



City of
Düsseldorf

Digital transformation is happening here

Düsseldorf – where business works



Contents

- 3 Digital transformation is happening here
- 4 Start-up ecosystem
- 6 Talent pool of digital trendsetters
- 8 Benefiting from synergies
- 10 Autonomous driving
- 12 Digital Innovation Hub
- 14 Germany's top location for business and foreign investment
- 15 Global business hub
- 16 Düsseldorf: world-class living and working
- 18 A perfect infrastructure
- 19 Düsseldorf Airport – gateway to the world
- 20 156 million consumers within 500 kilometres
- 22 Focus on your success
- 24 Contact

Digital transformation is happening here

Düsseldorf is the state capital of North Rhine-Westphalia, the largest German state. The region around Düsseldorf is a strong and very international business location with countless customers and cooperation partners for companies and start-ups, many of them offering digital technologies and services. The city and the state are dedicated to building a leading region for the development of the digital economy, including technological leadership in “Industry 4.0”, smart production and the digitalisation of manufacturing as well as digital services and strategies for corporates and SMEs.

50,000 students from several excellent universities in the city and the region have degrees in Computer Sciences, Information Technology and related fields of study. They form a great talent pool and an available workforce.

The state government has introduced a programme to support the infrastructure for digitalisation and is investing 7 billion euros in projects such as gigabit internet and a network of 6 digitalisation hubs. Düsseldorf co-funded one of these hubs and established the “Digital Innovation Hub/Düsseldorf

Rheinland GmbH”. International corporates and specialised small and medium-sized enterprises from different sectors cooperate with innovative start-ups or company teams to create digital solutions for the manufacturing, distribution, service and communications industries, not only in Düsseldorf but throughout the metropolitan region.

From telecommunications and autonomous driving to the retail, food, games and manufacturing industries, digital transformation is definitely happening here in Düsseldorf!

Start-up ecosystem

There are currently around 250 start-up companies in Düsseldorf, forming an important foundation for the innovative strength of the economy in and around Düsseldorf.

As part of Düsseldorf's initiative for start-ups and entrepreneurship, a long-term strategy and several projects have been defined by the start-up unit of the Office of Economic Development. The overall goal of the initiative is to create a positive and pro-business environment for entrepreneurship and start-up companies in Düsseldorf. As a result, Düsseldorf has attracted more than 80 start-ups in the past two years, some of them starting elsewhere, but coming to the economic centre of Düsseldorf to scale up. Düsseldorf's start-ups employ more than 2,000 people. Some former

start-ups have grown and scaled up immensely and are now model companies.

Düsseldorf's start-up scene:

- about 300 start-up events per year
- approx. 45,000 m² coworking spaces to come
- annual start-up week
- investor pitches
- university network to support start-up ideas



Digital technology enables us to make loans widely accessible through a marketplace and empower millions of people to realize their projects," says Philipp Kriependorf, co-founder of auxmoney.


Applying for a bank loan is a complex and laborious process, and often unsuccessful. Every year, millions of people make loan applications to banks that are wrongfully refused. auxmoney has developed a sophisticated scoring system to provide credit access to loan seekers turned down by banks. The

leading marketplace lender in continental Europe, which employs 130 people in Düsseldorf, offers borrowers fast and trouble-free access to loans. More than 50,000 investors have funded about 80,000 loans with a total volume of more than 600 million euros. On auxmoney, private savers and institutional investors directly invest in approved borrowers from different scoring classes. Avoiding the bank as intermediary, auxmoney can make more favourable loans available to more people while enabling investors to benefit from attractive risk-adjusted returns. Renowned investors such as Index Ventures, Union Square Ventures, Foundation Capital, Partech Ventures and Crosslantic Capital, a holding of ProSiebenSat1 Media, have invested in auxmoney.



**PHILIPP
KRIEPENDORF**

Co-founder of auxmoney

 www.auxmoney.com

auxmoney



MORE INFORMATION

▶ <https://youtu.be/Cm4-eKG0qwU>

▶ <https://youtu.be/e195f0rWS8g>

🌐 www.startup-city.de



Among the young companies taking the opportunities Düsseldorf has to offer for start-ups and scale-ups are:

- auxmoney
- Boxine
- Cumolocity
- doob Group
- Eurosimte
- Just Spices
- Kaasa health
- Kesselheld
- Peakwork
- PowerFolder
- Secusmart
- ShopCo
- Springlane
- StepStone
- trivago



The Düsseldorf region has a large pool of talent,” says ShopCo founder and CEO Jay Habib. “Düsseldorf is the most beautiful city on the Rhine River and about 25% of the entire German population lives within 150 kilometres. No other city in Germany can offer that.”

Everyone knows the advantages – and disadvantages – of shopping online. Users must coordinate multiple registrations, checkouts and passwords. But this could very well be a relic of the past, thanks to Shop.co and its universal shopping cart for online stores.



JAY HABIB

ShopCo founder and CEO

This innovative internet technology allows users to shop anywhere, and all store orders, checkouts and emails are saved in one place. The software was initially developed in Düsseldorf, and in 2015 a San Francisco office was added. The city of Düsseldorf helped the company to find suitable office space and supported its establishment. The start-up participated in numerous workshops and conferences for entrepreneurs, and is an active member of the Düsseldorf start-up ecosystem.



🔗 www.shop.co



Talent pool of digital trendsetters

Düsseldorf offers an extensive pool of qualified employees with a high level of experience in technology, industry and services. The city has more than 42,000 digital trendsetters, forming a huge network of expert employees with knowledge of network technologies. And for the talent of tomorrow, Düsseldorf offers world-class education in IT, engineering and design.

There are a total of 37 private universities, 12 Max Planck Institutes, 35 public universities located in and around Düsseldorf. There are 50,000 students studying Computer Sciences, Electrical Engineering and Information Technology in the catchment area of Düsseldorf (Aachen, Bonn, Cologne, Essen, Dortmund). Düsseldorf and NRW offer the best researcher network and skilled service providers for cutting edge digital solutions.



We relocated our European headquarters from Krefeld to Düsseldorf in July 2016 to give us better access to partners and young talent, and to be closer to the creative and digital scene,” says Masahiko Yamada, President and CEO, Wacom.



MASAHIKO YAMADA

President and CEO,
Wacom

Wacom is the world market leader in digital pen input technologies for tablets, interactive pen displays and digital interface technologies. Wacom Europe is a subsidiary of the Japanese Wacom Co. Ltd., which was established in 1983. The technology is primarily used in the creative industries such as art, design, film, special effects, animation, illustration, photography and product design. But Wacom's products also serve customers in the fields of medicine, education, financial services and IT. “Because the digital city of Düsseldorf has such a lively artistic, agency and fashion scene and hosts a variety of related business activities, it is the ideal location for us to boost our success through recruiting young talent, and exchanging ideas with other specialists,” says Masahiko Yamada, President and CEO, Wacom.





Düsseldorf is the digital capital of North Rhine-Westphalia, and it has been the right location for the head office of StepStone in the long term,” says Managing Director Dr. Sebastian Dettmers.

StepStone is the number one online job board in Germany. Companies from all over Germany place their job offers on StepStone but the portal also supports jobseekers by providing important tips and career strategies. Founded in 1996, StepStone is one of the pioneers in online recruitment, with now more than 30,000 customers. In Germany, StepStone is one of the most highly-visited online job boards with more than 14 million visits per month. More than 2,500 people from 20 countries work at StepStone, and more than 500 at the head office in Düsseldorf’s MediaHafen.

 www.stepstone.de/en



**DR. SEBASTIAN
DETTMERS**

Managing Director,
StepStone



MORE INFORMATION

 <https://youtu.be/WMdFYp9Hdgl>

 www.expatservicedesk.de/de.html



Benefiting from synergies – driving forward innovation

Düsseldorf's businesses and established companies are making full use of the opportunities emerging from the enormous expansion of digitalisation and the city's start-up scene.

Innovation is the driver of success and to continuously deliver it in quick succession represents an ongoing challenge for larger corporates. However, working together with digital professionals speeds up the cycle of innovation and raises synergy effects – a win-win situation for both sides.

Düsseldorf businesses are exploiting the potential to be gained from the start-up scene:

- with competitions for start-ups
- with accelerator schemes
- as mentors
- in collaborative activities.

Large companies benefit start-ups by sharing their know-how, supporting them in the development of their digital solutions and testing and bringing their products to market maturity. Large companies can also help market products from start-ups via their established sales channels. In turn, companies benefit from the ideas and innovative business models from start-ups, especially in the area of Big Data. Working together

drives forward development and innovations within companies and speeds up digitalisation processes. The Office of Economic Development can help you and your company to find appropriate cooperation partners for the digital era in Düsseldorf. Examples of established Düsseldorf companies who are successfully working together with start-ups include apoBank, Ceconomy, DDB, E.ON, Henkel, sms digital, Teekanne, Vallourec and Vodafone. Düsseldorf-based companies are the driving force behind digitalisation providing facilities for digital innovation and therefore building a perfect ecosystem for the digital transformation process:

- A4VR
 - doob Group
 - IOX LAB
 - LAVA Labs
 - Innovationhub
 - Robot Academy
 - SMS digital
 - voestalpine
- to mention but a few.

MORE INFORMATION


-  <https://youtu.be/Bfa873txDTI>
-  <https://youtu.be/1i-C3Ug46Uw>
-  <https://youtu.be/rePODQgMOPw>
-  <https://youtu.be/7TNcsGztyqU>

By working with Mapudo, we were able to extend our online portal to reach new target groups with specific products,” explains Christian Busch, Head of Online Sales at Vallourec.

The founders of the online platform Mapudo were matched with the steel tube manufacturer Vallourec through the Office of Economic Development’s mentoring scheme. The potential for cooperation was obvious. Vallourec has been able to present products that are not relevant for stockists on Mapudo’s platform which has led to substantial savings in process costs. Both businesses also see the cooperation as an opportunity to target customer groups even more precisely with online solutions thereby providing an even better service to customers.

The start-up was able to benefit from the steel company’s sector know-how, and Vallourec sees Mapudo’s speed and flexibility as an opportunity to respond quickly to the needs of the market.

 www.itube-portal.de

 www.mapudo.com



**NIKLAS
FRIEDERICHSEN**

Co-founder Mapudo (L.)

CHRISTIAN BUSCH

Head of Online Sales
at Vallourec (r.)



Welcome to the future: autonomous driving

One of six German test tracks for autonomous and connected driving is to be opened in Düsseldorf. The track is being funded by the German Ministry of Transport and is evidence of the key role Düsseldorf already plays in the advancement of digital and connected technologies.

The awarding by the German government of one of its test tracks for automated and connected driving to Düsseldorf confirms the city's leading positioning in innovative, future technologies.

Twelve partners from business and the public sector are involved including Düsseldorf's public transport provider Rheinbahn, the state-owned roads company Straßen NRW, Siemens, ZF TRW Automotive Holdings, Mobileye, Vodafone, Ericsson, ave Verkehrs- und Informationstechnik GmbH, RWTH Aachen University, the German Aerospace Center (DLR) and the City of Düsseldorf. When the basic technology has been set up on the test track, it will also be made available to other companies for testing vehicle functions.

Düsseldorf-based companies are contributing to autonomous driving through their know-how

and own developments. Düsseldorf's telecommunications giant Vodafone is providing intelligent networks and communication technologies. It is working on LTE-V2X and the new 5G mobile telecommunications standard. These will enable connectivity and the sharing of data between vehicles, pedestrians, traffic lights and much more.



MORE INFORMATION

 <https://www.strassen.nrw.de/verkehr/verkehrstelematik/komod.html>



Vehicles instantly connected to each other via radio technology can transmit information such as speed, position and the changing of lanes. Error-free communications in autonomous driving is also being worked on in Düsseldorf by the mobile communications company Ericsson.

Mobileye, who develops camera-based technologies for autonomous driving, has its European headquarters in Düsseldorf. Together with BMW and Intel, Mobileye plans to start producing completely autonomously driven cars by 2021. The ZF TRW Automotive Holdings Corp. is one of the largest suppliers to the automotive branch with approximately 600 employees in Düsseldorf. It is also carrying out intensive research into autonomously driven cars for the future.

A special feature of the Düsseldorf-based suppliers and developers of autonomous driving technologies is that they operate independently of car manufacturers.

Other Düsseldorf-based firms involved in driver-assist systems and automated driving include Renesas. There is also the company mVISE AG with its personalised adaptive cooperative system for automated vehicles.





Digital Innovation Hub

The Digital Innovation Hub Düsseldorf/Rhineland is a match-making and innovation platform for the region's start-ups, companies and universities with the aim of developing new digital business models, products and solutions.

It is located at the coworking space "STARTPLATZ" in the MediaHarbour district. Further targets of the "dighub" and its team of nine are to drive forward digitalisation and provide know-how and knowledge on digital transformation processes, giving fresh impetus to the region's companies.

Funding and facilities are provided by the federal state government of North Rhine-Westphalia, by the city government of Düsseldorf and more than 45 diverse cooperation partners working closely together.

Pen & Paper Hackathons, Demo Days, Idea Slams and the "Ignition Programme" (an acceleration programme for start-ups and teams from universities and companies) all demonstrate the broad range of dighub activities already providing major stimuli for digital transformation in and around Düsseldorf.

Members of the board:

- Commerzbank
- dighub e. V.
- Digitale Stadt Düsseldorf e. V.
- Düsseldorf Airport
- Hochschulnetzwerk Düsseldorf (university network)
- Huawei Technologies Deutschland
- IHK Düsseldorf (Chamber of Industry and Commerce)
- Offices of Economic Development Düsseldorf, city of Mönchengladbach, Rhein-Kreis Neuss
- PricewaterhouseCoopers
- Stadtwerke Düsseldorf (public utilities)
- StartupDorf
- Teekanne
- Vodafone Deutschland
- Wacom



The science of innovation management shows that innovation happens on the periphery of a sector, or even better, at the interface between two different sectors, and between different groups of people in institutions. So the task of digihub has been to bring them together, to enable them to work together and to innovate."



**DR. KLEMENS
GAIDA**

Digital Innovation Hub
Düsseldorf/Rhineland
region

"The Düsseldorf/Rhineland digihub is a matchmaker between small and medium-sized businesses, industry, start-ups and universities and has the clear aim of boosting new digital products and projects. The multitude of global market leaders in the region and in NRW was established by a spirited founding generation. As a digihub, we represent a link between the established economy and a vibrant and highly innovative start-up and university scene. We also stand for a new culture of innovation which specifically involves getting acceptance from the people working in companies."



PETER HORNIK

Digital Innovation Hub
Düsseldorf/Rhineland
region



 www.digihub.de

MORE INFORMATION

 www.digihub.de

 <http://www.digitalewirtschaft.nrw.de>



We are the motor for a digital Germany. With 5G, we are bringing gigabit speeds and ultra-low latency communications to the country. With our machine network, we are making the Internet of Things available to the mass market. In this future scenario, billions of devices will be




**DR. HANNES
AMETSREITER**

CEO Vodafone Germany

transmitting at the same time. Cost-effectively, energy-efficiently and in all locations. This will create new fields of application for industry. The whole of society will benefit from this in everyday life. From Düsseldorf, with our partners, we will be bringing innovative solutions to the whole country," says Dr. Hannes Ametsreiter, CEO Vodafone Germany.

 www.vodafone.de





Ranked as Germany's number one region for foreign direct investment, Düsseldorf is an international business hub in the heart of Europe.

Germany's top location for business and foreign investment

Thanks to its high quality of life and moderate living costs, the Düsseldorf region has become a magnet for international companies.

This, combined with a safe living environment, tolerance, open-mindedness and the famous Rhineland hospitality, means that the Düsseldorf region is now the third most popular destination for foreign direct investment in Europe, just behind London and Paris.

The city's central location on the European continent as well as its excellent transportation infrastructure, means that many European destinations are within easy reach. The city government is decidedly pro-business and actively promotes entrepreneurship.

If you are going to invest in Germany, invest in Düsseldorf!

MORE INFORMATION

 <https://youtu.be/JGoPJt4ujNU>



An international location for numerous multinational companies in different sectors, Düsseldorf makes the ideal base in Europe.

- The economic area Düsseldorf is home to more than 5,000 branch offices and subsidiaries of foreign firms
- Düsseldorf is a front-runner in terms of direct foreign investment
- For the Japanese, Düsseldorf has been the central hub in Europe for 60 years
- The most dynamic base for Chinese companies in Germany
- 40 diplomatic missions, 33 foreign chambers of commerce and funding agencies facilitate business contacts and foster a climate of international business in the city on the Rhine
- International schools hosting more than one thousand students from nearly 50 countries
- Several international kindergartens

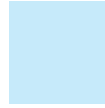
Global business hub



Düsseldorf: world-class living and working

Düsseldorf is an attractive, cosmopolitan and growing city with foreigners accounting for more than 20% of the city's population. As the state capital of North Rhine-Westphalia, Düsseldorf enjoys an excellent reputation among expats as a great place for their families but also for their career.

The well-respected Annual Quality of Living Survey from the Mercer consulting group ranks Düsseldorf sixth among all cities in the world. The leading internet portal for expats, InterNations, also compared more than 60 countries and 35 cities in their 2016 Expat Insider Survey. The not-so-surprising result: Düsseldorf ranked fourth in the world in terms of quality of life, work-life balance, ease of settling in, cost of living, and family life.




trivago

Düsseldorf is home to our growing team of more than 1,300 employees from 80 countries," says Rolf Schrömgens, co-founder and CEO of trivago, a global hotel search engine focused on bringing each individual to their ideal hotel. "We feel at home here. It is no coincidence that Düsseldorf is a city with a high quality of life."



ROLF SCHRÖMGENS
Co-founder, CEO of trivago

Founded in 2005, trivago has set its sights on changing the way travellers search and compare hotels. trivago's global hotel search engine offers access to approximately 1.8 million hotels in over 180 countries (as at 30 June 2017). The founders, Rolf Schrömgens, Malte Siewert and Peter Vinnemeier, met while studying at the HHL Leipzig Graduate School of Management. They founded trivago with the vision of creating a "wikipedia for travellers". The concept has evolved ever since. Today, the global hotel search engine is the biggest tech company in the region, employing more than 1,300 individuals. By mid-2018, trivago should be installed in its new modern headquarters in Düsseldorf's MediaHafen. In December 2016, trivago went public on the NASDAQ. The founders are still involved in the business and continue to shape trivago's strategic development.

 www.trivago.com

A perfect infrastructure

Centrally located at the very heart of Europe, Düsseldorf is globally connected – by land, water and air.

By air

With 70 airlines that service 200 destinations worldwide, DUS is an efficient hub for both people and goods travelling between Germany and the rest of the world. More than 23 million passengers, 217,000 departures and arrivals and 107,000 tonnes of cargo pass through the airport annually. It's a busy airport with twice daily connections to the most important European destinations and more than 130 intercontinental flights per week. But despite all of this activity, the airport is located in close proximity to the city centre ... about 10 minutes by car and 13 minutes by train. Düsseldorf is the "be there in ten minutes" city.



By road

Düsseldorf is integrated into Europe's densest network of motorways, with 13 motorway junctions within the city itself. Amsterdam and Brussels are two hours away by road, with Paris reachable in four hours.

By rail

More than 900 trains arrive at the main station daily, around 150 of which are long-distance trains.

By water


The city by the Rhine benefits from two large ports linking directly to international waterways. The Neuss-Düsseldorf ports make up the third largest inland harbour in Germany, handling 16 million tons of cargo annually. The biggest inland harbour in Europe is just 20 kilometres down the Rhine in Duisburg.



Düsseldorf Airport – gateway to the world

Düsseldorf Airport (DUS) is Germany's third largest airport and is conveniently located very close to the city centre.



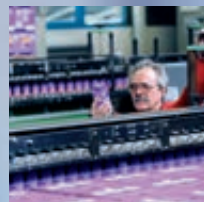


156 million consumers within a 500-kilometre radius

Düsseldorf is the ideal base for business within continental Europe. About 31% of the European Union's total population lives within a 500-kilometre (300-mile) radius of Düsseldorf – a distance that a truck can easily cover in a day.

About 50% of the total EU purchasing power is generated within this radius –

making Düsseldorf the perfect launch pad for entry into European markets. A total of 11.4 million people live within one hour's travel distance by car and more than 500,000 companies are based here. Nowhere else in Germany is there such a high density of providers and users, customers and business partners.



We value Düsseldorf's proximity to numerous markets, to excellent universities and research establishments, the outstanding infrastructure and international transport links," says Dr. Daniel Kleine, Düsseldorf Site Manager, Henkel. "At the same time, Düsseldorf is a pleasant place to live in and it also attracts international professionals."

In 1876, the 28-year old Fritz Henkel founded the company Henkel & Cie with two business partners to manufacture powder detergents in Aachen. Only two years later, the company founder re-located the company from Aachen to Düsseldorf. With that decision, Fritz Henkel demonstrated the right instinct for important location factors such as good transport connections. Today, Henkel is one of the most international companies in Germany with around 18.7 billion euros of sales (2016). About 80% of the company's 50,000 employees work outside Germany. However, Düsseldorf is still the corporate headquarters and 5,900 staff are located here, including the important R&D department and its second largest production site.



DR. DANIEL KLEINE

Düsseldorf Site Manager,
Henkel



Focus on your success

Düsseldorf has a thriving international business community, with one in every seven companies having an international background. The city of Düsseldorf's Office of Economic Development is the central point of contact for international companies, providing comprehensive advice and support on establishing a company but also advice during every phase of development. A strong network connects new firms with local and international corporates and innovative SMEs. Information is offered in 10 languages, and consulting services are offered in English, French, Japanese, Chinese and Russian.

What we do:

- Support the initiation of R&D cooperations and digital cross-innovations
- Support expats
- Deal efficiently with immigration, employment and tax procedures
- Find and hire the talents you need

In terms of recruiting, we certainly have an advantage because qualified digital talent want to move to Düsseldorf," says Maximilian Wagner, CEO of SMS digital GmbH.

When global markets are in transition, companies need new and forward-looking business solutions. The Düsseldorf-based SMS group GmbH, a group of global players in plant construction and mechanical engineering for the steel and non-ferrous metals processing industry, has taken this step. The start-up company SMS digital GmbH was launched in 2016 to face the challenges of Industry 4.0 and find innovative ways to lead the family-owned SMS group into the digital future. With a small team of 11, the start-up company provides SMS customers with innovative digital products and services. SMS digital is located in Schwanenhöfe, in a trendy industrial loft space in the Flingern quarter of Düsseldorf. "We could have established our office anywhere, but it was important to be in close proximity to the headquarters," says Maximilian Wagner, CEO of SMS digital.



MAXIMILIAN WAGNER
CEO of SMS digital GmbH

 www.sms-digital.com

SMS  **digital**



The Office of Economic Development is a one-stop agency and offers tailored investment services such as:

- Information on establishing a company
- Establishing contacts to local service providers, such as lawyers and tax consultants
- Help in finding commercial real estate
- Advice and support for visas and permits
- Support during the entire set-up process and also settling in
- Linking up to business networks



MORE INFORMATION

 <https://youtu.be/Bfa873txDTI>

Robert Jänisch about rapid prototyping, his motivation for setting up his own business and the start-up location Düsseldorf



IOX LAB offers high-tech tools – such as 3D printing – for experimentation and prototyping,” says founder and Managing Director Robert Jänisch. “We play a highly active role in shaping the IoT megatrend in the start-up cradle of Düsseldorf.”

The Internet of Things, in which any device can be connected to the internet but also to each other, has tremendous market potential for new products and services. Many companies have innovative IoT concepts, but are challenged when it comes to transforming them into reality. This is where IOX comes in. Launched in 2015, the start-up company uses rapid prototyping technology to test new product ideas ... in a matter of weeks. Prototypes can serve as proof of concept, helping companies to make better decisions, develop products faster and reduce market risks. The IOX office has the exciting atmosphere of a fast-growing start-up: a relaxed, open-space design in the middle of the chic Düsseldorf MediaHafen district.

 ioxlab.de



IOX

ROBERT JÄNISCH

Founder and Managing Director IOX LAB



Contact



Head of Office

Uwe Kerkmann
+49 211 89-95500
uwe.kerkmann@duesseldorf.de



Deputy

Andre Boschem
+49 211 89-95502
andre.boschem@duesseldorf.de



International Business Service

Annette Klerks
+49 211 89-95503
annette.klerks@duesseldorf.de

Imprint

Publisher

City of Düsseldorf | The Mayor
Office of Economic Development
Burgplatz 1 | 40213 Düsseldorf
Germany

Responsibility according to German press laws

Uwe Kerkmann

Concept

Dr. Marion Schwartzkopff

Design

doppel. design, Düsseldorf

Printing

Albersdruck GmbH & Co. KG,
Düsseldorf

X/17-1

<https://www.duesseldorf.de/international/international-business-service/business/digitalbusiness.html>

Photos: p. 1: Rainer Unkel, nadla/iStock; p. 2/3: Jörg Dickmann, starline/freepik.com; p. 4: Carsten Behler/auxmoney; p. 4/5: Andrey Prokhorov/iStock; p. 5: shop.co, Tobias Heckmann, PeopleImages; p. 6: Wacom Europe; p. 6/7: mapodile/iStock; p. 7: Stefan Simonsen/StepStone; p. 8/9: Pashalgnatov/iStock; p. 9: Rainer Unkel; p. 10: Chesky_W/iStock; p. 10/11: Just_Super/iStock; p. 12: nadla/iStock; p. 13: digihub Düsseldorf Rheinland, Vodafone, Andy Ridder/Vodafone; p. 14/15: from2015/iStock; p. 15: rcfotostock/Fotolia; p. 16: klug-photo/iStock, starline/freepik.com; p. 17: trivago; p. 18/19: www.fotografie-wiese.de/Düsseldorf Airport DUS; p. 20/21: Peoplecreations/freepik.com, starline/freepik.com; p. 21: Henkel; p. 22: sms group; p. 22/23: liuzishan/iStock; p. 23: IOX LAB, Rainer Unkel; p. 24: Paul Esser, davis/Fotolia, starline/freepik.com