reach of 110 million homes and businesses.

With more than 15 million customers and a 35% market share in 2018, Vodafone had the largest mobile customer base in Germany. As for broadband internet, it controlled almost 20% of the German market in 2018 making it the second largest provider after Deutsche Telekom. In the Czech Republic, Hungary and Romania, the situation is different, as Vodafone is primarily active in the mobile segment of these markets and has no meaningful presence in each country's fixed-line or TV segments.

Liberty Global's German subsidiary Unitymedia had roughly 3.5 million customers in 2017, which corresponded to approximately 10% of the German broadband market. He had the transaction attractive for Vodafone is that the German regional cable operations of Unitymedia and Vodafone are now overlapping as they are serving different regions. In the Czech Republic, Hungary and Romania, where Liberty Global is primarily a fixed line and TV operator, the company has 1.8 million broadband and 2.1 million TV customers currently. To

As a consequence, Vodafone's acquisition of Liberty Global brings a lot of potential for cross- and upselling of converged products to customers on a national level. Specifically in Germany, it would form a powerful mobile and fixed challenger to the incumbent Deutsche Telekom.

The transaction is currently under investigation by the European Commission, which has initially raised concerns against the cable deal due to possible anti-competitive effects. ¹⁸

To underline that "consolidation into multi-play" is not only a European trend, but a transaction from the Middle East can also be given as an example. MNO Viva Kuwait, controlled by Saudi Telecom Company (STC) has signed an initial agreement to purchase the entire share capital of Kuwaiti ISP Qualitynet from current majority owner Batelco. ¹⁹ In May 2019, Viva announced to have purchased 100 percent of the share capital of Qualitynet for 28.3 million KD. ²⁰

The Kuwaiti market is still far from offering truly converged products. On the one hand, the Kuwaiti Ministry of Communication (MoC) owns the fixed telecom infrastructure. On the other hand, Ooredoo, one of Viva's main competitors, offers bundled fixed-mobile products via FastTelco, which it has previously acquired. The acquisition of Qualitynet will allow Viva to extend into fixed broadband business and to provide fully integrated products and services to an extended customer base, with a growth focus on enterprise business.

Investment in Adjacent Industries

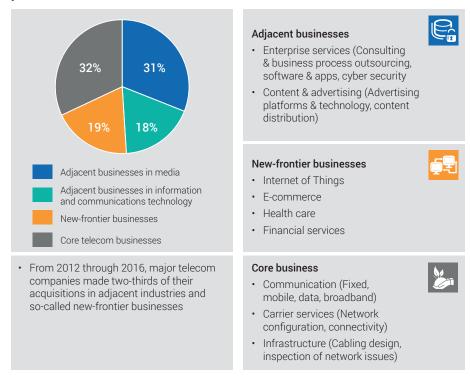
As mentioned previously, some telcos are using mergers and acquisitions as a lever to diversify their portfolio, to increase their customer base or to increase their revenue by acting in sectors close to their core business. Other operators are rather pursuing a strategy that helps to gain access to new and adjacent industries. These industries may not be matching with a telco's traditional core business immediately but since operators experience volatile and shifting markets, telcos need to be creative regarding the way they make a profit. Therefore, M&A activities in adjacent industries gain awareness and importance. Due to that, it is no surprise that two-thirds of the M&A activities performed by telcos worldwide were in adjacent industries and businesses from 2012 through 2016. It is presented in Figure 4: The New Frontiers and Businesses of a Telco's diverse Portfolio (Own representation based on BCG 2018 TMT Value Creator Report, 2018, para. 5)

As Figure 4 also illustrates, such specific new frontiers or businesses that go beyond the natural extension of a telco's key activity are e.g. IoT, software and applications, advertising platforms, analytics, cybersecurity or even health care.²¹

In 2018, the M&A deals in adjacent industries and new frontiers were mostly initiated by North American companies. The following Figure 5 shows examples that took place in Europe and in Russia.

In September 2018, the largest internet service provider in the United States, second-largest broadcasting and cable television company in the world, Comcast, announced its victory on the tender for the big European entertainment firm Sky. After losing the bid for 21st Century Fox against Comcast's rival Walt Disney earlier, the company was even more determined to spend approximately \$38.8 billion on the acquisition.²²

Figure 4: The new frontiers and businesses of a telco's diversion portfolio



By expanding its premium US content and distribution model to Europe and combining it with Sky's media and broadcast presence, Comcast expects to generate growth, to gain market share and to transform into an international media giant. The crucial benefit that helps Comcast to conquer the European market is Sky's subscriber base. Across Europe, there are around 27 million subscribers and Sky is particularly present in the UK, Italy and Germany. Essentially, the company is not principally an ad-funded media provider; it is a company with massive data about its customers' interests and now Comcast can benefit from the data. Furthermore, Comcast takes advantage of Sky's great user experience, which even impressed Comcast's CEO, Brian Roberts.²³ However, the main driver of Comcast's bid for Sky was the intense and omnipresent battle for a piece of the cake in an industry split by technology giants such as Netflix and Amazon. Comcast and its rivals need to gain market share in order to compete with such powerful tech companies.²⁴

Besides acquiring media companies, telcos invest their billions in advertising tech firms to develop themselves into a new era of media, communications, and tech. A popular example of such an acquisition is the American telecommunications and media provider AT&T and the advertising tech company AppNexus. In August 2018, shortly after AT&T's \$85 billion acquisition of Time Warner²⁵, AT&T announced the acquisition of APPNexus, which was worth around \$1.6 billion. By buying AppNexus, AT&T aims to become a leader in digital advertising and to draw off digital advertising cash from the new competitors in the era of digitalization, e.g. Google and Facebook.²⁶ AppNexus is one of the largest advertising exchange companies worldwide. Its core business consists of equipping firms with tools to sell advertising space on their digital platforms and to make ads available for advertisers to buy. The aggregation of both companies' expertise can result in a premium advertising platform that serves publishers and brands in terms of reaching today's consumers in the marketplace in a new and innovative style.²⁷ To sum it up, the acquisition helps AT&T to develop an even stronger position in the market and to eventually compete against Facebook and Google at least when it comes to access to data.28

Figure 5: Examples for completed deals in adjacent industries



Today, the large scale and the great variety of the tech industry is almost impossible to grasp. Of course, Telcos worldwide need to identify their own tech issues, need to solve them and they need to convert it into benefits. Sometimes, it is smart to acquire an advertising tech company as AT&T did. Other operators rather focus on fighting against the omnipresent issue of cyber attacks. So did Russia's national telecom operator Rostelecom. In May 2018, the large Russian broadband and mobile services provider has announced the acquisition of Solar Security, a leading local tech company in the area of target monitoring and information security. The approximately \$23 million deal enables Rostelecom to create a unified cybersecurity competence center where its existing information security employees and other resources are merged with the expertise of Solar Security.²⁹ Solar Security's main task will be the administration of Rostelecom's external security projects, especially concerning the corporate and government sector. Besides this, continuous development and improvement of new standards for information security services and technologies should lead to a new level of cybersecurity.³⁰

According to M&A lawyers and experts from Wall Street, in the future, there will be less of those large-scale mergers in the media and telecommunications industry compared to the past few years. A rest period until at least 2021 is assumed. Reasons for this expectation, valid for the U.S., are volatile markets, the time-consuming digestion of recent massive mergers, a rough economic situation, possible future government restrictions based on previous M&A experiences and ambiguity around new business models for telcos.³¹

5G on the rise

One of the major drivers, although not that evident at first sight, is the upcoming 5G implementation. The fifth-generation network technology is the latest version of mobile wireless technology, with speeds up to 200x faster than existing networks, lower latency and the ability for network slicing. Such features are anticipated to drive substantial M&A activity and expenditures as market actors (both large and small) race for better positions in the radically new environment. For instance, Verizon and AT&T announced to spend \$35 billion and \$40 billion, respectively, on the rollout of their 5G networks³². Such investments will require huge amounts of resources, expertise and partnerships to implement. These partnerships have to be formed with companies that have the size and financial strength to deliver the necessary infrastructure.

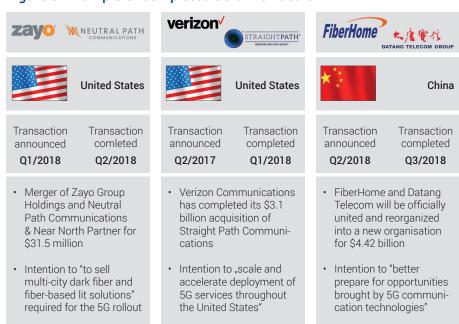
This has and will fuel 5G related M&A activity across various industries³³ including real estate enterprises (investing in fiber networks) as well as health care³⁴ and mining³⁵ companies (investing in automation and robotics). However, fiber and cable companies will be at the heart of this increased M&A activity as they own much of the network infrastructure, which will play a key role in the rollout of 5G. This originates from the required densification of wireless networks due to 5G technology. Such densification can be achieved through small cells located at approximately 300m-500m intervals in urban environments. These small cells require gigabit capable backhaul connections, which can only be provided through deep fiber networks of cable companies. As a result, wireless companies target cable companies as they increase their investment into their own infrastructure and cable providers gradually seek to participate in the wireless game as well due to their strategic assets³⁶. Hence, due to the required size, resources and complementary expertise of wireless and cable providers, further consolidation seems inevitable to provide for the rollout of 5G.

In 2018, the 5G related M&A activity was mostly focused on North America and Asia as those have also a leading role in the rollout of 5G. Exemplary cases can be seen in Figure 6: which will be described in detail in the following paragraphs.

For example, the Merger of Zayo Group Holdings and Neutral Path Communications & Near North Partners is a step forward to enable a stable 5G connection across North America.³⁸ Zayo is a service provider for communications infrastructure, co-location and cloud infrastructure. Their network spans across 126.000 miles in North America and Europe and serves customers from wireless and wireline carriers to media, content and finance businesses and other large businesses.³⁹ The merger with Neutral Path now adds 452 owned plus additional leased route miles to Zayo's extensive North American network. This enables Zayo to sell multi-city dark fiber and fiber-based lit solutions suitable for the rollout of 5G from Minneapolis into Omaha and further expand to other major markets. This development is aligned with Zayo's recent tuckin strategy, to add strategic assets and leverage them immediately. It made Zayo one of the key players for the 5G rollout, as they are not only providing required fiber infrastructure but also offer co-location services for small cells that are necessary to densify the wireless network. Additionally, they connect thousands of data centers, enterprise locations, carrier exchange points, wireless towers, media centers, and cloud providers through 11,5 million miles of lit fiber.

Another US American M&A story is the purchase of Straight Path Communications by Verizon Communications. After an intense back-and-forth bidding war with AT&T, Verizon was able to complete the acquisition for more than \$3 Billion. This is especially remarkable, as Straight Path had, as of October 2017, only 9 employees and was worth not even \$400 Million. By owning licenses for strategically important spectrum for both, mobile wireless and fixed, Straight Path has a unique position to provide point-to-point and point-to-multipoint wireless services for broadband wireless digital communication. The company owns, leases and markets licenses in the 39 GHz band (735 licenses) and in the local multipoint distribution service band (133 licenses) across the United States. The reason for this bidder war was the strategic relevance of this extensive radio frequencies portfolio⁴¹. Additionally, Straight Path is developing 5G technology through its subsidiary Straight Path Ventures.

Figure 6: Example of completed 5G driven deals



The acquisition of this mobile wireless spectrum and next-generation network capabilities will give Verizon an advantage in the 5G development and rollout over its competitors. Furthermore, this deal underscores how essential the millimeter wave spectrum is to mobile carriers and their future growth. This is not only a recent trend, but it has been going on for a while now as AT&T, T-Mobile US and Verizon have been snapping up companies owning mmWave licenses across the US.

Across the Pacific, but especially in China, 5G was also a major driver of M&A activity in 2018. For instance, FibreHome Technologies Group closed a deal to merge with Datang Telecom Group for \$4.42 Billion. 42 This deal unveiled a new Chinese telecommunication giant China Information and Communication Technologies Group Corp with the two previous companies continuing as subsidiaries. FiberHome was founded 40 years ago and owns optical fibers, components, and networks all over China. 43 Datang Telecom is a major player in the wireless communication industry in China as well as a major telecom equipment supplier.44 The group will be big enough and have the financial strength to deliver a countrywide next-generation network. Their combined strength better positions the new group to prepare for the opportunities stemming from the 5G wireless technology. Therefore, the wireless and fiber optical networks of both subsidiaries will be merged into an integrated end-to-end network allowing for increased density of wireless cells due to the complementary existing fiber infrastructure of both organizations. In the near future of the 5G era, this means that the boundaries between the two networks will become gradually blurred as the new company can leverage the existing fiber infrastructure of FibreHome to install 5G cells at previously inaccessible locations.

The past year has been a record year for large-value M&A deals in the tele-communications industry. Some of them already focused on the upcoming 5G wireless technology. Nevertheless, the anticipated large capital expenditures necessary for the implementation of 5G will start to slow down further activities in the telecommunication industry. Despite this anticipated slow-down, some large scale mergers were already announced in 2018 and unlike the overall M&A trend, further investments with regards to 5G seem likely (Figure 7: Example for announced 5G driven deals).

Figure 7: Example of completed 5G driven deals



An example is the announced merger in the USA between Sprint and T-Mobile US, which is anticipated to be closed in 2019. Both companies repeatedly argue that "the New T-Mobile will be the only company able to bring a broad and deep nationwide 5G network [...] ensuring America's leadership position in the digital era." This line of argumentation seems to be supported by regulators around the world. For instance, the U.K. government showed support for further M&A activity of the four U.K. telecommunications providers if they "struggle to justify the investment needed for 5G network upgrades" despite blocking a similar deal two years ago. Nevertheless, the current trade war between China and the USA shows to negatively impact M&A activity worldwide as M&A professionals consider the trade tension and tariffs as one of the biggest business risks for 2019.



Summary

The primary purpose of this paper is to draw strategic conclusions from observed M&A transactions so as to depict certain industry trends of the last year. The 2018 analysis reveals a number of strategic trends that either focus on consolidation of fixed and mobile providers as well as investments into adjacent industries or 5G as a promising technology. Altogether, we were able to identify three basic trends.

First of all, a general consolidation in the telco market had been an ongoing trend, which was observed within saturated markets. However, especially in Europe in the last year the classical consolidation of MNOs was slowing down, and the nature of M&A activities shifted. In 2018, consolidation activities were concentrated on vertical integration of network operators with complementary capabilities such as fixed and mobile. These consolidation dynamics were accompanied by a portfolio diversification of telecommunication providers. This resulted in heavy investments into adjacent industries that may not be matching with a telco's traditional core business immediately. This strategy is based on the goal of creating future revenue sources. Besides consolidation and diversification efforts, the rise of the upcoming 5G wireless technology triggered several strategic acquisitions as well as large scale mergers. Remarkable transactions were monitored particularly in North America and China.

Summing it up, the three basic trends are:

- Consolidation into multi-play to offer bundled services to customers;
- Investment into adjacent industries to diversify the portfolio;
- Acquisitions to prepare for the upcoming 5G rollout.

For the coming years, the slowdown in worldwide M&A activities mentioned previously in the introduction is expected to continue due to several reasons. Firstly, reduced investment is anticipated due to increased financial and political uncertainty. Especially in the USA, traditionally the country with one of the highest numbers and volume of transactions, economic conditions started to worsen, and substantial economic slowdown is becoming more likely. In 2020, presidential elections will take place. In Europe, potential Brexit is raising concerns and limiting planning reliability. Secondly, in the past, the volume of M&A deals has risen before overall market conditions worsened. The year 2018 has been a year with already decreasing transaction numbers compared to 2017 (which was a record year regarding transactions completed), which would also confirm the coming decrease of M&A activity. Thirdly, the big M&A deals, which have happened in recent months and years need to be digested before new transactions can happen.

However, certain focused M&A activity within the telecommunications industry seems likely due to the advent of the next generation 5G wireless technology. This can already be seen in the announced large scale 5G-driven mergers⁴⁸ and the supportive attitude of regulators in that regard.⁴⁹

The Authors

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The Company

Detecon is the leading, globally operating technology management consulting company with headquarters in Germany, which has been combining classic management consulting with high technological competence for over 40 years. The focus of its activities is on digital transformation: Detecon supports companies from all areas of business to adapt their business models and operational processes to the competitive conditions and customer requirements of the digitalized, globalized economy with state-of-the-art communication and information technology. Detecon's expertise bundles the knowledge from the successful conclusion of management and ICT consulting projects in over 160 countries.

Detecon is a subsidiary of T-Systems International, one of the world's leading vendor independent providers of digital services and subsidiary of Deutsche Telekom. Together with T-Systems Multimedia Solutions GmbH (MMS) and the digital areas of T-Systems Global Systems Integration (SI) the Detecon International GmbH forms one of the largest integrated digital providers in Germany as the portfolio unit "Digital Solutions".

As a member of this new alliance, Detecon is driving forward its consulting approach Beyond Consulting, a significant evolutionary step forward in traditional consulting methods adapted to meet the demands of digitalization today and in the future. The concept features top consulting that covers the entire spectrum from innovation to implementation. Groundbreaking digital consulting demands ever greater technology expertise and a high degree of agility that incorporates flexible, but precisely fitting networking of experts for complex, digital ecosystems in particular. At the same time, it is more and more important in digital consulting to accompany clients from innovation to prototyping to implementation.

This factor prompted Detecon to found the Digital Engineering Centers for Cyber Security, Analytical Intelligence, Co-Innovation, and Industrial IoT in Berlin in 2017 as facilities that extend the added-value chain of consulting and accelerate the realization of digital strategies and solutions by means of prototypes and proofs of concept.

Footnotes

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