strategy&

A tale of two telecoms

&

A look into the industry's future

pwc

Contacts

Amsterdam

Steven Pattheeuws
Partner, PwC Netherlands
+31-62-279-1964
steven.pattheeuws@pwc.com

Beirut

Bahjat El-Darwiche
Partner, PwC Lebanon
+961-1-985-655
bahjat.eldarwiche
@pwc.com

Delhi

Ashish Sharma
Partner, PwC India
+91-124-626-671
sharma.ashish@pwc.com

Dubai

Amr Goussous
Partner, Strategy& ME
+971-4-390-0260
amr.goussous
@strategyand.ae.pwc.com

London

Rolf Meakin
Partner, PwC UK
+44-20-7213-1707
rolf.e.meakin
@uk.pwc.com

Madrid

Carlos Severino
Partner, PwC Spain
+34-91-568-5226
carlos.severino
@strategyand.es.pwc.com

New York

Dr. Florian Gröne
Principal, PwC US
+1-347-346-0457
florian.groene@pwc.com

Paris

Pierre Péladeau
Partner, PwC France
+33-1-56-57-8658
pierre.peladeau
@pwc.com

Sydney

Chris Bartlett
Partner, PwC Australia
+61-414-835-935
chris.bartlett@pwc.com

Tokyo

Toshiya Imai
Partner, PwC Japan
+81-6757-8647
toshiya.ima@pwc.com

About the authors

Dr. Florian Gröne is an advisor to executives in the communications, media, and high-tech sectors for Strategy&, PwC's strategy consulting group. Based in New York, he is a principal with PwC US. He helps telecom operators with growth strategies, digital transformation, and the development of technology and operational capabilities for the digital age.

Pierre Péladeau is a leading practitioner of digital strategy and transformations for Strategy&. Based in Paris, he is a partner with PwC France. He helps telecom operators transform themselves, address their strategic challenges, and build new growth businesses in adjacencies.

Bahjat El-Darwiche is a thought leader with Strategy&. He has experience helping governments, regulatory authorities, industry bodies, and telecom operators in the areas of policymaking, sector development, regulatory management, infrastructure business models, and digitization ventures. He is a partner in the Middle East and the leader of the telecommunications, media, and technology practice in EMEA.

Rolf Meakin, a partner with PwC UK, and Amr Goussous, a partner with PwC United Arab Emirates, contributed to this report.

Executive summary

Imagine this scenario: About eight years ago, in 2017, the boards of two telecom carriers decided it was time to make some radical changes — in fact, the intent was nothing short of reinventing these two businesses.

Each company's board could see the writing on the wall: Technology companies such as Apple, Google, Facebook, and Amazon and smaller over-the-top companies were winning in apps, content, advertising, the cloud, and the Internet of Things. Aggressive challengers and alternative carriers were slashing prices, and many of the other established carriers were already looking for ways to respond. Growth was stalling, the usual cost-cutting measures had reached their limit, and dividend and debt commitments were tying their hands financially. Clearly, maintaining the status quo was a recipe for irrelevance and slow death.

Now, eight years later — in 2025 — these companies look nothing like their former selves. One of them, which we are calling BaseLink, has become the undisputed leader in providing the connected infrastructure of several countries' digital economies and the darling of investors looking for dividend income. The other, which we call DigiLife, has transformed itself into a ubiquitous global data platform and digital lifestyle and experience brand. Competing successfully with the likes of Amazon, Apple, Google, and Facebook, it is being hailed by growth investors as *the* stock to own.

In their determination to transform themselves, BaseLink and DigiLife took divergent paths. Yet each succeeded spectacularly. Their success is a tribute to their understanding of the nature of the telecom industry close to a decade ago, their vision for the future, and their ability to execute that vision. Their stories about the very different paths they took serve as a lesson for telecoms seeking to survive and thrive in the coming years.

BaseLink: Delivering the utility of technology

Back in 2017, the company that was to become BaseLink was stuck. The company, which had solid but stagnant positions as the second- or third-largest player in a number of European telecom markets, found that its customers' insatiable appetite for more bandwidth and speed to power their digital devices was consuming more and more capacity, but not adding to its top line. Usage, in fact, was forcing the company to increase capital expenditures to new heights just to maintain its current level of service.

At the same time, after more than 10 years of continuous growth, revenues had stagnated and then begun to slip. Price competition was relentless, and the services and network quality of its rivals had become virtually indistinguishable from its own. Consumers, and some regulators, had begun to view Internet connectivity as a basic utility, like electricity or water. One board member called the company's situation a "commoditization nightmare" (see "Grasping at differentiated straws: Commoditization in the wireless telecom industry," by Florian Gröne, Udayan "UD" Gupt, and Rawia Abdel Samad, Strategy&, 2018).

As its core broadband business began to suffer, BaseLink's leaders placed a number of bets on what at the time looked like attractive growth opportunities. They invested hundreds of millions of dollars in video content rights and even a studio; acquired Internet of Things (IoT) ventures with vertical offerings in healthcare, logistics, and manufacturing; and built a slew of cloud-based services, including storage, Web hosting, messaging, and collaboration software. But nothing seemed to move the revenue needle, and the increased spending on new services had only depressed earnings further.

Meanwhile, turnover of leadership and staff members was rising dramatically, especially at the new businesses, as the war for talent escalated. The cost of managing the new services was ballooning, and the organization itself was breaking down in the face of the frantic pace, multitude of priorities, and frequent changes in direction. Shareholders were unimpressed — the stock went through an 18-month decline — and finally the board asked the CEO, the CMO, and a number of product and new-venture leaders to step down.

What followed was a phase of brutally honest assessment of what the company was good at and what it wasn't. Interim leadership concluded that the company, at its core, was an engineering-driven organization with unsurpassed expertise in building and running high-performance networks and connectivity infrastructure. Bolting on all kinds of new offerings had only diluted its core strength. Under a new CEO, a veteran of the power distribution industry, the company rallied around a new vision and strategy: Embrace the utility nature of broadband connectivity, and turn the company into a connectivity asset and value-added network service powerhouse.

The story of how BaseLink dug out of its hole and achieved a distinct, more profitable, and growing position is a testament to its clearly defined — and much more coherent — strategy, careful planning, and step-by-step execution.

Stage one: Cut costs and reinvest for growth

The first step involved a painful retrenchment and return to basics, identifying the capabilities at which BaseLink excelled. The company took a *Fit for Growth** approach to determining what was essential to its transformation. Leaders moved quickly to agree on a set of distinctive capabilities that would best help build the company's desired network-as-a-service (NaaS) positioning:

- Network planning and engineering, even though the company recognized it had some work to do to pivot its focus from hardware to cloud-driven software
- Efficient, automated, and highly digitized business and technology operations, which encompassed a lean, continuous improvement approach
- Management of strategic partnerships, both in the private sector and with different levels of government, and through public–private arrangements

To streamline its operations and fund the creation of its new business model, BaseLink undertook a radical program of complexity reduction. First, it sold off or shut down all of its content and entertainment businesses, its production studio, and its nonstrategic legacy network assets. It then shuttered seven product line–specific branch offices and all its regional headquarters and facilities, and reduced its retail footprint by more than 30 percent over a two-year period. It

To streamline its operations and fund the creation of its new business model, BaseLink undertook a radical program of complexity reduction.

* *Fit for Growth* is a registered service mark of PwC Strategy& LLC in the United States.

restructured its labor costs by cutting 40 percent of its workforce in more transactional functions, predominantly in administration, retail, contact centers, marketing operations, and product management. And it simplified customer operations, digitizing its sales, distribution, and support interfaces.

The cuts made to its operations and costs gave BaseLink the focus and means to modernize and improve the capacity of its network and lay the initial foundations for its broader business transformation. The company expanded its spectrum holdings and fiber rollout program by redirecting funds freed up through its cost transformation to increase capital spending — outspending competitors for the first time, and going against the broader industry trend of contracting investment budgets. What's more, BaseLink leapfrogged the typical incremental fiber buildup process by making several targeted acquisitions of long-haul fiber network providers and competitive local exchange carriers on a city level. This augmented the backbone for densifying the network with small cells, carrying out early 5G trials — and ultimately leading the market in scale deployment.

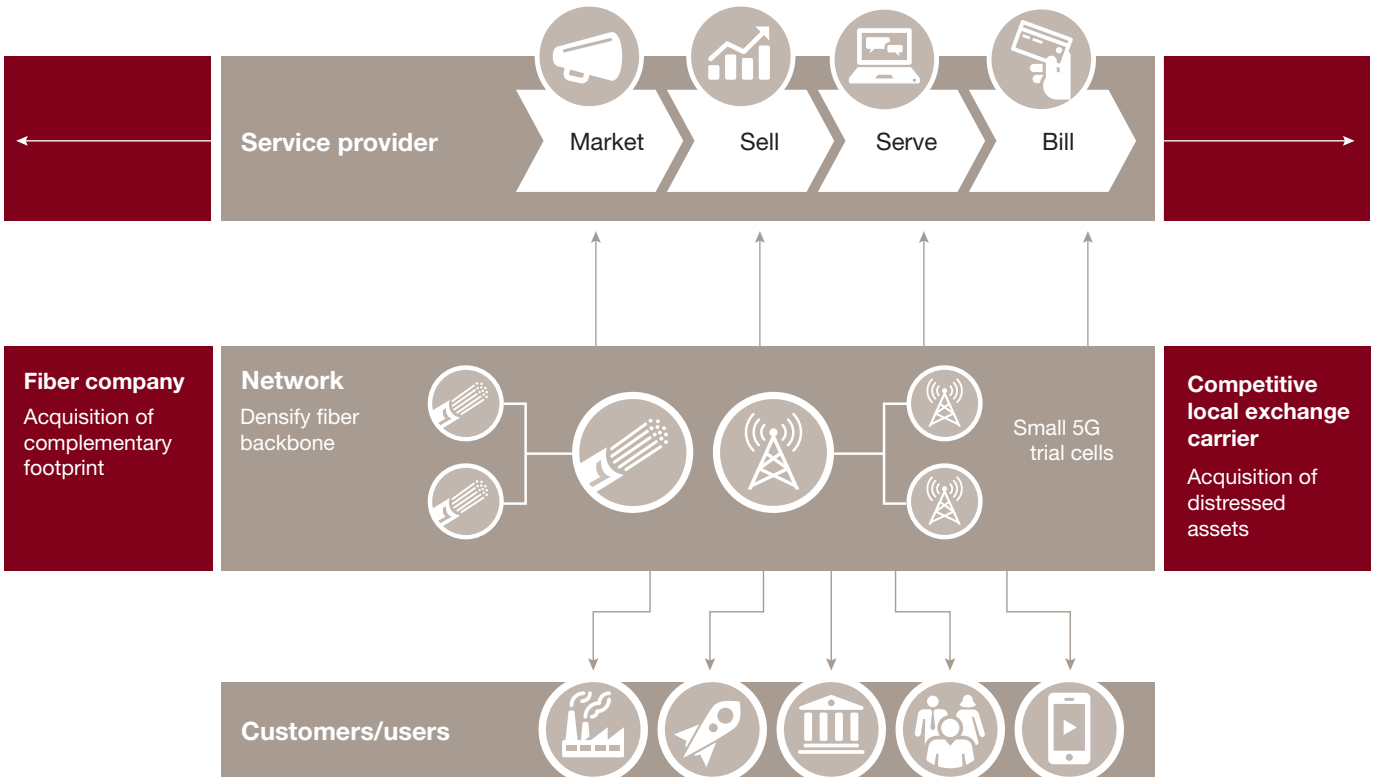
BaseLink's efforts, at this stage, were supported by an active campaign to ensure regulatory alignment on the public–private partnership needed to support the company's investment in new infrastructure and provide a reasonable return on its investment. These efforts included commitments to coinvest in "gigabit" broadband initiatives at the national and municipal levels, and to create a wholesale pricing and equal-access framework governing future carrier-to-carrier operations (*see Exhibit 1, next page*).

Stage two: Build a value-added network platform

The next step in laying the groundwork for BaseLink's new commercial model required more than just new and better plumbing. A new set of software capabilities would allow BaseLink to "slice" its network into different "priorities," depending on the customer's needs: top speed, high reliability, unlimited bandwidth, near-real-time latency, high security, or any combination of the above. So the company doubled down on its transformation to software-defined networking and network function virtualization. First, it invested heavily in a rigorous review and rebuilding of its service catalog, and then it set about acquiring specialized technology startups at the forefront of software-driven network optimization and intelligent edge-computing solutions. It also acquired specialized security, privacy, and digital identity management services.

Exhibit 1

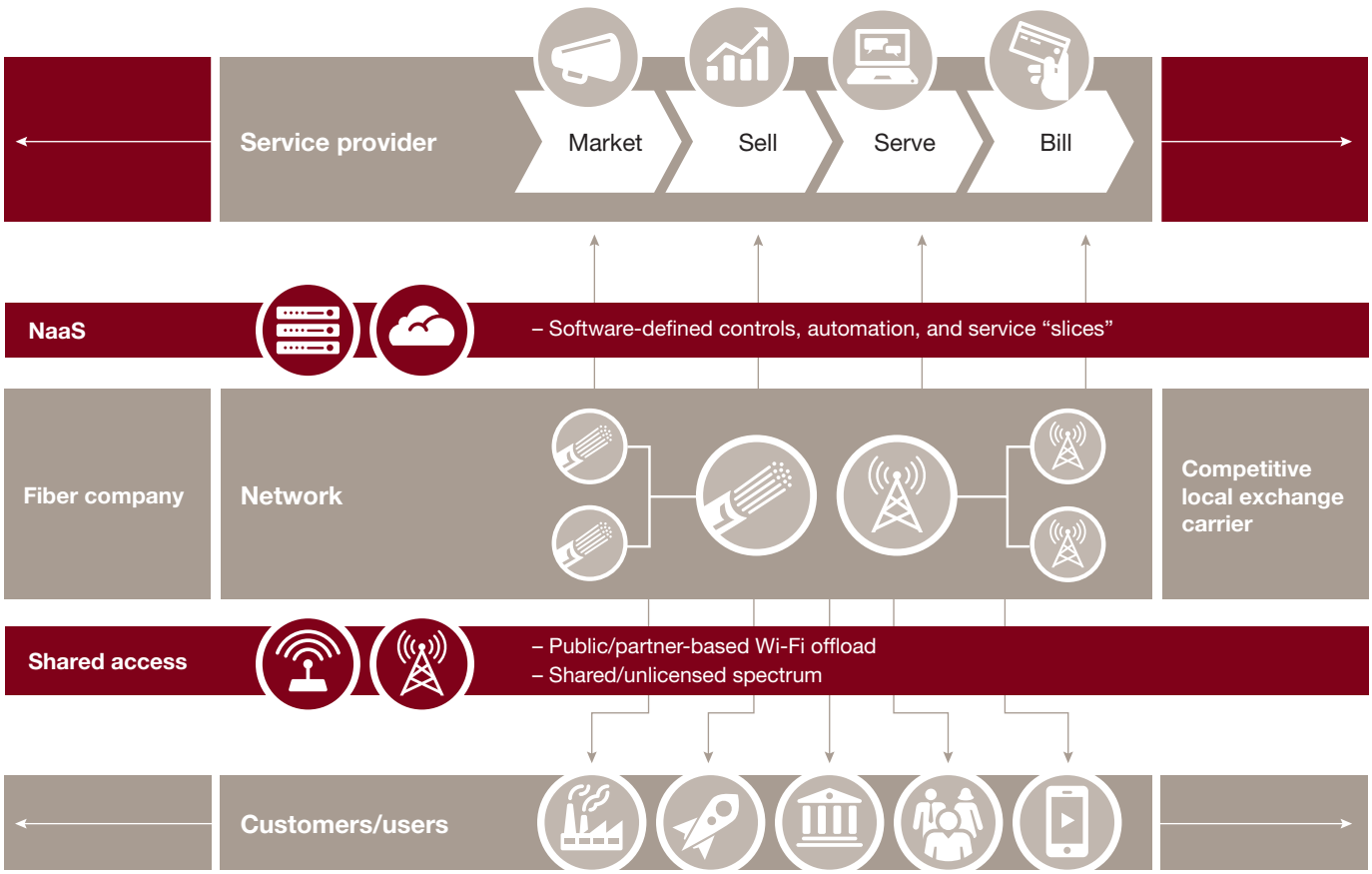
Reinvesting for growth at BaseLink



Source: Strategy& analysis

As part of its plan to deliver connectivity at various price points, BaseLink made several further investments in its network. It integrated additional third-party Wi-Fi assets to increase its ability to offload excess traffic from its cellular network. And it invested in more spectrum to further lower its costs, giving it greater flexibility in offering a variety of speed and quality of service levels at different prices (*see Exhibit 2*).

Exhibit 2
Building a value-added network platform at BaseLink



Source: Strategy& analysis

Stage three: Create the new commercial model

At this point, BaseLink's transformation of its networking capabilities was essentially complete. Before it could reposition itself as the simplest connectivity option offering the best value, however, it complemented its legacy customer and business support systems with a highly automated operations engine that could support its customers' basic needs through a simple self-care model through any digital device. This final step allowed it to aggressively overhaul its commercial model to become the value-added utility network of choice for a broad range of businesses, other carriers, and retail customers (*see Exhibit 3, next page*).

BaseLink now offers a variety of virtual networking capabilities — powering a number of so-called XVNOs — and wholesales carrier-grade services to 23 fixed, mobile, and hybrid virtual network operators across the six countries in which it operates. It provides 5G backhaul and national roaming services to seven smaller networks. And it uses its intelligent NaaS platform to resell on-demand connectivity to native cloud software-, infrastructure-, and platform-as-a-service providers to further extend their own businesses.

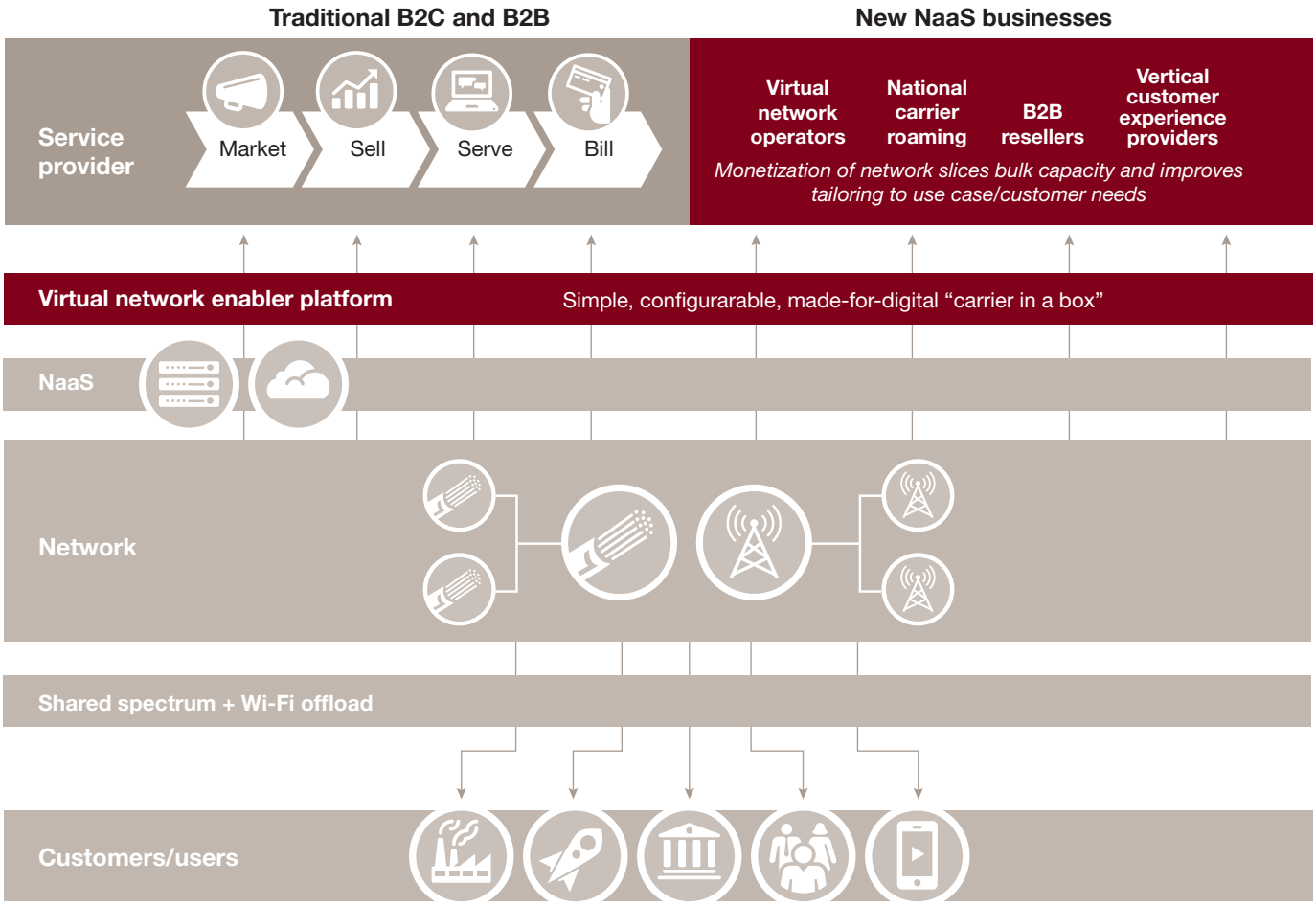
But perhaps the most important part of its new business model, and source of growth, is providing unparalleled "fit for purpose" connectivity and customer experiences to other companies in a wide range of industries. Its highly flexible and reliable networking infrastructure allows it to guarantee the appropriate user experience, at a reasonable cost, no matter how demanding its vertical customers' needs. Among its offerings:

- **Immersive media and entertainment.** Its network can power a wide range of technologies, including augmented-, virtual-, and mixed-reality experiences as well as high-fidelity online gaming and e-sports, guaranteeing high speeds and low-latency bandwidth. In fact, DigiLife now uses BaseLink as its connectivity provider in two of the markets into which DigiLife recently expanded.
- **Digital health and wellness.** BaseLink now provides reliable, resilient, and secure connectivity to critical devices and applications, including connected implants and pills and remote diagnostics and analytics systems.
- **Mobile financial services.** It offers secure connections and strong-form authentication to facilitate a wide range of financial transactions.
- **Connected driving and autonomous fleets.** The company delivers low-latency connectivity with guaranteed reliability to autonomous cars, trucks, public transport, planes, and drones.

BaseLink's highly flexible and reliable networking infrastructure allows it to guarantee the appropriate user experience.

Exhibit 3

Creating BaseLink's new commercial model



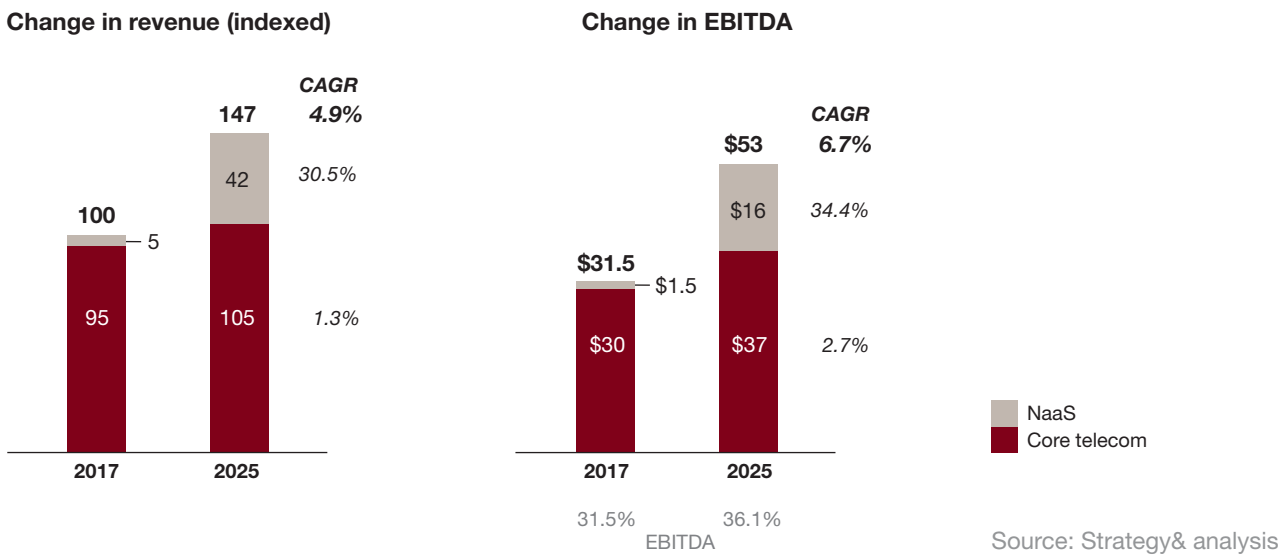
Source: Strategy& analysis

These vertical offerings are proving to be the real difference in BaseLink's eight-year transformation, allowing it to share in and benefit from the growth of all kinds of over-the-top businesses, and to claim its rightful role in powering the digital age.

Financial implications

By the time BaseLink had completed its transformation, its mix of revenues and costs had changed significantly (*see Exhibit 4*). Revenues from its traditional consumer and enterprise offerings have fallen to 85 percent of the total, with its new NaaS offerings now making up the rest. Selling, general, and administrative (SG&A) expenses have fallen considerably, with the savings going straight to the bottom line.

Exhibit 4
Financial impact of BaseLink's changes



Source: Strategy& analysis

DigiLife: Digital experiences for all

Like BaseLink, the company that became DigiLife realized almost a decade ago that its current path was taking it nowhere fast. It had grown into a major player with operations in several European countries, and it had started to diversify into content and IoT services, but both businesses were still small. Growth had stagnated, earnings were down, and competitors were taking large bites out of its traditional businesses. Despite efforts in various directions, little had changed in its business or operating model.

What was changing, and quickly, was the technology landscape. Augmented and virtual reality were all the rage. Facebook had made a big bet in the area by acquiring Oculus Rift, Microsoft had launched HoloLens, and Google had taken a stake in Magic Leap. The IoT was also growing fast, and consumers were rapidly turning their houses into "smart homes" and buying connected cars. Smartphones were increasing rapidly in power, offering apps and services that could manage virtually every aspect of consumers' lives.

The convenience and entertainment value of these new technologies were astonishing. Just as impressive, and increasingly worrisome, was the sheer amount of data these technology providers were capturing. Google, Facebook, Amazon, and other technology giants already stored and sold minutely detailed data on virtually everyone who interacted with their platforms — not just demographic data on who they were and what they liked but, increasingly, information about their whereabouts at every moment of the day, even their changing emotional states. Smart speakers in the home and car were learning to capture and analyze casual conversations, and robot vacuum cleaners were mapping the layout of every room in the house.

As the sheer amount and level of detail of data being collected grew, however, so did concerns about privacy and security. In the early days of the data "big bang," few consumers realized just how much these companies knew about their every desire, their every movement. By and large, they were perfectly happy to trade what level of surveillance they were aware of for the many conveniences of the digital age.

Eventually, however, as new technologies and new data-gathering techniques intruded further into their daily lives, consumers grew increasingly concerned about how all that data was being used — not just overwhelming them with eerily precise marketing offers but affecting their healthcare, insurance, and other choices, even their interactions with law enforcement. The movement to regain control of personal data grew, especially once people came to realize that their data had real financial value — value that they themselves could profit from.

A world was coming in which screens, cameras, microphones, GPS, and movement detectors would be ubiquitous — a mixed-reality world in which all objects would be connected and everything would generate data. This is where the most forward-looking members of DigiLife's board saw an opportunity: Could DigiLife evolve into the premier manager of all that data?

As a telecom provider, the company was already transmitting much of that data as it moved across its network infrastructure. So it didn't take a great leap to imagine the company becoming a data hub, developing a variety of data-based consumer services and industry offerings, and creating a controlled data marketplace for the exchange of data among the consumers who actually generated it and the companies that wanted to put it to use. Further, it could give consumers the power to protect and profit from their own personal data. In other words, the goal was to put together an entire ecosystem built on data services.

Could DigiLife evolve into the premier manager of all that data?

At the time, of course, DigiLife's board was fully aware that achieving this vision of "enabling the digital life for all" would be no easy task. It would require, board members knew, a monumental effort on three fronts — regulatory, technological, and commercial. And the outcome would by no means be ensured. But the risk, they believed, wasn't just worth taking — it was a necessity.

Leveraging its DNA in keeping its customer data private, DigiLife began the effort to push for a regulatory environment friendly to its data aspirations. It lobbied for and achieved changes in government policy that gave consumers the right to gain access to the data collected on them and to determine what companies could collect it and with whom they could share it. These proposals were positioned as a natural evolution of the General Data Protection Regulation, which was starting to be implemented in Europe, and as a necessary complement to the 2015 Revised Directive on Payment Services (PSD2), designed to promote more open banking across Europe by providing access to customer banking data to third-party providers of innovative banking services.

The PSD2 regulations on data sharing were a key breakthrough that created a more level playing field in the collection of data and the provision of digital services. They did not, however, fully define consumers' data ownership rights and accompanying data exchange mechanisms. That was the next step, and DigiLife spent the next several years working with governmental agencies to iron out these regulations.

None of DigiLife's regulatory efforts would matter, of course, if the technological building blocks for its new data services weren't in place. The company laid out a plan for building the required technology infrastructure in three stages, each integrated into its evolving business and operating model.

Stage one: Lay the technical foundation in the cloud

DigiLife continued to operate its traditional voice, mobile, and broadband businesses while completing work on a large-scale cloud infrastructure, an initial catalog of application programming interfaces (APIs) for accessing data, and a few core algorithms around personal identity and data security (*see Exhibit 5, next page, and Exhibit A, page 17*).

Stage two: Build up processing and access capabilities

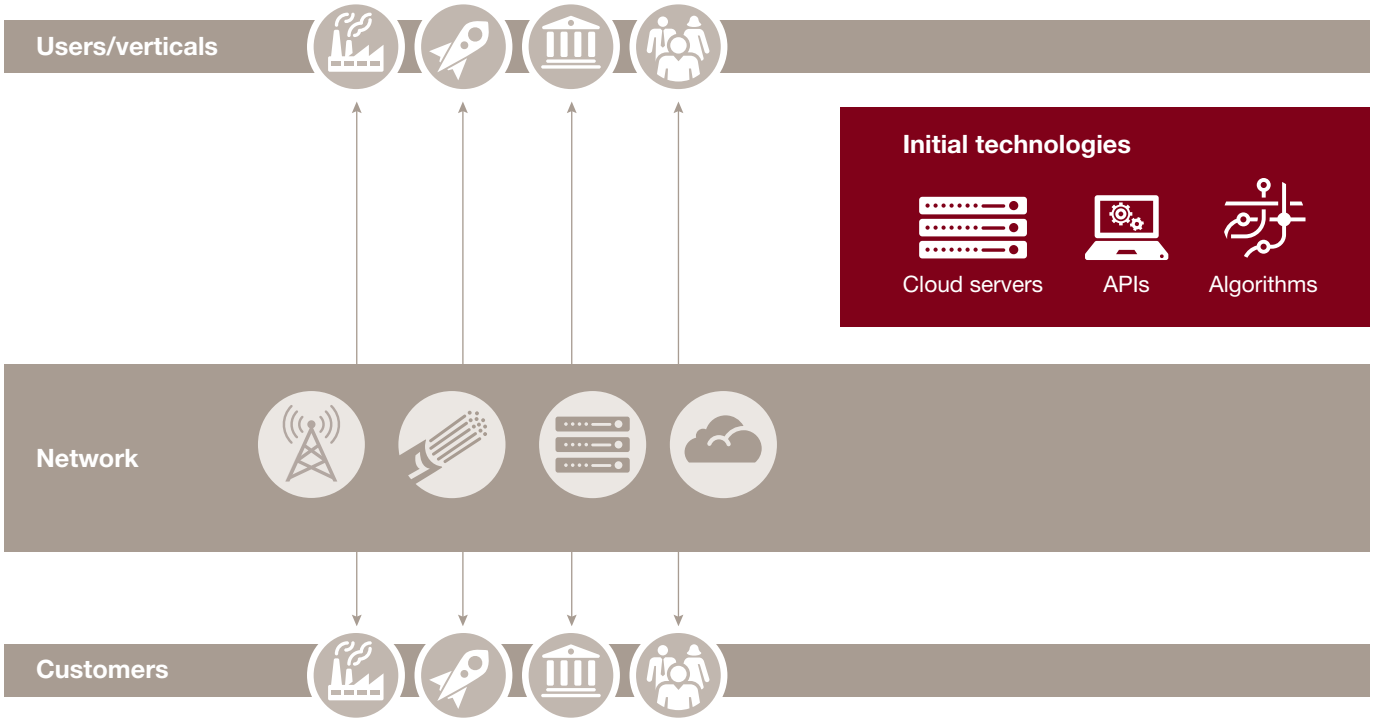
With its essential cloud infrastructure completed, the company began building the first two layers of its new technology infrastructure — processing and access. These would provide the means to create a new line of business built on data services, but still had to be subsidized in their early stages by the core telecom business (*see Exhibit 6, page 16*).

The processing layer performs basic data protection and encryption services for the raw data DigiLife captures from its consumers, businesses, and all connected objects on its network, including ownership, identification, and authentication, ensuring the protection and security of the data when accessed. It also provides a library of programming utilities for combining and analyzing data for the reuse of all parties, much as weather data is processed to provide the weather forecasts that all can reuse in other applications.

The access layer provides the tools needed to make the data, once processed, available to others. DigiLife neither wanted nor needed to replicate all the data that would travel on its network, so it built a data reference catalog that serves as a universal, searchable data directory. The catalog also contains all the basic ownership, privacy, and data management rights associated with each piece of data (*see "Keeping private data private," page 17*).

Exhibit 5

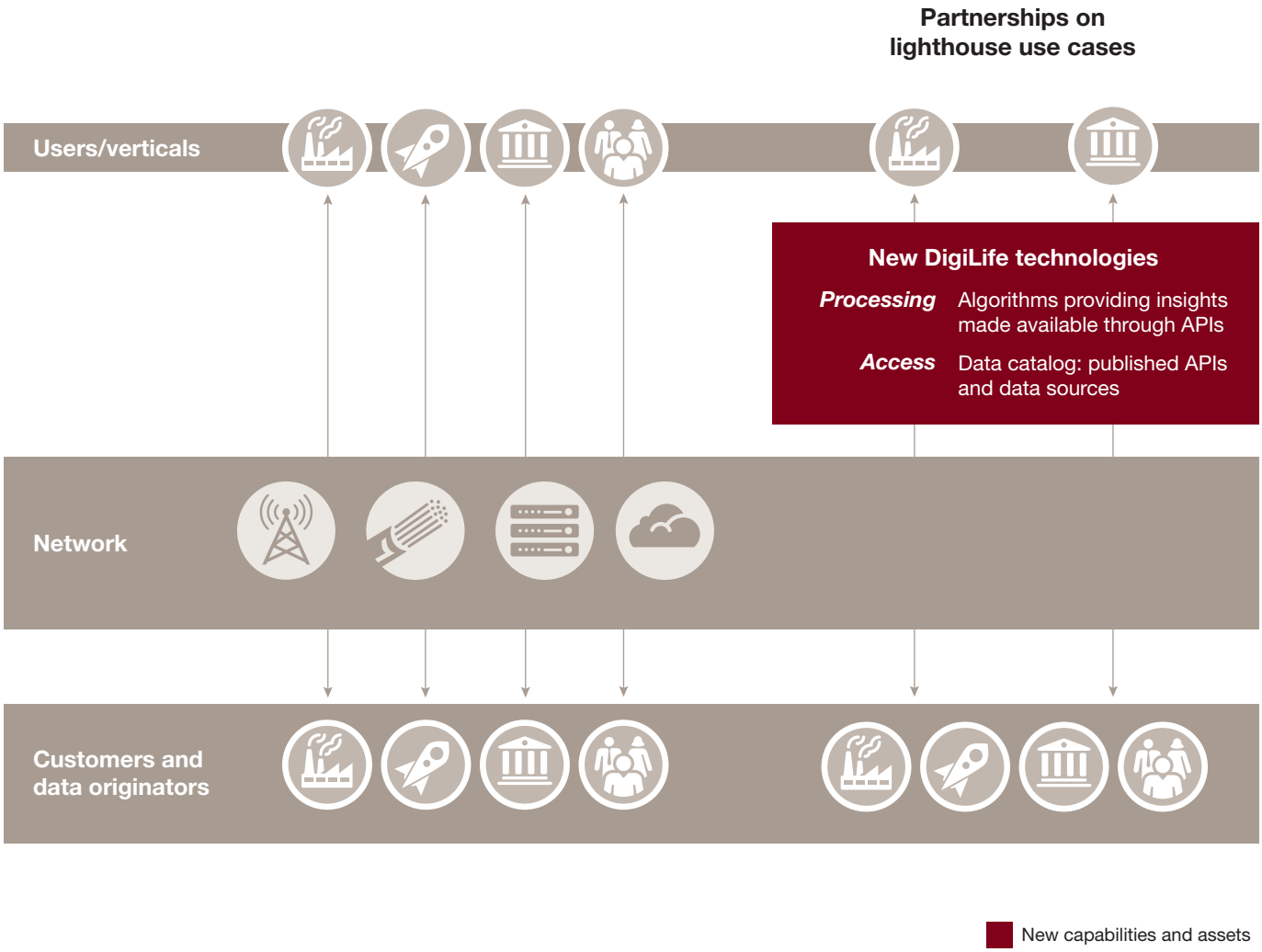
DigiLife's new foundation in the cloud



Source: Strategy& analysis

Exhibit 6

Building up processing and access capabilities at DigiLife



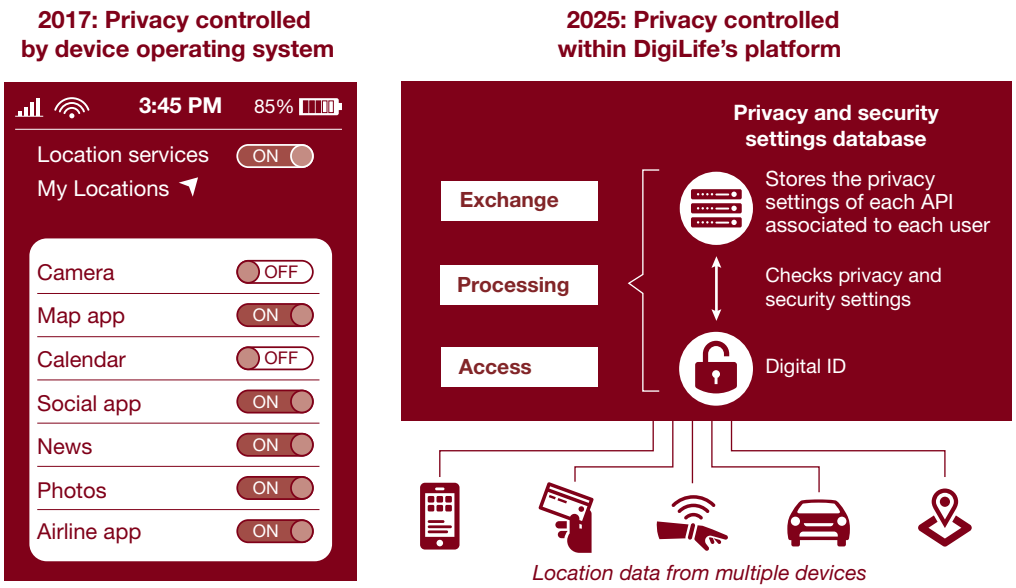
Source: Strategy& analysis

Keeping private data private

Back in 2017, maintaining privacy while online or on one of the growing number of mobile devices was difficult at best, and frustration with the use of personal data was rising fast. At the time, users had to choose their privacy settings within each device's proprietary operating system, and they had to wade through a complicated and confusing menu of settings for each app on each device. It was virtually impossible to create a consistent privacy profile.

DigiLife solved this problem by moving each subscriber's privacy choices out of his or her many devices and into the company's cloud. The advantages of its solution were immediately apparent: The system was device-agnostic. Each subscriber could now create a universal privacy profile that was easily modified as needed, and regulators could far more easily control and verify how subscribers' personal data was used (*see Exhibit A*). Moving personal data settings into a unique location for all devices and apps solves the data privacy problem.

Exhibit A
Moving personal data into the cloud for privacy



Source: Strategy& analysis

Recognizing that it could not pull off such an ambitious effort on its own, DigiLife partnered with several technology firms that had the capabilities needed to help build the technology bricks, and with potential consumer companies in a few key verticals, including financial services and healthcare, to ascertain the potential for its new digital life services. And it began looking into partnerships with other telecoms to extend the reach of its data exchange services, which would eventually cover 80 percent of the markets DigiLife was active in.

Stage three: Foster the exchange and commercialization of data

The exchange layer provides all the tools needed for the exchange of data, with or without financial compensation. Although much of the data is provided free as part of the open data movement, consumers have begun to realize that the personal data they generate through the devices and digital services they use constitutes a form of labor on their part, and thus has real commercial value that businesses should pay to use (*see Exhibit 7, next page*).

So this layer also allows for the tracking of personal data and how businesses use it, creating the technical means to transfer micropayments to everyone who provides data. This feature helped give DigiLife the political capital needed to drive the growth of its platform.

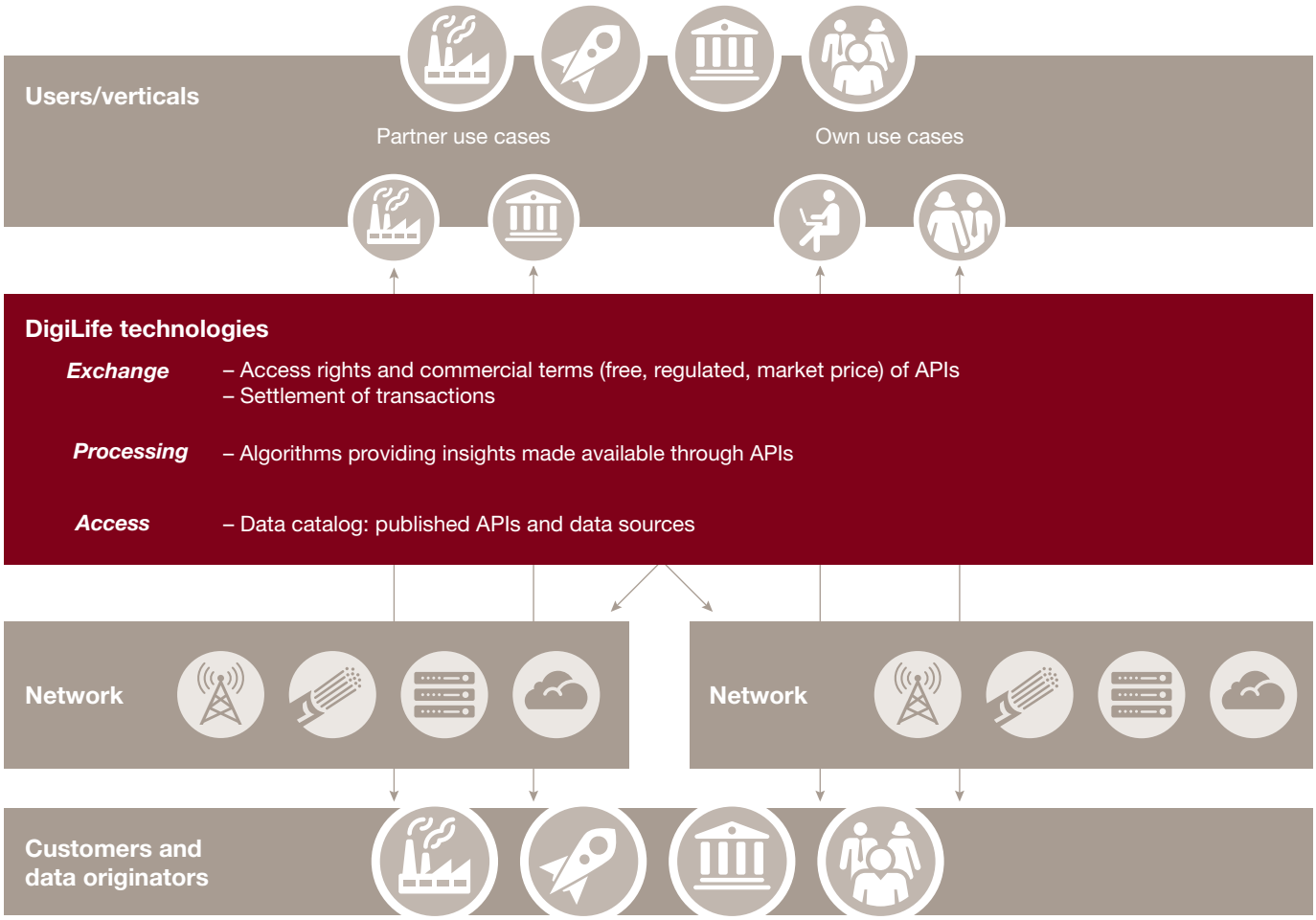
At present, DigiLife's traditional telecom business has become much less important, and its commercial model now depends more heavily on the acquisition and commercialization of data. This aspect of its business is treated as a regulated quasi-monopoly in the countries where it does business. And it — along with other, similarly evolving telecom companies — has led the creation of a wide-ranging interoperability network across other geographies.

Much of DigiLife's success now depends on the data exchange platform it developed. As consumers grew more willing to participate, DigiLife's data marketplace became the medium of choice for data exchange. Consumers can now decide how much of their personal data to sell, and to whom. Large marketing companies and data aggregators now buy varying levels of anonymized data from individual consumers, analyze and restructure it, and resell it to others. Data companies that prove themselves untrustworthy, through lack of adequate security or privacy mechanisms, are being weeded out of the marketplace.

One particularly successful application involves the exchange of consumer credit information. Thanks to DigiLife's lobbying efforts, consumers have regained control over how much credit-related data

Exhibit 7

Fostering the exchange and commercialization of data at DigiLife



Source: Strategy& analysis

they provide, and to whom. Credit scores now include both the raw relative credit score and a "reliability score" determined by how much information the consumer is willing to provide. Similar mechanisms allow consumers to manage their healthcare data, transforming their relationship with the insurance industry, among other businesses.

Thanks to the positive network effects generated by the growing success of DigiLife's data services platform — and its proven privacy and security features — companies in more and more industries are now making use of its offerings. The result: A whole new ecosystem of startups has emerged to exploit the vast amounts of data available through the company's platform.

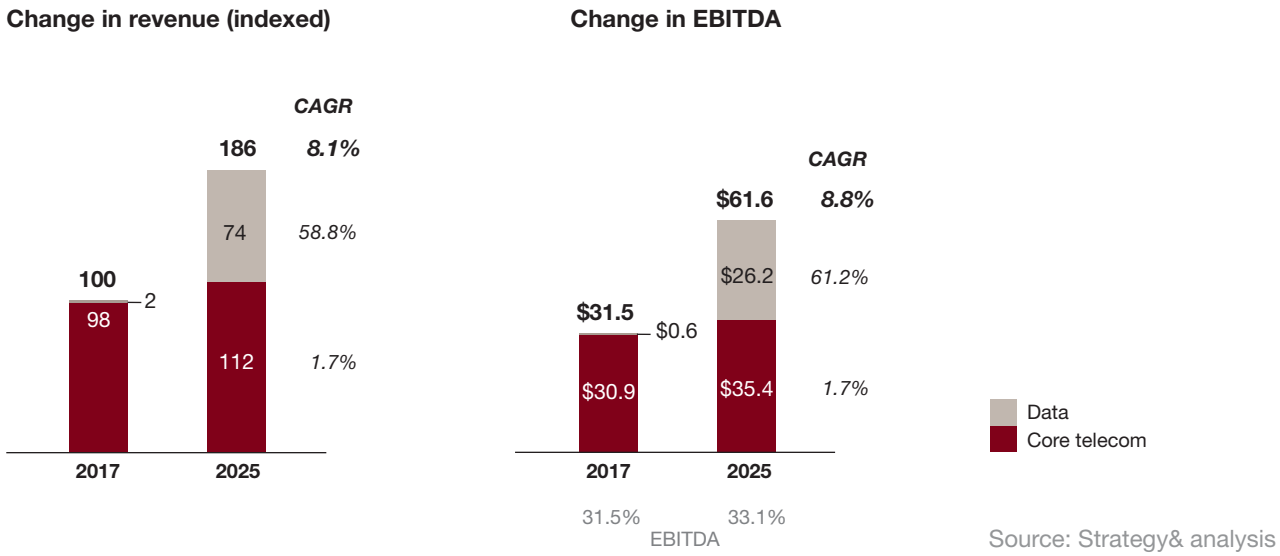
Now that the platform is in place, DigiLife is also building on the data privacy tools it created. It recently launched a variety of data services designed to streamline consumers' digital lives, such as digital identity and authentication, personalization engines for managing online connections, and even services that provide consumers with detailed monitoring and analytics on their online and offline lives, including risk-based scoring of health, diet, and driving record.

Financial implications

DigiLife's transition to a full-service data ecosystem initially took a toll on its financial stability. In the early years, it was still largely dependent on its traditional telecom business, even as it began to invest heavily in transforming its technology infrastructure. Over time, however, as data volume continued to explode and the company added more applications to its platform, its efforts to commercialize data services began to pay off. By 2025, revenues from its traditional telecom operations had stagnated, but revenues from data services had grown to 40 percent of the total, and earnings to 43 percent (*see Exhibit 8, next page*).

Exhibit 8

Financial impact of DigiLife's changes



Source: Strategy& analysis

The moral of the story

The stories of BaseLink and DigiLife, of course, are hypothetical, and perhaps idealistic. It may be more reasonable for telecoms of today to choose a path somewhere between radical transformation and a slow descent into oblivion. But, to be sure, there is risk in taking an approach that is not bold enough.

The reality is that many carriers today are trying to juggle what are essentially two distinct business models: a utility-like business built on technology and operating excellence with large, long-term investments in networks and infrastructure; and a digital consumer experience business that relies on compelling digital services, apps, and content, powered by data analytics and constantly evolving in a nimble way to deliver against ever-changing consumer demands and trends. Yet most carriers today aren't really succeeding at either model.

Strategy is about choices — about being clear on one's strategic aspiration and identity, and then aligning products and services, capabilities, and resources with that identity in a deliberate and coherent way. Having multiple strategic identities leads to conflicting objectives, unhealthy competition for investments and resources (and chronic underfunding as a result), and a heavy burden on your people and culture.

The telecom carriers that evolved into BaseLink and DigiLife started on their journeys from very different beginnings. BaseLink was an also-ran carrier in a number of markets that saw an opportunity to turn its market position into an advantage. It had developed the network capacity and technology capabilities to transform itself into a pure utility infrastructure play.

DigiLife was a dominant player in an even larger market with a strong brand, a wealth of customer data and insight, the resources to invest in the necessary R&D and product development, and the power to affect the region's regulatory agenda. In each of our cases, the company's success was the result of a choice to move in a clear and single-minded strategic direction, one based on its market position, scale, and distinctive set of capabilities.

There is room for many different flavors of BaseLink and DigiLife. Some of the recipes offered in our tale hold real promise to help carriers overcome the daunting challenges and dilemmas of today's competitive environment. But delivering on that promise will require making choices, and sticking to them.

Strategy& is a global team of practical strategists committed to helping you seize essential advantage.

We do that by working alongside you to solve your toughest problems and helping you capture your greatest opportunities.

These are complex and high-stakes undertakings — often game-changing transformations. We bring 100 years of strategy consulting experience and the unrivaled industry and functional capabilities of the PwC network to the task. Whether you're charting your corporate strategy, transforming a function or business unit, or building critical capabilities, we'll help you create the value you're looking for with speed, confidence, and impact.

We're a network of firms in 158 countries with more than 236,000 people who are committed to delivering quality in assurance, advisory and tax services. Tell us what matters to you and find out more by visiting us at strategyand.pwc.com.

www.strategyand.pwc.com

© 2018 PwC. All rights reserved. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www.pwc.com/structure for further details. Mentions of Strategy& refer to the global team of practical strategists that is integrated within the PwC network of firms. For more about Strategy&, see www.strategyand.pwc.com. No reproduction is permitted in whole or part without written permission of PwC. Disclaimer: This content is for general purposes only, and should not be used as a substitute for consultation with professional advisors.