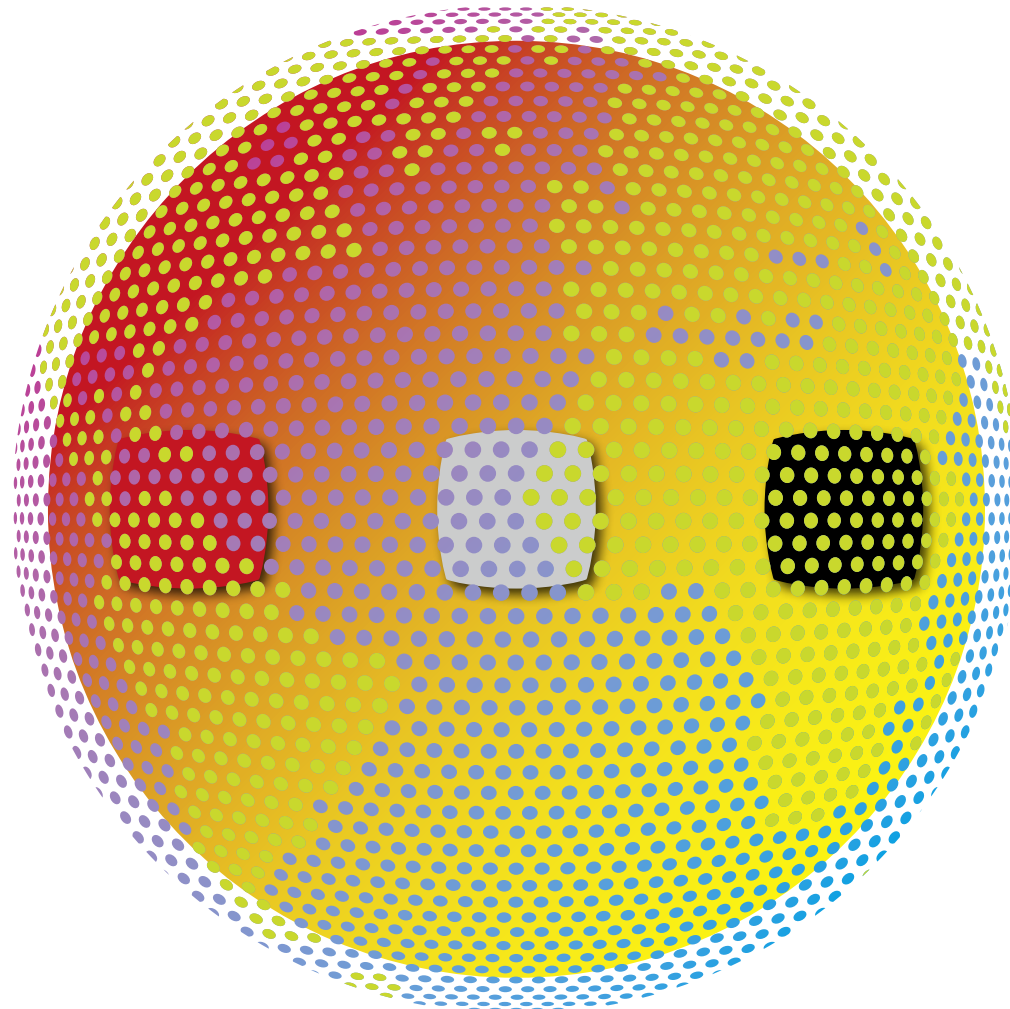


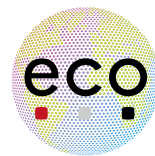
2017 ANNUAL REPORT



ASSOCIATION OF THE
INTERNET INDUSTRY

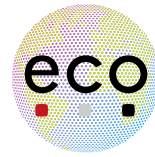


WE ARE SHAPING THE INTERNET
IN ALL OF ITS FACETS



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Oliver J. Süme

Vice-Chair of the Board and Board Member for Policy,

Law & Regulations until 11/2017

Chair of the Board since 11/2017

1. Forward

Dear Readers,

2017 was election year in Germany – and in late 2017, the eco Annual General Meeting also voted.

In 2016, at this juncture, Prof. Michael Rotert welcomed you and indicated that fundamental changes would be taking place in 2017 in the scope of the implementation of our eco Strategy 2020.

Today I would like to welcome you as newly elected Chair of eco – Association of the Internet Industry and start by thanking, on behalf of all members and employees of the association, our long-standing Chair and

current Honorary President for his commitment and energy!

If it were not for Michael Rotert, eco as an association would not have achieved the high levels of relevance and visibility which you will once more learn much about in this year's Annual Report.

But I would also like to sincerely thank our members for the confidence they have placed in me by electing me as Chair of the Board.

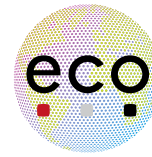
Together with the management team, which has likewise been newly appointed, I want to build on the successful work of recent years, and to continue to serve as the voice of reason for our members and for the industry in these turbulent times, in order to successfully shape the framework conditions for a future-oriented and sustainable Internet industry.

With Klaus Landefeld as my deputy, and Prof. Norbert Pohlmann and Felix Höger as further members of the Board, we are a seasoned and experienced team that wants to do justice to this aspiration. I look forward to these challenging tasks, to the constructive exchange with our members and industry stakeholders, and to fruitful cooperation.

And for now, I wish you an informative read!

Your

Oliver J. Süme



Prof. Michael Rotert

eco Chair of the Board until 11/2017

eco Honorary President since 11/2017

Dear Readers,

Looking back at the year 2017 and on the past 17 years in my role as Chair of the Board of eco – Association of the Internet Industry, my main feeling is pride – but this is naturally also tempered with a certain measure of nostalgia.

Pride, because over the last 17 years, our association has managed to achieve all of the strategic goals that we defined together.

Today we represent over 1,000 member companies and are on location with our own offices in Berlin, Brussels, Cologne, and Munich.

An influential voice for the Internet industry, we are warmly welcomed at both national and international committees as a source of inspiration and knowledge. We are also industry network partners and, at numerous events and congresses, we accordingly represent our core values for a free, open, and trustworthy Internet. In so doing, we fulfil our role as an industry association in contributing to the responsible digital transformation of the economy, public administration, and society.

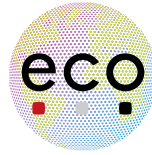
Our track record is also underpinned by our eco Strategy 2020, which makes the association fit for the future and its new challenges.

When I took over the chairmanship of the association 17 years ago, we were still at a stage where we had to fight to have digitalization and the Internet's importance for the economy acknowledged. Again and again, we had to shine a spotlight on the emerging transformation processes that our industry would exert on the traditional branches of the economy and on society. Today, Internet-based technologies permeate all business processes and are a central component of social interaction. In the federal government alone, 14 ministries and around 500 employees are dealing with this area – our topic has really taken hold in politics.

The nostalgia of which I spoke at the beginning is relativized in that, as elected Honorary President of eco, I will continue to be closely connected to the newly elected Board and with eco's team of employees. I am confident that, in this new role and together with you, I can continue to provide many new and important points of inspiration for eco in the coming years. And that is something that I'm really looking forward to!

With best regards,

Prof. Michael Rotert



Harald A. Summa
CEO

2. Report from the Management

As CEO, in years past I could always look back on exciting years. In keeping with the maxim, "Nothing stays the way it is", eco remained constantly in motion. Likewise, in 2017, eco's staff continued to represent the interests of its members, faithful to our claim, "We are shaping the Internet", in numerous projects and at a wide array of events and meetings, and supported politicians, business, and society in harnessing the potential of the Internet.

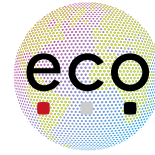
This 2017 Annual Report provides detailed information on all of these activities. That being the case, here I would like to draw attention to just a few aspects of what we do for our members.

Bringing together all strands of our members' different opinions and views is not always easy. I would therefore like to take this opportunity to fly the flag for our political work in Berlin and Brussels.

No other industry is currently more in the focus of political change than the Internet industry. Large corporations and small companies alike are faced with sustained change in the markets, partly driven by competition, and often also in a regulated form. The effects of political action are often unclear and have widely different characteristics. It is therefore important to address politicians in an unambiguous manner and with clear recommendations for action, based on a consensus of the parties involved.

With its large diversity of formats, eco is always striving to draw members' attention to developments and their possible consequences, with a view to jointly creating better framework conditions for our members' business environment. In so doing, we would often like to see more input and discussion on our proposals. At this point, therefore, we would like to make an appeal for more participation and courage in expressing political opinions!

It can sometimes be difficult to predict what the exciting topics of the coming years will be, simply because technological progress and the speed of innovation are accelerating so rapidly. Start-ups with disruptive business models impact what's happening just as much as those groundbreaking developments that exceed all



expectations. Digitalization stops at nothing and for nobody.

Allow us to adopt the intelligence of the swarm. Take part in eco's process of topic selection. This is the only way to guarantee that our offers will continue to be to your taste in the future.

For me as CEO, 2017 represented a special challenge, in that I worked increasingly on securing the future of the association and its corporate activities. Not only did this include management succession planning, but also planning for national and international expansion.

To position ourselves for the future, my role as solo managing director at eco, which has been in play since eco's foundation, is to be re-tailored from January 2018 to involve joint management with Alexander Rabe. A corresponding amendment to the Articles of Association was adopted at the eco Annual General Meeting at the end of November 2017. In addition, a newly created presidium, the membership of which is still to be announced, will provide advice to the board and management from 2018.

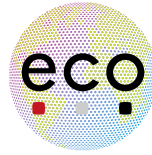
The appointment of Ivo Ivanov as CEO of DE-CIX International GmbH also paved the way for the future of DE-CIX. In the DE-CIX Group AG, we are responsible as CEOs on an equal footing for the welfare of DE-CIX companies.

DE-CIX's internationalization strategy, launched in 2013, was raised to a new level in 2017. We entered the Indian subcontinent with a joint venture and started offering peering services in Mumbai at Mumbai IX, powered by DE-CIX. Further locations in India are to follow shortly.

Much happened again in 2017 and much will happen in the coming years. Help us in our development and continue to give us your support and encouragement,

Your

Harald A. Summa



3. Association Development

3.1 Finances

The eco Group successfully concluded the 2017 financial year and grew as in previous years. The first fruits were borne from both the regional expansion of the cooperation with networker NRW e. V., which began in 2016, and the establishment of the south German branch office presence in Munich.

The joint organization of events by eco and networker NRW not only optimized costs, but also managed to win 75 new members for the eco Association and 28 members for networker NRW.

Similarly, positive developments resulted from the eco presence in south Germany and Munich in particular. The events that took place throughout the year were consistently

successful, and the visibility of eco in the B2B sector was significantly increased.

Notwithstanding its revenue increase, the steadily growing Certified Senders Alliance (CSA) was unable to compensate completely for the loss of the Internet Content Task Force (ICTF), meaning that generated proceeds increased by just 0.6 percent as compared with the two to three percent of previous years; but the 0.6 percent nonetheless represents an increase in adjusted revenue.

As presented in the Annual Report 2016, the "SIWECOS – on the safe side" project had an influence on revenues and costs in 2017.

Due to its delayed launch in 2016, personnel and project costs in the form of marketing expenses and PR services exerted a notable impact. The corresponding costs are largely reflected in the increase shown in public funding.

As in previous years, other income included remuneration in kind, reimbursement of advanced costs, and offsetting of personnel costs.

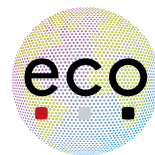
The development of the subsidiaries was variegated in the 2017 financial year. After a slight loss in the previous year, eco IT Service & Beratung GmbH was once again able to report a small profit. eco Service GmbH, on the other hand, closed the financial year with a slight

loss due to higher event costs and lower income from sponsors.

The "Trusted Cloud Data Protection Profile for Cloud Services" (TCDP) project is in the starting blocks for 2018 and represents the first certification scheme specifically tailored to the requirements of the GDPR.

In this way, the eco Association continues to engage in European third-party funding programs in order to strongly establish the eco brand in the EU.

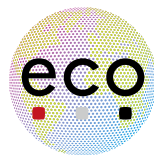
With a constant growth in the number of members, the eco Association's budget for 2018 assumes a moderate growth of 3.5 percent.



Revenue and Expenditure in 2017					Budget for the Financial Year 2018	
eco e.V.	Actual Value 2017 in Euro	Percentage	Actual Value 2016 in Euro	Change from preceding year	Planned for 2018 in Euro	Percentage
Revenue						
Member fees	1,742,137	56.3 %	1,697,213	2.6 %	2,000,000	60.7 %
Public funding	456,209	14.7 %	276,590	64.9 %	350,000	10.6 %
Generated proceeds	735,255	23.7 %	730,586	0.6 %	850,000	25.8 %
Other*	162,676	5.3 %	18,300	788.9 %	95,000	2.9 %
Total revenue	3,096,277	100 %	2,722,689	13.7 %	3,295,000	100 %
Costs						
Personnel costs	1,544,813	48.7 %	1,282,227	20.5 %	1,760,000	53.6 %
Administration costs	206,077	6.5 %	196,048	5.1 %	245,000	7.5 %
Occupancy costs	129,321	4.1 %	155,550	-16.9 %	140,000	4.3 %
Contributions	32,983	1.0 %	33,837	-2.5 %	32,000	1.0 %
Travel costs	89,327	2.8 %	88,029	1.5 %	100,000	3.0 %
Investments	13,425	0.4 %	71,689	-81.3 %	15,000	0.5 %
Marketing/Projects	994,818	31.4 %	770,769	29.1 %	884,000	26.9 %
Administrative accounting/ legal costs	70,799	2.2 %	57,135	23.9 %	60,000	1.8 %
Other/taxes**	90,281	2.9 %	103,466	-12.7 %	47,000	1.4 %
Total costs	3,171,844	100 %	2,758,750	15.0 %	3,283,000	100 %
Surplus/deficit	-75,567		-36,061		12,000	

* Other revenue: incl. charging benefits for cars, offsetting of personnel costs, reimbursement of advanced costs, etc.

** Other expenditure: Bank fees, artists' social security contributions, insurances, further education, advanced costs, etc.



3.2 eco Association Structure and Holdings

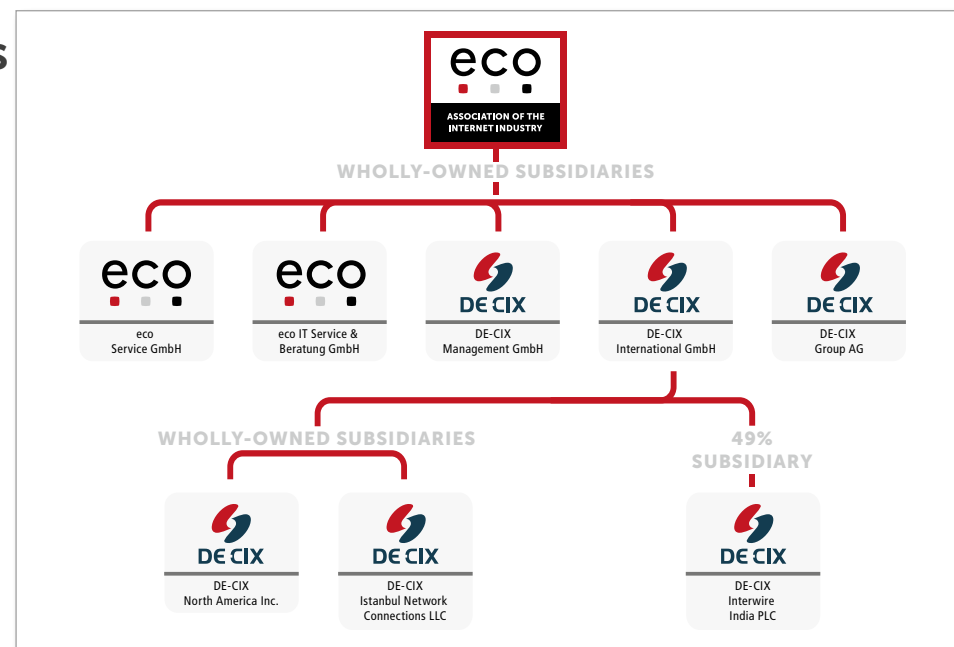
The current eco – Association of the Internet Industry was founded in 1995 as the Electronic Commerce Forum e. V. Over the years, not only has the name been changed several times, but a number of other companies have also been founded around eco to support the work of the association through various services for its members. While eco was never a non-profit association, it was conceived and constructed from the outset with taxable and non-taxable business areas. Since 2003, the newly added companies have been located for accounting purposes in an asset management section.

In 2017, for the first time, DE-CIX's internationalization strategy – initially launched in 2013 – also took the route of acquiring a holding in an existing company. This was required in order to enter the extremely promising Indian market, where local legislation and telecommunications regulation only permit joint ventures. For this reason, a 49 percent stake in Mumbai IX was acquired and transferred to DE-CIX Interwire India PLC. Mumbai IX operates according to the same concept as all DE-CIX exchange points in a neutral, distributed structure, which makes several data centers accessible through one infrastructure. With close to 100 connected customer networks by the end of 2017, Mumbai IX has already become the leading provider on

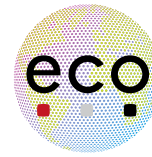
the Indian subcontinent. Additional locations in other cities in India are planned. Delhi, Chennai, and Kolkata are on the expansion list.

In order to be able to better manage the global structures going forward, DE-CIX Group AG was also founded in 2017. As a holding company, this will consolidate all activities and investments of DE-CIX in the future. To this end, DE-CIX International AG was converted into a GmbH (limited liability company).

In Germany, DE-CIX currently operates exchange points in Frankfurt, Hamburg, Düsseldorf, and Munich. International locations include New York and Dallas in the USA, and Madrid, Marseille, Palermo, and Istanbul in Europe. In Dubai, DE-CIX operates the UAE-IX.



eco – Association of the Internet Industry	eco Service GmbH eco IT Service & Beratung GmbH DE-CIX Management GmbH	DE-CIX International GmbH	DE-CIX North America Inc.	DE-CIX Group AG
CEO	CEO	CEO	Board of Directors	Supervisory Board
Harald A. Summa	Harald A. Summa	Harald A. Summa	Harald A. Summa	Felix Höger (Chair)
Board		Ivo Ivanov	Ivo Ivanov	Klaus Landefeld
Prof. Michael Rotert (until 11/2017)			DE-CIX Istanbul Network Connections LLC	Rudolf van Megen
Oliver J. Süme				Board
Klaus Landefeld			Board of Directors	Harald A. Summa (CEO)
Prof. Dr. Norbert Pohlmann			Harald A. Summa	Ivo Ivanov (COO)
Felix Höger			Ivo Ivanov	



Katrin Mielke
Membership Manager

3.3 More than 1,000 member companies ensure industry power

eco is the largest association of the Internet industry in Europe and is growing constantly. By the end of 2017, the association was able to register close to 1,060 members, who together are working to shape the Internet.

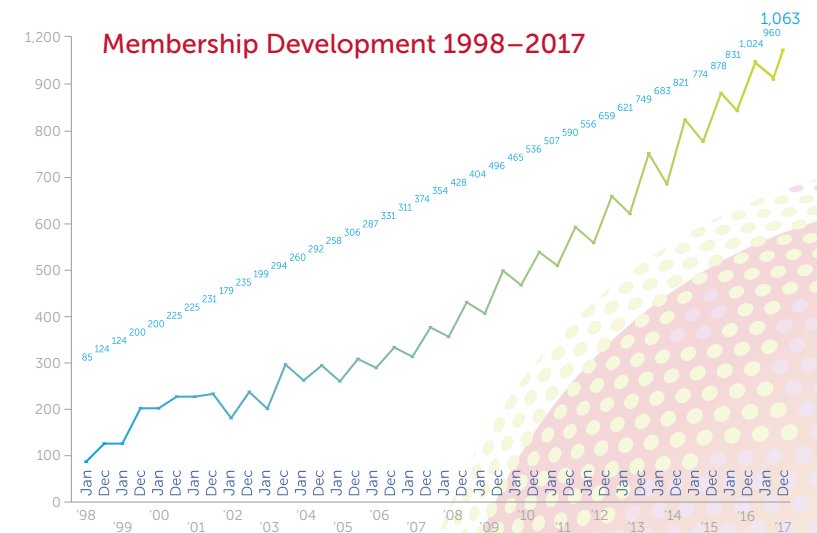
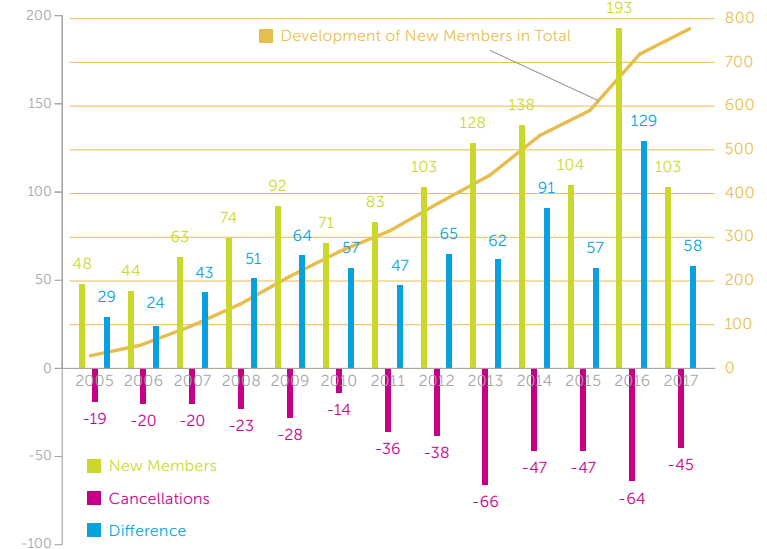
Digitalization is penetrating more and more areas of our professional and private lives, which is reflected in the constant growth in the association's membership numbers. In more than 100 eco events, members can get fully informed about current developments and meet potential business partners and customers. They take the opportunity to get informed/to present themselves on location and to exchange

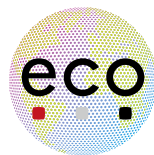
knowledge with specialists and business leaders from all segments of the Internet industry, as well as with key politicians.

Among the member companies, there are Internet service providers, application service providers, telecommunication companies, domain suppliers, hardware manufacturers and software vendors, cloud services providers, IoT specialists, data center operators, content providers, and many others.

The list of all eco members can be found in Chapter 14; you can read more about the benefits for members at: international.eco.de/about-eco/membership

New Members, Cancellations and Mergers 2005–2017





eco Board 2017

Prof. Michael Rotert

Chair of the Board until 11/2017

Honorary President

Managing Partner

maxspot GmbH

Oliver J. Sümme

Vice-Chair and Board Member for

Policy, Law & Regulations until 11/2017

Chair of the Board since 11/2017

Attorney-at-Law / Partner

Fieldfisher (Germany) LLP

Klaus Landefeld

Board Member for Infrastructure &
Networks

Vice-Chair since 11/2017

Managing Director nexiu GmbH

Felix Höger

Board Member for Online Services /

Cloud Computing

Chair of Supervisory Board

DE-CIX Group AG

CEO Höger Management GmbH

Prof. Dr. Norbert Pohlmann

Board Member for IT Security

Professor and Managing Director of the

Institute for Internet Security – if(is)

4. Reports from the Board

4.1 Policy, Law & Regulations

The Internet industry, digitalization, and the digital transformation of the economy, society, and the state have continually gained in importance in recent years. Accordingly, Internet and network-related political topics have become a focus on national, European, and international levels and have become the subject of numerous legal and regulatory discussions and political activities. eco promotes a modern Internet policy in order to make the most of the opportunities and potential of digitalization, and to actively shape digital transformation. The Policy, Law & Regulations Division brings together eco's expertise on the wide array of topics and ensures that the association positions itself consistently and sustainably in its dealings with political stakeholders.

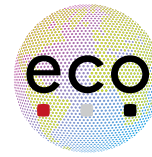
eco represents the political interests of its members through the Capital Office in Berlin and its office in Brussels, and keeps members informed about current developments and planned legislation. The interests of member companies feed directly into the association's developed and coordinated positions on relevant topics and from there into current political debates, whether this is through events, bilateral conversations, or through political press relations work. Current position papers, statements, and background papers, as well as PR activities, can be accessed on the division's area of the eco website:

www.eco.de/politik-recht

In Germany, the year 2017 was dominated by the approaching end of the legislative term. The election campaign started in Germany even before the parliamentary summer break.

The Capital Office took this opportunity to advocate for the inclusion of Internet policy topics and the positions of the Internet industry in electoral manifestos. After the federal elections on 24 September, the formation of the government began to be negotiated in various exploratory talks and coalition negotiations. As a "Jamaica" coalition (a coalition between the Christian Democratic Union/Christian Social Union (CDU/CSU), Free Democratic Party (FDP), and the Green Party) was not agreed upon, the Union once again formed a coalition with the Social Democrats (SPD) in Merkel's Cabinet. The forming of the government and the end of the negotiations on the coalition agreement dragged on into the year 2018.

There were also numerous other Internet and network-policy initiatives and activities of the



*Oliver J. Süme, Attorney-at-Law
Vice-Chair of the eco Board
Board Member for Policy, Law & Regulations until
11/2017
Chair of the eco Board since 11/2017*



*Alexander Rabe
Head of Capital Office
Head of Policy, Law & Regulations Division*



*Henning Lesch, Attorney-at-Law
Deputy Head of Capital Office
Head of Law & Regulations Team*

federal government which were significant for the Internet industry. The discussion on IT security, which has become a focus of digital policy in Germany and Europe in the last few years, continued to feature prominently. Further intervention points for political lobby work arose from the discussion on the Network Enforcement Act (NetzDG).

The EU General Data Protection Regulation (GDPR), which will apply from May 2018, was also a reason and opportunity to inform member companies about current developments and to support them in conforming with the regulation. In January 2017, the EU Commission presented a draft for an ePrivacy Regulation, which gave rise to additional new questions about its interplay with, delimitation from, and relationship with the GDPR. The ePrivacy Regulation is intended to replace

the outdated ePrivacy Directive and to complement the GDPR.

The German Blanket Data Retention Act, and the reintroduced obligation to retain data – which had to be fulfilled by 1 July 2017 – was a further focus of the division's activities. On a European level, the political lobby work was dominated by the parliamentary debates on the modernization of copyright law as well as by legislative efforts in the areas of IT security and cyber security.

eco was actively involved in the development of the legal framework on a European level through its Brussels office and the close cooperation with the European umbrella association EuroISPA. In numerous appointments and talks with Members of the European Parliament and representatives of the European

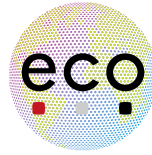
Commission, eco was able to represent the interests of its members and use the opportunity to discuss legal policy on a European level.

eco has set itself the goal of focusing legislative activities more strongly on a local state level and to expand its regional political activities. The topics of media regulation, broadband extension, and the digitalization of administration are of particular interest. eco is already cooperating with the networker NRW association in the state of North Rhine-Westphalia. Other states in which eco plans to particularly expand its activities are Hamburg, Hesse, Baden-Württemberg, Bavaria, and Rhineland-Palatinate.

In the reporting year, for the first time, the eco Complaints Office published its own

annual report. In March, the report was presented to the public in an event in Berlin with State Secretary Gerd Billen. The annual report documents in a transparent manner the successful work of the eco Complaints Office in the fight against illegal content on the Internet.

In Chapter 5, you can find further details on the Internet and digital policy-related legislative procedures and focus topics on the national, European, and international levels, as well as details on the Complaints Office, on events, and on the PR work.



*Prof. Dr. Norbert Pohlmann
Board Member for IT Security*

4.2 IT Security

Due to the growth in digitalization, the Internet industry is becoming more and more important. However, the risks that accompany this growth are also rising noticeably and the IT security situation is worsening.

The consequences of ransomware, which encrypts data on our IT systems and then demands money to decrypt it again, showed again in 2017 that entire industries can suffer damage which in turn impacts the real world. Wi-Fi encryption, which was believed to be secure, along with "reliable" CPUs, turned out not to be so secure or reliable after all and proved how vulnerable we are across the board – and how urgent action is. Fake news, or

rather the verifiability of how real and substantial information is, has gained an unforeseen significance.

These are just a few examples from 2017; all of which shock and show us that there is still another step, an important one, that needs to be taken towards a secure and trustworthy future. Crucially – without IT security there cannot be sustainable digitalization!

Europe furthers IT security

Europe has invested a lot of energy in legislation in the field of IT security and data protection in the last few years. One key measure is the European General Data Protection Regulation (GDPR), which will harmonize how

personal data is processed by private companies and the public sector throughout the European Union. This is designed not only to protect personal data within the EU, but also to guarantee the free flow of data within the European single market.

Another measure is eIDAS, a regulation dealing with electronic identification and trust services for electronic transactions in the EU Single Market which aims to foster even more harmonized trust services in Europe.

The NIS Directive was also enacted in 2016 as a European framework aimed at ensuring a shared high level of security for networks and information systems in all EU Member States, so economic and social activities and, in particular, the European Single Market, can function smoothly.

Work is also underway on the ePrivacy Regulation and the EAID Directive, which are intended to create a framework for the free transfer of non-personal data in the European Union, whilst further initiatives are due to follow. Additional regulatory subject areas are to be expected from Europe in future.

The federal election and its opportunities

Even before the election, through its ongoing political activities in Berlin, eco had already worked intensively at introducing the topics of security and trust into the political debate.

The eco event format *pol/Talk* allowed for many interesting discussions with politicians, which enabled us to optimally position our ideas. In the Network Policy Forum 2017, we were also able to push our ideas and points of view in the discussions with companies and administration which were attended by representatives of policy-makers and ministries.

Cyber security services

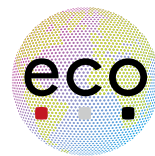
eco offers a service with botfrei.de and botfree.eu that helps Internet users to free their IT systems of botnet malware and to make them lastingly secure. This project, which was formerly publicly-funded, is run in cooperation with Internet service providers and technology partners like G DATA and Avira. The botfrei.de forum also offers expert support and is used very actively.

Secure Websites and Content Management Systems project

Since the Internet Security Days 2017, the SIWECOS project's solutions have been in operation as a service. SIWECOS offers a free website scan for SMEs as well as a SIWECOS hoster service – MOD security rules for the defense against cyber attacks on CMS installations on hosts.

Internet Security Days

In 2017, the Internet Security Days took place on 28 and 29 September in the Phantasialand theme park in Brühl. Over 300 participants came together under the motto "Secure.



Digital. Connected" to get up to speed on topics such as the Human Factor, Advanced Cybercrime, Security by Design, and Connected World. The next Internet Security Days will take place on 20 and 21 September 2018, again in Phantasialand.

nrw.uniTS project

eco has been active for many years in the nrw.uniTS network, which is an organizational network for all IT security companies, particularly in the NRW federal state, whose focus is on promoting cooperation. nrw.uniTS organizes, coordinates, and promotes contact, knowledge, projects, and activities in the area of IT security which are useful for individual companies and others, but which they would not manage to do on their own. The cooperation between universities and the industry ensures the connection of application-oriented top research in IT security with practical, hands-on entrepreneurship. Events, participation in fairs, and the drafting of strategies are among the network's successful activities.

IT security is once again a leading topic

IT security was again one of the most important topics in the PR communication of the eco Association in 2017. Alongside interview requests, numerous requests for information on security topics from the consumer's point of view came from TV and radio, as well as from print and online media. Awareness-raising, the representation of contexts and interconnections, and concrete recommendations for action are those areas where the eco Association can contribute in order to promote more IT security.

IT Security Specialist Advisory Board

In 2017, the new IT Security Specialist Advisory Board met for the first time and discussed general and specific challenges in the field of IT security with the Competence Group leaders, the eco management team and Board, and experts from the Internet industry. This resulted in the drafting of focus topics for the Competence Groups.

Competence Group Anti-Abuse

In 2017, the CG Anti-Abuse dealt with the topics of the IT Security Act as well as better abuse processes and awareness-raising on such abuse processes among ISPs'/hosters' management. The CG is a closed group just for members and is mainly used for confidential communication and exchange among ISPs and hosters.

Competence Group Security

The CG Security devoted itself in 2017 above all to the topics of cloud security, encryption, and the General Data Protection Regulation (GDPR). It also once again carried out its annual survey on Internet security.

Competence Group Infrastructure Security

DDoS and how to defend against such attacks were the focus of the CG in 2017. DE-CIX in particular distinguished itself this year, with a relevant Request for Comments (RFC) and a corresponding service offer.

Congresses and trade fairs

eco attended numerous events related to IT security in 2017. The association, for example, was one of the exhibitors at the international RSA conference in San Francisco, and was also present at the it-sa fair in Nuremberg, for the first time with a community stand with fourteen sub-contracted exhibitors. eco also successfully ran its own event formats with and for members, in particular roadshows (i.e. Firewall On the Road, Secure and Stable Corporate Networks).

Members from the field of IT security

From the field of security, eco also attracted further members who would like to work on topics related to IT security within the association.

Special topics from the field of IT security

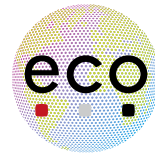
Blockchain was one of the major topics in 2017. It creates the basis for distributed, trustworthy, and automated cooperation and offers great potential for new business models and ecosystems. For Germany and the EU, with its multitude of SMEs, blockchain is the ideal technology for trustworthy, distributed cooperation.

A further topic in the field of IT security is Artificial Intelligence/machine learning. Most IT security companies see the development of "deep learning", increasing amounts of data, and greater computing capacity as representing huge potential to detect attacks more effectively.

Political bodies

The eco Association is politically involved in various bodies that deal with the topic of IT security, including the IT Security in Industry initiative of the German Federal Ministry for Economic Affairs and Energy (BMWi).

Without IT security, there cannot be sustainable digitalization! This is why we as the eco Association will continue to work towards making the Internet an even stronger and more secure tool for the Internet industry; one that enriches our everyday work and lives.



Felix Höger

Board Member for Online Services/Cloud Computing

4.3 Online Services/Cloud Computing

To a large extent, you can indeed expect the expected in the annual report of an Internet association: reports of progress, success stories, one or two admonitions directed at leaders in politics and industry, and of course, expressions of thanks. Even in the financial statement, attention is firmly directed forwards along technological and economic growth vectors. However, our times are too contradictory and too fast-moving for routine change. Welcome to the exponential age!

The world has pushed the fast forward button

The growth vectors are not the problem; they are still pointing in the same direction. The global economy is booming, our technological culture is developing at break-neck speed. What may bemuse the reader are the cracks and contradictions, because the international news paints a different picture: Trump, Brexit, viral propaganda, radicalization, walling-off, walls. Is global cooperation stumbling of all times in this age of the cloud economy? If not the euphoria, at least the knowledge of unstoppable globalization was a cornerstone of all of the stories that we told ourselves about our age.

Our industry is also wracked by conflict: We are experiencing how digital platforms both create gigantic social networks and at the same time disrupt social solidarity. We are working on increasingly empowering machines, and yet are starting to ask ourselves who will still have work to go to when this has been achieved. And for what will we qualify our children in the age that follows? Programming?

The Supreme Court of the United States will decide in early summer 2018 whether cloud operators with their headquarters in the USA can be forced to hand over customer information to American law enforcement, even if that breaks laws in other jurisdictions. What do the rule of law and legal certainty mean in a global cloud industry?

The developments are overtaking our own prognoses and keep reaching new tipping points of change at ever greater speed. The unexpected, the cracks and contradictions, and even some disasters follow in their wake. When we take a look behind the dark blanket of clouds of the political climate, then we can see that technical and economic change keeps moving forward and accelerating. How can we cope with all of this?

When visions of the future arrive in the mainstream, then things really take off

In the cloud market, we can really get to feel this exponential rate of change. Just two years ago, many companies in Germany underestimated the speed of development, as they were too fixated on technical details and locked into old patterns of thinking. The cloud was more

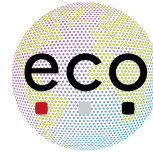


Photo: Ross Findon (@rossf)/umspash.com

of a vision than a reality. And today: four out of five small and medium-sized enterprises use not only one, but several cloud services. Many of the German companies who were skeptical for so long can no longer imagine their business being without the resources and tools they source from the cloud. The cloud has arrived in the mainstream and it is time for a rethink.

The change in companies is not only happening in technical systems that only a few experts understand. The cloud is now changing how every single member of staff works; in teams and before and after office hours. Indeed, what is an "office" nowadays? People are now experiencing first hand that not only a few

programs and devices have changed, but entire business models, value chains, organigrams, and career paths.

Technology was just the beginning, culture comes next

This is where we are today. Particularly because we can see that the cloud is changing much more than mere technology, companies cannot avoid actively dealing with this change.

Correspondingly large is the need for the advice, orientation, knowledge exchange, and networking which eco and EuroCloud have been offering for many years on the widest array of platforms and events, in numerous bodies, talks, publications, and programs.

As such, we contribute to quality, transparency, and trust in the cloud market, for example with quality seals like the StarAudit or through our cooperation in competence networks like the Trusted Cloud of the Federal Ministry for Economic Affairs and Energy (BMWi). Through such an approach, we train staff in companies and at providers in both using cloud services competently and in designing them to meet the needs of the market.

Digitalization needs rules, not just algorithms

Support for individual users and individual companies is just one aspect of what we do. As the rate of change picks up the pace, the political work done by our team, our members,

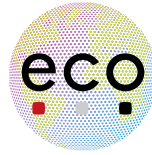
and our supporters is increasingly important. In Europe, as in Germany, we need to agree – over and over again – on new rules and find new solutions. This is why, for example, eco and EuroCloud also deal with topics in areas like education, and question apparent givens – such as whether Wi-Fi and tablets are enough to make a classroom a digital classroom.

How do we want to live in the Gigabit Society?

This is exactly where our greatest strength as an association is: We were there from the outset, from the very beginnings of the Internet and cloud industry; we know the details and the ins and outs. Added to this, we are very well connected and look beyond national borders.

The change won't stop, it will surprise us again and again – and often shock us. That is why it is so important that changes are perceived in the mainstream. It is crucial that companies and organizations become active, start projects, gain experience, take risks – and don't just wait for something to happen.

The time of routine work and vague visions of the future are over. The contradictions do not signal the end of the shift to a global economy, but rather its acceleration. What does exponential change feel like? Like this, apparently.



*Klaus Landefeld
Board Member for Infrastructure & Networks
Vice-Chair of the Board since 11/2017*

4.4 Infrastructure & Networks

Increasing digitalization and the overall penetration of digital devices mean that users' and companies' usage of digital services and applications is increasing as well. At the same time, however, trust in exactly these services and applications is diminishing constantly. This is disastrous for a sector which is built upon managing private and sensitive information for itself and its customers.

The uncertainty is understandable, as hardly a day goes by without a new data protection scandal, a new hack, the next big security vulnerability – or something of this ilk. Added to this is users' often insufficient understanding of the function of the services, or the simply overwhelming nature of their "Terms and Services". Combined with alternate accusations

of spying on data and planned interference in the inter-governmental sphere, even as a professional in this area, one has to wonder how we arrived at this point.

As a result, what is urgently required, on the one hand, is that the level of security and data protection be improved. On the other hand, companies and state actors require a new ethic, so that consumers and companies can develop new trust in digital services and applications. Only then will users not only be motivated to increase their own personal degree of digitalization, but also to take a positive approach to facing the sector's new offers and ideas on the path to the digital society.

In 2017, four topic areas were in the particular focus of the work of this division of the board, on which further light is shed below:

Politics and society

- Who has our personal data at their disposal? How will questions of data control, data protection or, in short, data self-determination of citizens be handled in a digitalized world? And how can this be achieved, and above all, oversight be established? In preparation for the coming GDPR and the required technical precautions, these questions were discussed in a range of events over the course of the year with politicians, industry, and civil society.
- Following the US election in 2016, the French election, and finally the German Bundestag election, questions were raised in 2017 concerning the use of Big Data in election campaigns, and the targeted advertising and (dis)information of users generated out of these findings. An issue which reared its head in debates concerning Fake News and Hate Speech which accompanied the process around the Network Enforcement Act (NetzDG) was that of the technical implementation of the automatic detection of content subsequent to its blocking, filtering, or even deletion.
- The dialog was also continued in the context of the Transatlantic Cyberforum, which concerns itself with transnational questions of the security of IT and IoT, state surveillance, the international cooperation

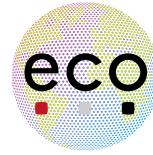
of law enforcement agencies, and parliamentary control. In the process, a set of white papers and best practices, which are designed as input for the political process on both sides of the Atlantic, were developed.

Development of the broadband network

In the area of broadband, after long years of discussions, direction-setting changes could be achieved in 2017: The political objective at the German federal level was raised from 50 Mbit/s to one Gbit/s. In line with eco's position, the nationwide availability of gigabit connections by 2025 was declared to be a guiding principle and a prerequisite for a high-performance, digitalized society.

The federal government subsidies for broadband have been measured – at least since the third Call for broadband subsidization – on their contribution to the achievement of this goal and have enabled consistent backing for gigabit connections. Parallel activities in the states – for example, in North Rhine-Westphalia and Hesse – are attempting to achieve this goal even earlier and to frame it within their own measures.

In the focus of the broadband discussion in 2017 were concepts for financing, funding programs and their requirements, the question of the concrete implementation – for example, the lack of main construction work capacity –



and the future regulation of fiber-optic networks.

Federal Network Agency and regulation

In a quite hectic first half-year in 2017, a range of regulations and technical guidelines were adapted or updated by the Federal Network Agency (BNetzA), including:

- TR AAV, the automated process for the disclosure of information following requests for customer data of telecommunication services by LEA, which was broadly expanded and now, alongside fuzzy searches, also enables semantic searches and searches based on addresses;
- TR Notruf, which underwent an urgently required revision, so that it now finally also encompasses rules for IP-based telephone services and Public Safety Answering Points;
- TR TKÜV in the version from July 2017, which in particular includes the regulation on the technical implementation of blanket data retention and on inquiries regarding retained data.

As in previous years, the BNetzA had consultations in the context of the ATRT (Committee for technical regulation in telecommunications) on technical topics and was supplied with information from the market in response.

Continuing discussions were undertaken with the BNetzA about the TC Transparency



Regulation, standardized product data sheets, and the associated broadband measurement tool which, in eco's opinion, is thoroughly unsuitable in its current form for fulfilling the requirements of a reliable measurement for consumers and companies.

From the European perspective, topical issues included the implementation of the NIS Directive, the amended categorization of over-the-top services as telecommunication services rather than electronic communication services, and the impacts of the Radio Equipment Directive (for which the transition phase ended in June 2017) on WLAN routers and public wireless networks.

In the area of blanket data retention, a range of events were held on the concrete implementation of the German Telecommunication

Surveillance Act (TKÜV) and the technical framework conditions; in the meantime, the decision of the Administrative Court Cologne of Cologne and the High Administrative Court Münster in May 2017 demanded further discussions and agreement on its suspension and the associated obligations and possible courses of action for companies.

In the fall of 2017, both as a result of the discussion on net neutrality in the USA and also through questions on the concrete technical and contractual design of the products of individual providers in the German market, the BNetzA again addressed the implementation of the EU open access regulation and its interpretation.

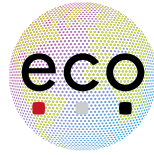
Future of the Internet and the Internet industry

Questions regarding the future of the Internet gained considerable momentum in 2017, and were discussed in a range of topic areas. These included in particular Industry 4.0, with its demands on the network, and standardization and the consequent opportunities for German industry, as well as the chances and hurdles for the rapid implementation of a 5G strategy for Germany. The new eco CG Blockchain concentrated on the implementation of business models on the basis of blockchain technology, their opportunities and limitations, and the technical feasibility and economic limitations associated with the processing.

eco was actively involved in the questions regarding the digital collective, the shaping of digital transformation, and bridging of the "Digital Divide", which splits our society today into a range of digital trenches. From New Work, Work 4.0, and digital participation for all, through to questions regarding digital assistants and Artificial Intelligence and the consequences of these for society, eco positioned itself as a competent point of reference for politics, the media, and NGOs in these important current topic fields.

IT security

The duality of the political goals and motivation was more apparent in the areas of IT security than in almost every other area: Thus, the BMWi raised the question of the responsibility



for IT security in the area of telecommunications, which is closely interwoven with the questions of IoT and its associated security risks. Topics under deliberation included product security in this area, questions of liability, and a seal of quality for the IT security of products.

In conjunction with the implementation of the NIS Directive, the possibilities for providers to increase the security in their networks were decisively improved through amendments to the Telecommunications Act (TKG). The Federal Office for Information Security (BSI) took on the industry standards for critical infrastructure in the IT-related areas, and began work on the technical guidelines for routers, which should function as a pilot project for increasing the security of IoT devices.

Almost in parallel, and subsequent to the revised legal regulation of lawful interception at the source and the remote forensic search of computers, as well as the creation of ZITIS (Central Office for IT in the Security Area), there were a range of events and discussions – supported by the BMI and individual law enforcement and security agencies – on the topics of government hacking and the handling of security vulnerabilities in general, and Hack-Back in particular.

What is missing here is a clear state position on the question of whether the IT security of all should be allowed to be weakened for the surveillance of certain individuals, and where the limits of state action in the digital world should lie.

Analogous to the creation of “operative capabilities in cyberspace” of the German Army and following the example of the – perhaps legal, but rather tenuous – international activities of the FBI, special offices in the Federal Criminal Police Office and the Federal Police Force are to be able, according to these plans, to undertake measures on computers “in cyberspace”, if these are not located within the territory of the Federal Republic of Germany. This is being justified on the grounds that cyber criminality does not stop at national borders and, in particular, that the hunt for terrorists requires global action.

Naturally, this follows directly from the encroaching feeling of powerlessness against the backdrop of increasing successful attacks by hacker groups against companies and governmental authorities – in particular, the effective protection of critical infrastructure as a potential target is being questioned more and more.



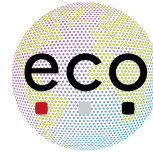
It is deliberately overlooked that the known attack vectors utilized to breach target systems remain a security threat exploitable by others – regardless of whether we are talking about individuals, groups, organized crime or state actors. Simply a consistent, uncompromising strategy to immediately close all vulnerabilities as they become known can represent an acceptable solution for the protection of society in general.

For providers to fight DDoS attacks, the possibilities of Blackholing for specific targets was further improved at DE-CIX, and in particular, the validation of prefixes and the possibilities for controlling them was optimized. In combination with the legal framework which explicitly allows the filtering of targets for the purpose of fault correction, which was expanded in June 2017, the possibilities for network

operators to implement mitigation measures in the case of an attack were considerably improved.

International development of the association

For the further development of the association, eco decided in its Strategy 2016 to establish a committee that investigates the possible areas of international activity and examines how the association can integrate the growing number of international members into the work of the association. This committee was established in 2017 as the “eco International Steering Committee”, and the work was formalized in a first step with the appointment of Lars Steffen as Director of eco International at the end of 2017.



Alexander Rabe
Head of the Capital Office
Head of Policy, Law & Regulations Division



Henning Lesch, Attorney
Deputy Head of the Capital Office
Head of Law & Regulations

5. Political Representation

At the start of 2017, the upcoming German Bundestag election campaign was already dominating the year's political representation agenda. The 18th legislative term was drawing to a close, and many coalition party undertakings set out in the coalition agreement and the Digital Agenda were to be implemented before the summer break and the onset of the intensive phase of the Bundestag election campaign. At the expense of legislative rigor, important decisions such as the abolition of blanket data retention were now postponed, poorly crafted laws such as the Network Enforcement Act (NetzDG) were quickly ushered in, and parliamentary procedures were concluded without the necessary political discourse.

With the work of its own Complaints Office, eco has been dealing with the handling of illegal content on the Internet for many years and has built up an internationally unique and successful collaborative network. As such, eco was naturally at the forefront of the political and media discussion concerning whether the NetzDG makes sense.

Conversely, when it came to amendments to the law that initially seemed sensible – such as the abolition of Wi-Fi third party liability – legal backdoors for possible website blocking were inserted. The legal introduction of the possibilities of a "federal Trojan" did not represent one of the finest hours of the federal government in terms of future-oriented digital policy. Through allowing potential application of so-called

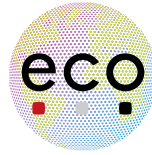
"Zero-Day Exploits", the use of such a Trojan could permanently jeopardize the IT security of all systems. The team in the Policy, Law & Regulations division tried to avert the worst. But at the same time, eco had to position itself in order to be heard as the voice of the Internet industry at an early stage in the formulation of the election programs, and to find anchorage there for the positions and core demands of a modern Internet policy.

Bundestag election campaigns are naturally dominated by core topics such as labor market policy, taxes and duties, and pension policies. Moreover, the 2017 election campaign also had to contend with global political crises and wars and the associated situation of millions of refugees. Invariably, bringing the topic of digitalization and the opportunities offered through Internet-based innovations to the forefront of political discourse was thus a difficult undertaking. Nonetheless, building on the Internet Policy Agenda formulated as early as 2016, the eco team in Berlin found a strategic approach and met this challenge with finesse.

A campaign for online and offline agenda setting was initiated under the title of "Wahl/Digital 2017", which enabled all Internet policy actors from federal politics to contribute their views. Together with numerous high-level member representatives, the "Internet Policy Party Check" was run during the year. In September, the division presented the Network Policy Forum as the culmination of the campaign, with contributors including Federal Chancellery Minister Peter Altmaier, Minister for Federal Economics and Energy Brigitte Zypries, and the FDP Federal Chairman Christian Lindner.

Even if not all of eco's demands and positions have been taken up by the new federal government, eco has proven its political significance on the federal political level for the long-term and, in the difficult field of a Bundestag election campaign, consummately demonstrated the significance of the Internet industry.

Naturally, the numerous activities at European level which the eco office in Brussels continued to accompany and support in 2017 should not to be given short shrift here. By holding meetings with members of parliament and Commission representatives, and through event formats such as political breakfasts or presentations of expert opinions – e.g., in the field of ancillary copyright law – eco was able to represent the interests of its members at the increasingly important European level.



*Henning Lesch, Attorney-at-Law,
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Regulation*

5.1 Legislative Processes & Focus Topics

5.1.1 Germany

Adaptation of the General Data Protection Regulation

In Germany, the implementation of the General Data Protection Regulation (GDPR) was to be regulated through a national implementation law. The DSAnpUG (the Act to Adapt Data Protection Law to Regulation (EU) 2016/679 and to Implement Directive (EU) 2016/680) was published as a draft bill in December 2016, with the debate on it continuing until 2017. It remained unclear until the end whether the German legislature, which had made generous use of the opening clauses, was actually acting in accordance with the European regulation or whether it was in fact diluting it. eco critically monitored developments in this area and

emphasized that a uniform legal framework for data protection in Europe should also be the benchmark for, and objective of, German legislation. For the year 2018, further special legal regulations are pending, which will have to be adapted after the GDPR comes into force.

Implementation of the NIS Directive

Given that the German IT Security Act had already been introduced before the adoption of the NIS Directive in Brussels, the German legislature had to make further amendments. These were enacted by the NIS Directive Implementation Act in December 2016, with the focus being on regulations for digital services. Due to a spectacular hacking incident,

further additions were made in the area of the TKG (Telecommunications Act). With the resultant clarifications, network operators now also gained legal certainty when dealing with hacker attacks in their networks. The debate, in particular on liability for IT security, is continuing at European level.

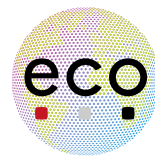
Green Paper/White Paper on Digital Platforms and the 9th Amendment to the Act Against Restraints of Competition (GWB)

The debate on the regulation of intermediaries continued in the year under review. In addition to the debate on a White Paper for Digital Platforms, which had already been initiated in 2016 and whose development eco had critically accompanied, the regulation of digital platforms was also taken up in the context of the 9th Amendment to the Act Against Restraints

of Competition. In the debate, eco took a skeptical stance towards the federal government's law. While the proposed regulations do not discriminate directly against digital services, they do contain the potential to apply different standards to digital multilateral markets.

Network Enforcement Act (Act for the Improvement of Law Enforcement in Social Networks)

In March 2017, the Federal Ministry of Justice and Consumer Protection (BMJV) presented the draft of the Network Enforcement Act (NetzDG). The law, which was strongly criticized by large sections of the Internet industry and the public, was passed by the German Bundestag in June 2017, shortly before the end of the legislative term. In addition to drawing attention to serious deficiencies in fundamental rights in the law, eco also especially



Nicolas Goss
Legal Consultant for Telecommunications Law & Regulations



Elisabeth Oygen
Legal Consultant for IT Law



Dr. Folke Scheffel
Legal Consultant for Internet & Media Law

criticized – in its position statements and position papers – the rigid bureaucratic reporting requirements. In its commentary, eco also issued a detailed criticism of the penalty guidelines presented in December. Deliberation on the guidelines will continue in 2018 – as will the debate on the future of the controversial law.

Blanket Data Retention

On 22 June 2017, the Higher Administrative Court (OVG) in Münster ruled that the German regulation on blanket data retention was incompatible with EU law. As a result, Germany's Federal Network Agency (BNetzA) suspended blanket data retention due to the implications of the court decision for all companies concerned. The decision of the OVG is valid until the main proceedings have been finally concluded. However, an exact date for

this is not yet scheduled. The Internet provider SpaceNet, supported by eco, had taken legal action in April 2016.

Net neutrality

Telekom Deutschland GmbH was the first company to enter the market in spring 2017 with a zero-rating offer called StreamOn. Such offers must comply with the requirements of the European regulation on net neutrality and its concretization by the Body of European Regulators for Electronic Communications (BEREC). eco issued a position statement on this topic, given the importance of the balancing of interests between innovations, access, and content providers on the one hand, and the maintenance of the Internet with low market access barriers on the other. At the end of 2017, Germany's Federal Network Agency (BNetzA) concluded that StreamOn is essen-

tially in line with the European regulation on net neutrality. Only the reduction of bandwidth in certain tariffs in transmitting all videos was considered to be an illegal traffic management measure and was prohibited. Telekom has announced that it will oppose this aspect of the decision in court. A decision from the preliminary injunction proceedings can be expected in 2018.

End user rights in telecommunications

The Telecommunications Transparency Regulation came into force in June 2017. Accordingly, providers of Internet access services have to fulfil various information obligations. To increase transparency and comparability, product information sheets must be made available to end-users. This is also intended to increase competition.

In the broader context comes the future, installable measuring tool of Germany's Federal Network Agency (BNetzA), with which consumers will be granted an easing of their burden of proof concerning their download and upload speeds vis-à-vis their provider. The installable measuring tool is to be made available to consumers in the first half of 2018. Through cross-association commentaries and joint meetings, eco has worked together with other associations to ensure the appropriate involvement and consideration of the interests of its member companies.

Platform regulation

Discussions on a suitable form of platform regulation, on the regulation of intermediaries, and on the design of user interfaces between the broadcasters of the federal states continued in 2017. An important point of discussion

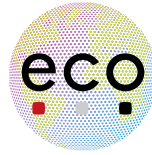


Photo: Pixabay – cuongdv

5.1.2 Europe and the World

continued to center on how platforms and intermediaries could on the one hand, be made legally secure, whilst at the same time not being overly subject to regulation. On the other hand, however, a clear-cut distinction was also required.

In the opinion of the federal states, platforms in particular are to be regulated through the broadcasting treaty which is still under discussion, dealing primarily with findability, but also with the concrete design of user interfaces. eco, together with the associations ANGA, Bitkom, and ZVEI, has repeatedly taken part and intervened in the debate. However, a final political decision is still pending.

Copyright

In September 2016, EU Commissioner Günther Oettinger presented his proposal for a new copyright law in the digital single market. Following on from a policy breakfast in Brussels on this topic, in February 2017 eco presented the expert opinion on ancillary copyright law commissioned from Prof. Dr. Alexander Peukert in a panel discussion with members of parliament and staff of the European Commission.

The four committees in the European Parliament which delivered an opinion on the report had also adopted it in 2017. However, the rapporteur in the responsible JURI Committee was replaced in June. Together with the highly contentious issues of ancillary copyright and value

gap, this was one of the reasons why the negotiations were stalled and continued into the following year. Therese Comodini Cachia's idea of formulating a presumption of representation for press publishers instead of an ancillary copyright did not find favor with the new German rapporteur Axel Voss (EPP). The Council was also unable to reach agreement in 2017 on the extent to which filtering measures on the Internet are an effective tool.

After long discussions and delays, the report on the retransmission regulation (SatCab2) made significant progress in the year under review. Even though it was the subject of dispute among individual political groups, the Parliament and the Council were able to adopt

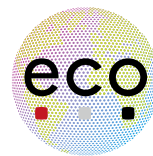
it in 2017 and thus have it passed into the trilogue in 2018. Here, eco's concerns with technology neutrality and an obligation to have recourse to a copyright collecting society continue. Among other measures, eco has addressed these points in an inter-association letter.

ePrivacy Regulation

The publication of the Commission's proposal for the ePrivacy Regulation on 10 January 2017 marked the kick-off to a new debate on the protection of privacy and personal data on the Internet. eco took a critical line on the Commission's proposals. In several papers and face-to-face meetings in Brussels and Berlin, eco sought to convey the problems of the disintegrating regulatory structure. In spite of these efforts, in October 2017 the EU Parliament decided to further reinforce the Commission's draft. eco is now monitoring the dossier as it moves into 2018 and hopes to achieve an improvement of the proposed regulation in the Council negotiations.

EU Cybersecurity Strategy and Cybersecurity Act

At European level, a debate began on the future regulation of cyber security against the background of the expiring ENISA mandate and the objective of a unified digital single market. Spurred on by global developments, the Commission's plans covered many aspects. In its "Cybersecurity Strategy", various individual measures such as regulations for



WHOIS queries or the handling of electronic evidence were addressed, as were questions of certification of IT products and services and the appropriate institutional framework for this. The Cybersecurity Act, published at the same time, is intended to create the basis for a certification framework for cyber security. This proposal is regarded by eco as representing one of the central topics for 2018.

Free movement of data

In September 2017, the EU Commission presented a regulation allowing non-personal data to be stored anywhere in Europe in the future. On this issue, for once, the Commission, the European Parliament and stakeholders seem to be united. As such, progress should be made quickly in the coming year, whereby the scope for opt-outs for Member States should be kept as limited as possible.

Illegal online content: Fake News and Hate Speech

In 2016, Commissioner Věra Jourová presented her Code of Conduct on Hate Speech, which she had entered into with Facebook, Google, Microsoft, and Twitter. In 2017, she then

presented further improved response times and appeared to be satisfied. Developments in the fake news segment were less encouraging. In the wake of the elections in the USA, there were fears that the national elections in various EU States might be influenced, but such influence could not be quantified. Nevertheless, the first legislative measures have been drawn up in Germany and France and the issue is still very topical at EU level. Commissioner Andrus Ansip described fake news in April as a serious problem and media literacy and quality journalism as vital. At the end of the year, Commissioner Mariya Gabriel announced an expert group, a public consultation, and a Eurobarometer survey for early 2018. In the meantime, the topic of fake news is increasingly being intermingled with other topics and being forwarded as an argument (for example in the case of law for an ancillary copyright).

In September 2017, the Commission presented its guidelines for dealing with illegal online content. eco took a stand on this and, in particular, took issue with the supposed need for a regulation which goes beyond the eCommerce Directive and its supplementary self-regulation.

The handling of illegal online content will remain an important topic in the coming year and the focus will continue to be on fake news, hate speech, terrorist content, and copyright. On top of these, the controversial introduction of filter obligations is still under discussion. eco will continue to vigorously monitor further developments in this area in 2018 and actively participate in the debate on the handling of illegal online content at national and European level.

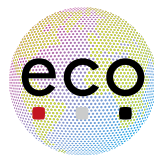
Internet governance

The topic of Internet governance, which primarily deals with questions of the future composition of Internet policy and the future technical and administrative regulation of the Internet, has become increasingly important in recent years, at both European and international levels. For many years now, eco has been advocating for the successful multi-stakeholder Dialog on Internet Governance to be strengthened and is convinced that this model is the best variant for developing a sustainable Internet governance system that enjoys broad social acceptance.

As the Association of the Internet Industry, it is important to eco to maintain and continue the successful multi-stakeholder-based self-management of the Internet. Policy-makers and companies as well as all other stakeholders should therefore get involved in those bodies engaged in discussing the future shape of the Internet and Internet policy.

IGF

The international Internet Governance Forum (IGF) took place in Geneva from 18 to 21 December. The four-day conference brought together some 2,000 representatives of international governments, industry, non-governmental organizations, and civil society from 142 countries to discuss current issues of Internet governance. Cyber security, human rights, and freedom of expression on the Internet were also on the agenda in 2017, and received special attention. In the keynotes and workshops, issues addressed included the further development of Internet governance, the facilitation of sustainable growth, questions of intervention in international data traffic, national shutdowns of the Internet, and trust in and security of the Internet.



In addition, the experiences and deliberations on the reform process of the IANA stewardship were on the agenda once again this year. eco was represented by Prof. Michael Rotert, who was invited to attend numerous workshops and panels as an expert, including those of the Council of Europe.

Prior to the IGF, in July 2017, the German federal cabinet had approved the key points presented by the Federal Ministry for Economic Affairs and Energy on the federal government's bid to host the Internet Governance Forum 2019 in Berlin.

EuroDIG

At the European level, the European Dialogue on Internet Governance (EuroDIG) has established itself as the most important discussion platform in which stakeholders from industry, governments, science, and the civil society can exchange ideas on the future shaping of the Internet. The 2017 EuroDIG took place

on 6 and 7 June in Tallinn, under the title of "Digital Futures: Promises and Pitfalls". It was hosted by the Ministry of Foreign Affairs of the Republic of Estonia and the Estonian Internet Foundation. The keynotes, plenary sessions, and workshops focused in particular on current developments and upcoming issues relating to Internet policy.

The topical scope ranged from technical issues such as Next Generation Internet right through to human rights. However, IT and cyber security, as well as the phenomena of fake news and hate speech – topics which are particularly in the public eye – were also the focus of attention.

Data protection and privacy, as well as questions of cross-border jurisdiction, were further core topics discussed at the EuroDIG. eco was represented at the event by Prof. Michael Rotert, who is also a member of the planning committee.

IGF-D

The Internet Governance Forum Deutschland (IGF-D), initiated by eco and organized jointly with further partners, is an open and informal multi-stakeholder discussion platform for the government, private enterprise, and civil society, as well as for representatives from the technical and academic community in Germany. Central to its activities are questions relating to the social, economic, and political development of the Internet.

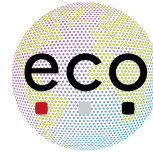
In November 2017 the IGF-D took place in the "Rotes Rathaus" in Berlin. The topics Industry 4.0 and the Internet of Things were dealt with in numerous keynote talks and panel discussions – exploring both the public's perception and the industrial context. In addition, current developments in the field of cyber foreign policy and issues of hacking by states ("federal Trojans") and their effects on trust and security were in the spotlight. The General Data Protection Regulation and its implications



Foto: © iStock / Teka77

in practice for consumers and business people was also one of the topics discussed at the IGF-D. eco was represented by Thomas Rickert and Prof. Michael Rotert, who is also Co-Chair for the Industry of the IGF-D.

In light of the fact that Germany has applied to the United Nations to host the international IGF in 2019, a wide range of activities and projects of the IGF-D in 2018 will involve associated preparation and support.



*Alexandra Koch-Skiba, Attorney-at-Law
Head of Complaints Office*



*Kira Pleschka
Consultant Complaints Office*

eco 
COMPLAINTS OFFICE

5.2 eco Complaints Office: Combatting Illegal Internet Content and Youth Media Protection

For around 20 years now, the eco Complaints Office has been fighting successfully against illegal content on the Internet. The work is based on voluntary cooperation with society as a whole, and its fundament is that of the self-regulation of providers and the engagement of Internet users. From the outset, eco has also cooperated with law enforcement agencies in the fight against child sexual abuse material and other illegal Internet content.

Internet users can report possible illegal Internet content to the eco Complaints Office, especially in the area of youth media protec-

tion, free of charge and anonymously, for example under international.eco.de/eco-complaints-office, and thus contribute to combatting such content at both national and international level.

Review 2017

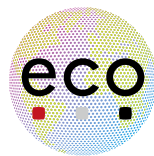
One of the major challenges of 2017 was a further significant rise in the incidence of complaints. The total number of complaints increased by eleven percent compared to the previous year. Disregarding spam and Usenet content, 27,660 cases were reported. The number of justified complaints more than doubled in comparison to the previous year. Thanks to the dedication of the entire team, the success

rate of the eco Complaints Office was not adversely affected by the large increase in the number of reports.

Consistent criminal prosecution is essential in order to effectively combat crimes on the Internet. The year 2017 therefore saw the Complaints Office further intensifying its cooperation with law enforcement agencies. At the same time, the year was characterized by a series of political debates concerning the handling of reports of potentially illegal Internet content, with discussions on the Network Enforcement Act (NetzDG) being particularly prominent.

In addition to consistent communication, transparency in particular is the key to strengthening confidence in the work of the Complaints Office in the long term. This being the case, in March 2017 the Complaints Office presented its first independent annual report at a policy breakfast together with State Secretary Gerd Billen (Federal Ministry of Justice and Consumer Protection). For the first time, the eco Complaints Office also opened its doors and political representatives and journalists were given a look behind the scenes. A particular highlight here was the visit of Renate Künast, Member of the German Parliament (Bündnis 90/Die Grünen – The Greens).





Sebastian Fitting
Consultant Complaints Office



Peter-Paul Urlaub
Consultant Complaints Office

She thanked eco for its successful and transparent work over a period of around 20 years and, in her book "Hass ist keine Meinung" ("Hate is not an opinion"), published in 2017, she lauded "[...] a working environment created by people for people, a model showing how work must be organized in order that the deletion of illegal content involving hate and violence can be conducted in a way that is tolerable to all parties."

The many political debates and discussions with parliamentarians, and numerous dialogs with members – for example, within the new event format "Expert Lunch on Youth Media Protection" – showed again in 2017 how important transparency is for the work of the Complaints Office.

Amongst other political contributions in 2017, as part of a European Commission workshop, the eco Complaints Office brought its expertise on the handling of reports on illegal Internet content to bear on a roundtable discussion in the Federal Ministry for Economic Affairs and Energy (BMWi) under the leadership of Federal Minister Brigitte Zypries.

In light of the preparation of the "INI Report on the CSAM Directive", which was published by the European Parliament in December 2017, eco sought dialog with various members of the European Parliament. The report deals in a number of places with the handling of reports on images of the sexual abuse of minors on the Internet and, as such, with the work of the national complaints offices in the EU Member States.

Well connected nationally and internationally

The eco Complaints Office's complaints processing, political engagement, and public relations work was consistently further developed in 2017. Given that the Internet knows no national borders, the strong network of cooperation partners has also contributed to this growth – for effective complaints office work, it is important to be well networked worldwide. The birthday greetings shared with fragFINN exemplify this networking, with the children's search engine celebrating its tenth anniversary in November 2017. fragFINN was co-founded by eco in 2007 and is part of the "Ein Netz für Kinder" ("A Network for Children") initiative of the Federal Government Commissioner for Culture and the Media and the Federal Ministry for Family Affairs, Senior Citizens, Women, and Youth (BMFSFJ).

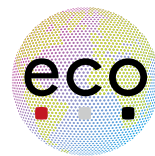
INTERNATIONAL ASSOCIATION OF INTERNET HOTLINES
INHOPE

safer
internet  de

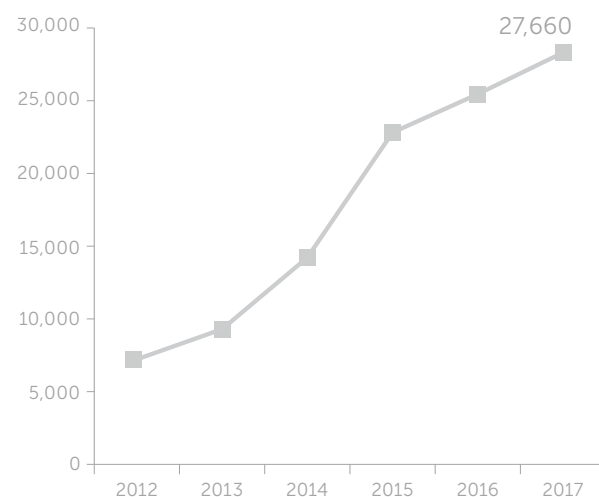
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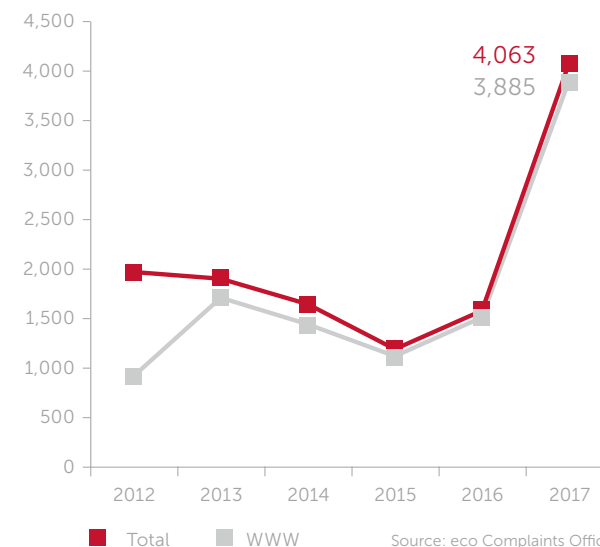


Growth in Number of Complaints in Annual Comparison



Source: eco Complaints Office

Development of Justified Complaints in Annual Comparison



Source: eco Complaints Office

Statistics 2017: Figures & Facts

The year 2017 proved to be an eventful and challenging year for the eco Complaints Office: The total number of complaints increased by eleven percent compared with the previous year. The number of received reports on web-based content increased fivefold. In the area of racism and hate speech, the number of reports increased by 120 percent. Disregarding spam and Usenet content, 27,660 cases were reported. Of these, the number of justified cases (4,063) more than doubled when compared with the previous year.

The justified complaints were forwarded to the law enforcement agencies, the content provider, the host provider, and/or members of the INHOPE network, depending on the type of infringement and taking into account the country in which the illegal content was hosted.

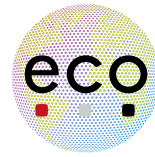
The take-down times for images of sexual abuse of children have only slightly increased, despite the increase in complaints. Overall, 95 percent of illegal Internet content such as representations of sexual abuse, incitement of the masses, and depictions of violence were taken down worldwide after being reported

to the eco Complaints Office, an increase of 17 percentage points compared to the previous year. There was also a significant increase in the success rate in the area of racism/hate speech: 83 percent of the URLs reported by the Complaints Office worldwide were taken offline.

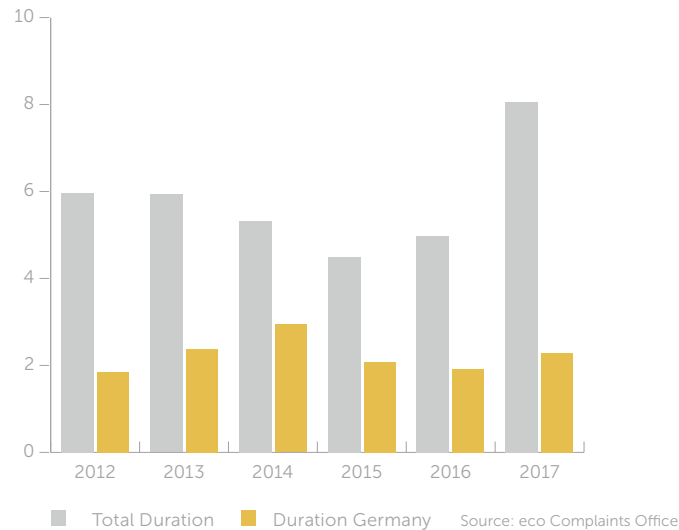
Engagement and Cooperation 2017 in Detail

As (co-)operator of the portal www.internet-beschwerdestelle.de/en since 2008, the eco Complaints Office has been part of the German Safer Internet Centre

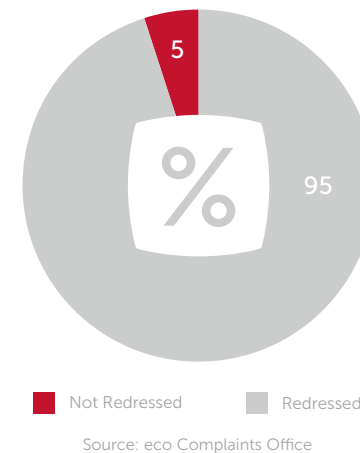
(www.saferinternet.de), whose members include eco, FSM, jugendschutz.net, "Nummer gegen Kummer", and klicksafe.de (a project of the North Rhine-Westphalia's State Media Authority and the Rhineland-Pfalz State Agency for Media and Communication). The German Safer Internet Centre also received EU funding under the Connecting Europe Facility (CEF) in 2017. In particular, the complaints offices receive financial support for their work in processing complaints about representations of sexual abuse of minors and complaints about racist Internet content.



Average Duration until Take-Down in Annual Comparison (Child Pornography)



Total Success Rate (2017)



Under German Law (German Interstate Treaty on the Protection of Minors (JMStV) and German Criminal Code (StGB)), images of the sexual exploitation of minors through representations in unnatural sexualized poses (often referred to as Posing) may not be disseminated. The eco Complaints Office actively supports the work of the network "No grey areas on the Internet", set up in 2014 to combat the abuse and sexual exploitation of children.

The year 2017 saw a continued exchange of experiences with this competence center in

dealing with complaints concerning images of minors in sexually explicit poses. This work and the comprehensive processing of reports of images of minors in sexually explicit poses in the Internet, along with the recording of statistics and analysis, is funded by the German Federal Ministry for Family Affairs, Senior Citizens, Women, and Youth (BMFSFJ).

Aside from a regular exchange of information which has continued for around ten years now, cooperation with the German Federal Criminal Police Office (BKA) in the area of combatting images of the sexual abuse of children includes

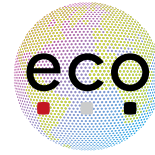
a written cooperation agreement between the complaint offices (eco, FSM, jugendschutz.net), the BKA, and the Federal Review Board for Media Harmful to Minors (BPjM). In 2017, a renewed cooperation agreement between the partners was signed.

In the area of state security offenses, cooperation meetings were held with the BKA, the North Rhine-Westphalia Criminal Police Office, and the Cologne Police Headquarters. In addition, the collaborative work with the eco Complaints Office at state level is part of a cooperation agreement between eco, networker

NRW, and the North Rhine-Westphalia Criminal Police Office, which was signed in September 2017.

Finally, the eco Complaints Office is also active at the local level – one example is the joint project "SUSII" (Safe-and-Secure-on-the-Internet). Further information on this initiative is available in Chapter 8.1.2.

Further information on the eco Complaints Office is available at: international.eco.de/eco-complaints-office



Online Youth Protection for Companies

Since 2016, the eco Complaints Office has offered members and external companies the service of an external Youth Protection Officer. In accordance with Para. 7 JMStV (the Interstate Treaty on the Protection of Minors), commercial providers of generally accessible telemedia that contain content that is developmentally-impairing or youth-endangering, as well as providers of search engines, must appoint a Youth Protection Officer. These officers have three functions: provision of advice to the provider, acting as contact person for users, and serving as the point of contact for official oversight.

To support companies in the implementation of this obligation or in the voluntary appointment of a Youth Protection Officer, eco offers the possibility of appointing an external Youth Protection Officer. For inquiries or questions, please send an email to: jugendschutzbeauftragte@eco.de.

Further information is available at: international.eco.de/eco-complaints-office/eco-youth-protection-officer-service

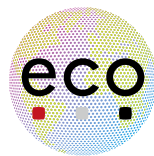
Youth Media Protection Expert Lunch

With the establishment of the "Youth Media Protection Expert Lunch", the eco Complaints Office launched a new offer and event format in 2017. The forum is targeted exclusively at

association members who are active in the area of youth media protection, with the aim of enhancing the exchange of ideas and experiences, gathering information, and allowing dialog to be initiated with other members.

At the kick-off lunch in Cologne on 26 June 2017, the experts of the eco member companies assembled for the first time. The main topics were the presentation of the eco Complaints Office's work, the topical discussion on the Network Enforcement Act (NetzDG), and an exchange of views on the content of future meetings.

The second in-person meeting of the Youth Media Protection Expert Lunch took place on 16 November 2017, also in Cologne. Once again, it focused largely on the NetzDG and the communication of the European Commission on the handling of illegal content. The latest developments and practical challenges were also discussed.



Melanie Busse
Office and Event Manager
Berlin Office

5.3 Events and Highlights of eco's Capital Office in 2017

In 2017, eco registered over 1,200 participants at the Policy, Law & Regulations division's activities and events. In total, over 25 events were organized and held in the eco Capital Office premises or at external locations.

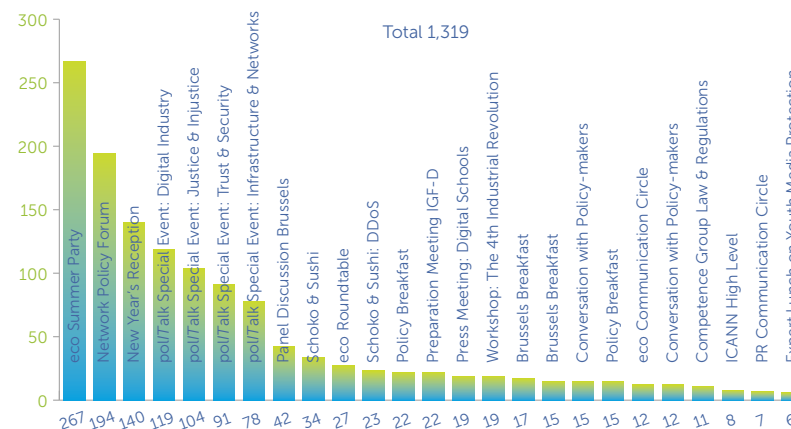
The eco Capital Office events are attended first and foremost by political representatives and interested stakeholders from the political arena, as well as member companies: The focused target group includes federal ministers, state secretaries, spokespersons on Internet policy from parliamentary groups, members of the German Bundestag and their colleagues, and representatives of the states' ministries.

In accordance with tradition, the year 2017 started with the eco New Year's Reception in Berlin, which was opened by Jochen Homann, President of the Federal Network Agency

(BNetzA) and held under the motto of "Perspectives for the Gigabit Society". Numerous other events, such as the policy breakfasts in Berlin and Brussels, the afternoon "Schoko & Sushi" format, and evening events like the popular eco pol/Talks, remained an integral part of the annual calendar.

A particular event highlight in 2017 was the Network Policy Forum "Digital Agenda 2017 – 2021 – Network Policy Vision and Necessities", designed around the German federal election in September. Representatives of the Internet industry and from political parties discussed the key features of a new Digital Agenda and

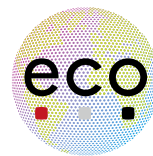
Participants at eco Berlin Events 2017



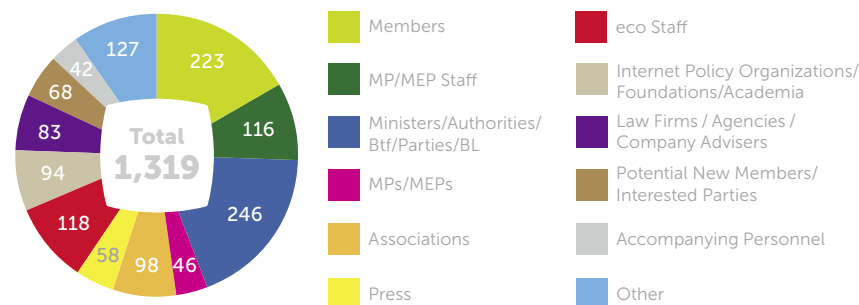
the Internet policy-related objectives for the next legislative term. eco also presented the results of its Network Policy Party Check, which was compiled on the basis of four events with Internet politicians between March and June 2017, as well as an analysis of the official election programs.

eco New Year's Reception: Perspectives for the Gigabit Society

On 24 January 2017, eco celebrated its traditional New Year's Reception under the banner of "Perspectives for the Gigabit Society" in the Capital Office in Berlin.



Target Groups Reached at eco Berlin Events 2017



eco Chair of the Board, Prof. Michael Rotert, opened the evening and expressed his expectations for the new year clearly. While 2017 was to be an election year, it was nonetheless expected of the federal government that they would not only engage in electoral campaigning, but also continue to advance concrete goals, especially in the area of Internet policy. Prof. Michael Rotert saw a particular need for action in the area of digital infrastructure.

Afterwards, President of the Federal Network Agency (BNetzA) Jochen Homann gave a keynote talk that emphasized how high-performance broadband networks form the basis of successful digitalization, and that the expansion target of 50 Mbit/s could only be an intermediate target. Jochen Homann concluded by putting the regulatory measures of the future in more concrete terms, and

spoke of new perspectives regarding the regulation of OTT services.

Wahl/Digital 2017 – pol/Talk special event

Leading up to the German federal election 2017, eco organized a digital policy themed campaign entitled Wahl/Digital 2017 in the format of the Internet Policy Party Check. During each of the four pol/Talk special events, four members of the Bundestag each answered five fast rounds of questions regarding Internet policy plans of the CDU/CSU (Christian Democratic Union), SPD (Social Democratic Party), Bündnis 90/Die Grünen (the Greens), and die Linke (the Left). The results were analyzed by eco in the form of an Internet Policy Party Check, which provided a good overview of the Internet policies of each electoral program.

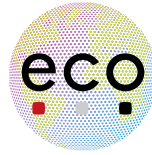
At the successful opening event of the series "Wahl/Digital 2017 – pol/Talk special event" on 28 March, the main focus under the title of "Digital Economy & Digital Work" was on topics such as start-up funding, the digital transformation of the economy, digital education, and the promotion of innovation, along with fair competition, dealing with the increasing digitalization of the working world, and uniform legal conditions.

Those invited to the first Party Check were Maik Beermann (CDU), Saskia Esken (SPD), Dieter Janecek (Bündnis 90/Die Grünen), and Petra Sitte (Die Linke).

At the second Internet Policy Party Check on 25 April, Tabea Rössner (Bündnis 90/Die Grünen), Herbert Behrens (Die Linke), Andreas Nick (CDU/CSU), and Jens-Zimmermann (SPD)

shared the panel and faced the five fast rounds of questions on digital infrastructure and networks. The Internet industry's perspective was provided by eco Board Member Klaus Landefeld.

Which regulations are necessary for dealing with hate speech, fake news & Co.? What shape do the responsibilities of state and Internet providers take in the fight against illegal and unwanted online content and in digital communication, and how can the security of networks be ensured? These were the questions on which the third Internet Policy Party Check focused on 16 May. Lars Klingbeil (SPD), Renate Künast (Bündnis 90/Die Grünen), Nadine Schön (CDU/CSU), and Petra Sitte (Die Linke) were present at the "Justice and Injustice in the Internet" themed panel discussion. eco Board Member Oliver Sume contributed the Internet industry's perspective.



It was questions concerning “Trust and Safety Online” on which the fourth and final Internet Policy Party Check focused on 20 June, to which Saskia Esken (SPD), Konstantin von Notz (Bündnis 90/Die Grünen), Thomas Jarzombek (CDU/CSU), and Petra Sitte (Die Linke) were invited. The Internet industry’s perspective was contributed by eco Board Member Norbert Pohlmann.

eco Summer Party – Networking BBQ

The Capital Office’s traditional eco Summer Party on 24 August saw approximately 300 guests from ministries, the Bundestag, industry, the press, and the Internet community meet in Berlin. Taking place shortly before the

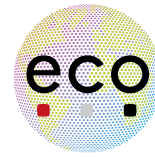
end of the parliamentary summer recess, the celebration provided the opportunity to discuss the topics and trends of the following weeks, while also allowing those present to tune themselves back into political life.

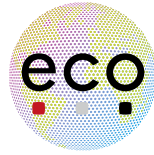
The evening and the buffet, which were highly praised, were opened by eco Chair of the Board, Prof. Michael Rotert who, before stepping down from his position, thanked all dialog partners from both politics and the industry for the previous years. Prof. Michael Rotert assured the guests that he would stay in dialog with them, and would remain actively involved in the area of Internet policy.

Network Policy Forum: “Digital Agenda 2017–2021 – Network Policy Vision and Necessities”

Together with representatives of the four parliamentary groups of the Bundestag and high-ranking representatives of the Internet industry and the user industry, eco presented the results of the Internet Policy Party Check on 5 September in Berlin. The results were compiled based on four events held between March and June 2017 involving Internet politicians from the parties then represented in the German Bundestag, as well as an analysis of those parties’ official election programs.

During the Network Policy Forum, discussion focused on political objectives and priorities concerning digitalization for the next legislative term, as well as the socio-political implications of digital transformation. In front of an audience of approximately 200 guests, representatives of the Internet industry exchanged ideas with political representatives on the key features of a future-oriented Internet and digital policy.





Sidonie Krug

Spokesperson for Political Communication

Christin Wagner

PR Specialist and Online Communication

Policy & Law



5.4 Political Communication

Successful media balance 2017

In terms of PR, 2017 proved to be a very successful year for eco's Capital Office. Key Internet policy topics for eco – such as blanket data retention, the debates around hate speech and fake news connected with the controversial Network Enforcement Act, the protection of minors, and the importance of digital policy in the German federal election – were all strategically accompanied by political communication and transported to the media and the public arena.

eco is being recognized by more and more key editorial offices in Berlin as a competent Internet policy actor. This is demonstrated, amongst other things, by the ongoing significant rise in

media inquiries on current Internet policy-related debates – concerning, for example, a digital ministry, blanket data retention, or the Network Enforcement Act – and the share of political press references to eco in leading media, which continued to increase in comparison to 2016. Particularly heartening is the marked increase of TV coverage on and requests for statements from eco, for example from the Tagesschau, Tagesthemen, and Berlin direkt, as well as within news programs on Sat1 and RTL.

eco Campaign Wahl/Digital 2017 – Setting a political agenda during the german federal election campaign

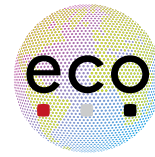
The indisputable focus of political communica-

tion in 2017 was the German federal election, which gave rise to eco's closely linked goal of raising the status and creating greater awareness for the topic of digital policy within federal politics. The agenda-setting campaign "Wahl/Digital 2017" was already conceptualized in late 2016, and was set in motion in 2017. With this campaign, eco was able to sustainably anchor the topics of Internet policy and the further development of the Digital Agenda in the media debate during the federal election campaign.

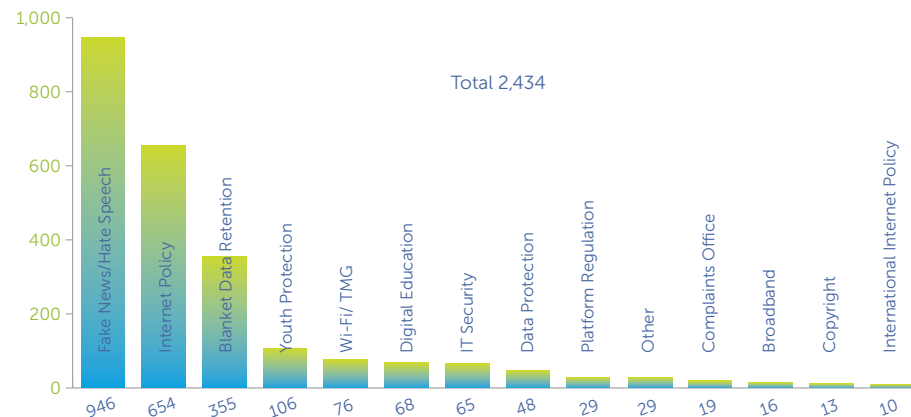
The association's key political demands were positioned in a range of leading media, and discussed actively and publicly with the relevant decision-makers in federal politics. In this way, the main goals of the campaign were fully achieved. One main factor that led to this success was the departure from conventional

tried-and-tested formats in favor of an innovative mix of entertainment, information, political debate, and audience interaction within the framework of live communication, as well as the framing of key messages (political demands) with journalistically relevant content.

At the heart of the campaign was the four-part event series, "The Internet Policy Party Check", which initiated dialog with Internet politicians from the parties represented in the German Bundestag and clustered the broad range of topics, while also creating PR opportunities. The content developed on the basis of these four events was then presented at a high level final event, the "Network Policy Forum", held immediately before the election in September 2017.



Press Publications Selection of Topics from eco Policy, Law & Regulations 2017 (Print and Online)



Classic media work and social media accompaniment extended the reach of the events and their key messages to all relevant communications channels. A media cooperation deal with the WirtschaftsWoche, which was formed on a content-related rather than financial basis, guaranteed regular coverage of the events.

Successful discourse between industry and politics

Taken together, these events allowed the core political demands of the Internet industry to be successfully publicly discussed with all relevant Internet politicians and political decision-makers at ministerial and state secretary level, in a way which attracted strong media interest.

Raising awareness

A total of around 600 participants took part in the four Internet Policy Party Checks and the Network Policy Forum – 80 percent of whom were from the main target groups of politics, industry, and the media.

The media analysis registered over 250 press reports, which included four agency reports (dpa/Reuters). The evaluation of PR work demonstrates a share of approximately 10 percent in eco leading media such as Die Zeit, WirtschaftsWoche, and Handelsblatt.

Successful agenda setting

Framing the key demands with appropriate background information, current survey

PR Activities eco Berlin 2017

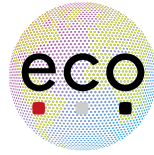


figures, and infographics created interesting added value for the media, who were happy to pick up these topics. This worked particularly well concerning the demand for an Internet Minister and the issue of broadband expansion, both of which received extensive coverage, initially as an exclusive in the Handelsblatt, and then broadly through the dpa.

Complaints Office: Best practices in the debate concerning self-regulation and the Network Enforcement Act

Another highlight was the very successful PR coverage of the debate concerning hate speech and, in connection with this, the Network Enforcement Act which was hastily

approved by the outgoing government in 2017. Through its political PR work, eco and the eco Complaints Office have succeeded in positioning themselves as experts in this area and have been enabled to play a major role in shaping the debate in various leading media, and especially on TV. An excellent basis for this was provided by the eco Complaints Office's first independent annual report, which was presented in early 2017 in front of representatives from the press and politics. The topic was picked up by a multitude of leading media and agencies such as the dpa.



Kathrin Jennewein
PR Specialist



René Bernard
PR Editor

6. Association Communication

Content development as the key to enduring topic-based PR

One important strategic component of eco's association communication in 2017 was the decision to opt not only for classic Competence Group communication, but also for an increased amount of content developed in-house. Such a strategy not only enables the development of strong PR stories and offers added value to the media, but it also enhances the content of current debates on the relevant Internet market topics.

This approach found effect in the form of a trilogy of studies on the topics of Smart City, Smart Home and Industrial IoT, through which eco was able to position itself as an expert on the topic area Internet of Things. The studies

were first offered exclusively to Handelsblatt and heise, and afterwards to select specialist and business editorial offices. They were also presented at press conferences in Cologne, Berlin, and Munich. Media cooperation with the daily newspaper Die Welt ensured additional continuous coverage. The media resonance of approximately 350 reports on all three studies was particularly good. The continued media inquiries on the topic testify to the fact that eco has successfully managed to stake a long-term claim to the Internet of Things topic.

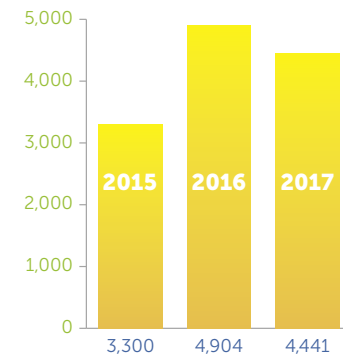
Successful PR stories developed from Competence Group topics

As in previous years, a second important pillar of eco association communication in 2017

was the relaying of Competence Group topics and content through interesting PR stories and media messages. The repeated successful cooperation with the German Press Agency dpa in positioning statements of Competence Group Leaders is especially noteworthy; for example, on the topics of New Work and changes to the working world by 2035. Communication concerning the Manifest for Serious Email Marketing, which 36 member companies signed, was also particularly successful.

Another highlight of Competence Group communication was the successful media work on the new Competence Group Blockchain. Additional PR content was developed through a YouGov survey, which was then placed very successfully in leading media. From a very

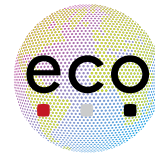
Press publications Internet industry 2015-2017



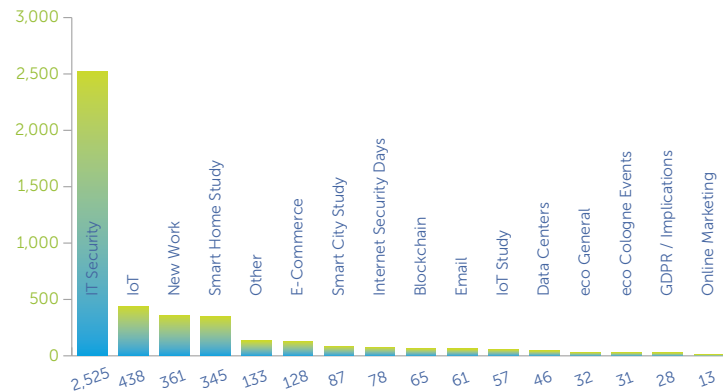
early stage, eco was thus able to cast itself as an expert on the newcomer topic of blockchain.

Maximum attention for eco services

eco offers a range of services to its member companies. In order to make these services known publicly while simultaneously generating added media value for eco, the eco PR team regularly includes service topics in its strategic communications measures and uses them as cases in point for demonstrating eco's expertise. Applying this approach and using targeted PR, eco's new External Data Protection Officer service could be marketed especially effectively as part of current political debates on topics such as Brexit and the European General Data Protection Regulation. Similarly, the new security initiative SIWECOS



Press publications, selection of eco topics Internet industry 2017 (print and online)



was successfully presented to the press in the context of the Internet Security Days.

Professional online press portal for improved media services

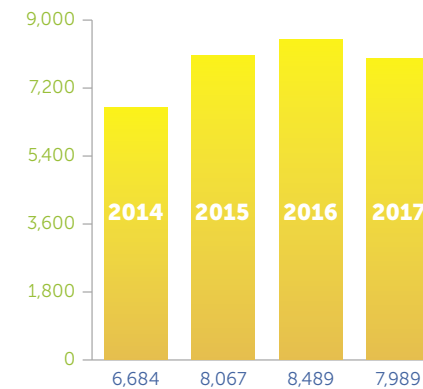
In order to also offer an improved service to journalists online, a new eco press portal was designed in 2017. The portal is set up to be used in an intuitive way and facilitates searches for specific types of media and content, as well as making the search for eco topics and contact persons faster.

The complete studies on Smart City, Smart Home and Industrial IoT are available to all eco members free of charge as a download in the members' portal: www.eco.de/en/members

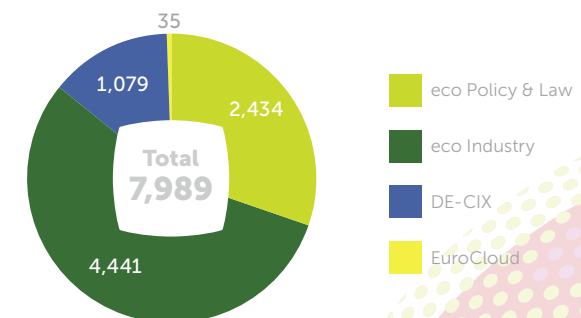


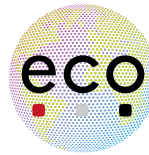
6.1 Press Analysis eco Total

Press publications eco total (print and online)

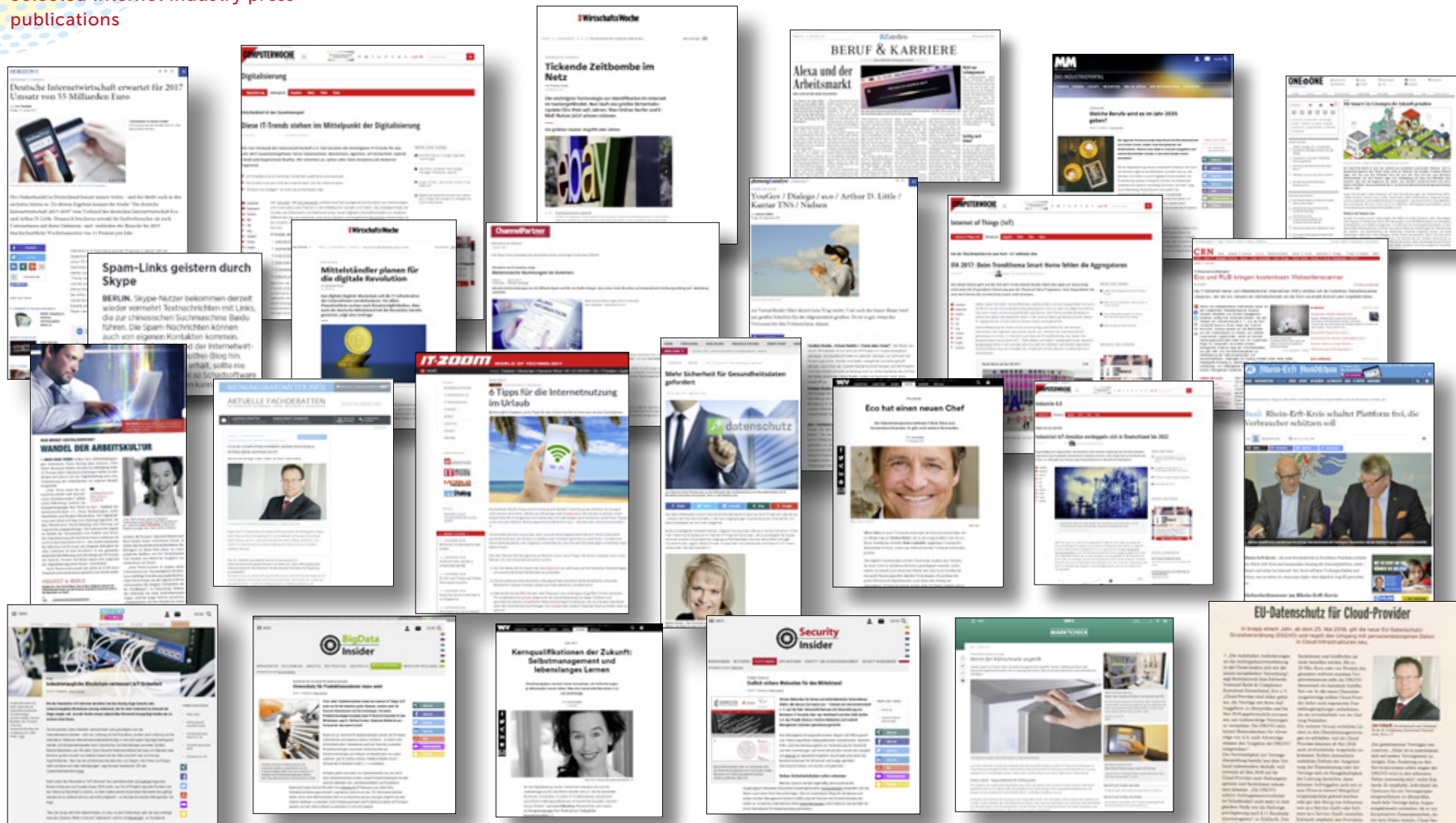


Press publications eco total 2017

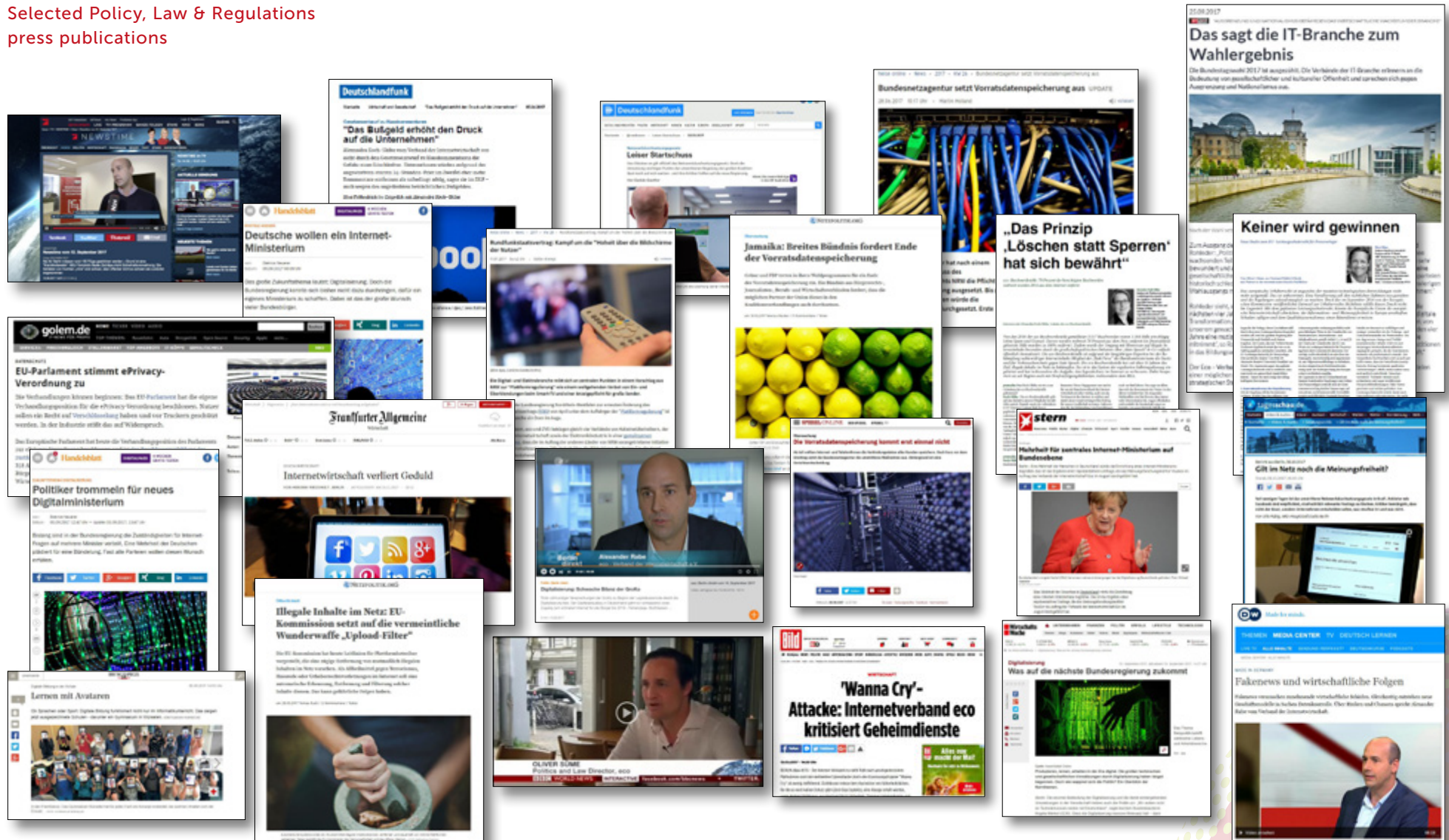


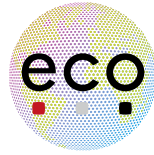


Selected Internet industry press publications



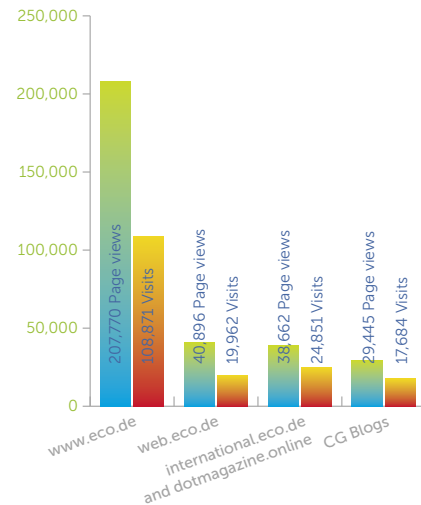
Selected Policy, Law & Regulations press publications



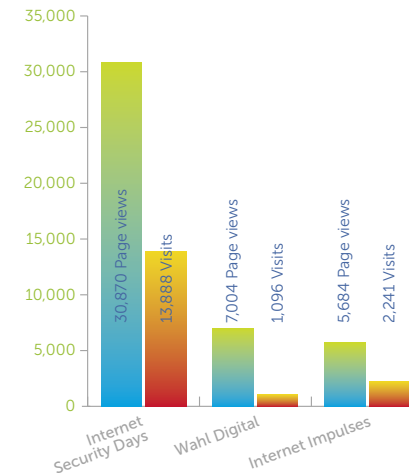


Benjamin Büttrich
Head of Web Development

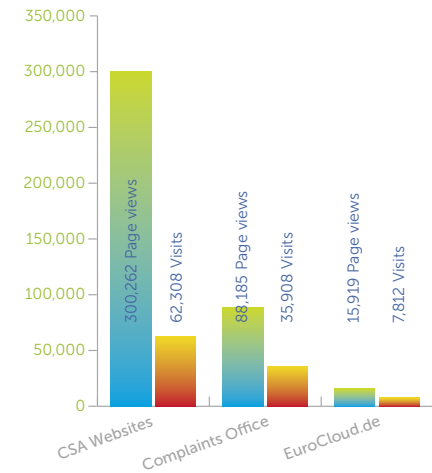
Access to association websites



Access to event pages



Access to services and initiatives



6.2 eco Websites

Association website

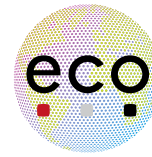
In 2017, eco started to upgrade its web presence. From August onwards, visitors to the site could find the eco Competence Group topics, from blockchain to security, in a new shared portal. In the second half of the year, further content such as the events calendar, offers for journalists, and the Policy, Law & Regulations division's pages were integrated into the same portal. A complete transition from the web presence www.eco.de to this new content platform is planned for 2018, when a secure area will also be made available for members.

Events

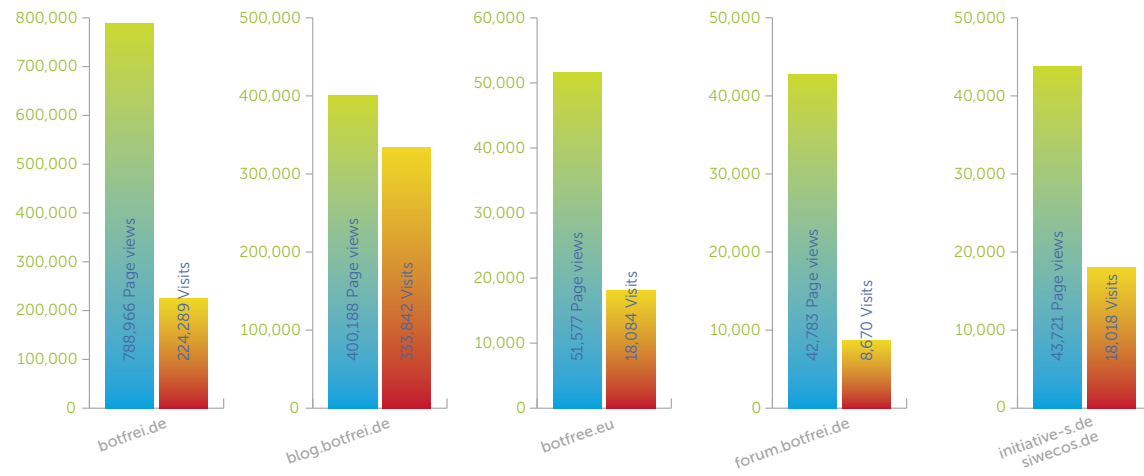
Along with numerous events for association members, eco cooperates with well-known partners in offering conferences and events on key topics of relevance to the Internet industry and digitalization. The Internet Security Days, the event series Wahl/Digital 2017 and the Internet Impulses in Cologne were accompanied by eco's own web offers.

Services and initiatives

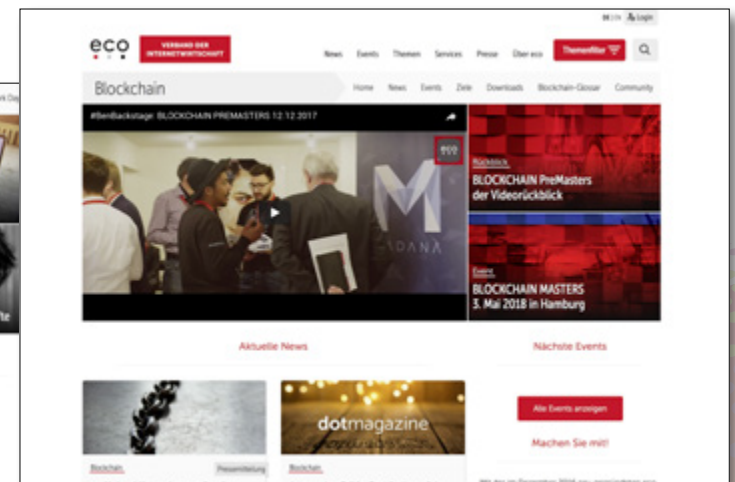
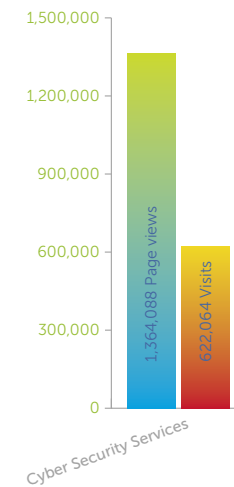
eco supports a range of services and initiatives with targeted websites. These are aimed partly at companies and partly at consumers. A principal focus is on content and services for IT and Internet security in addition to the fight against illegal content online.

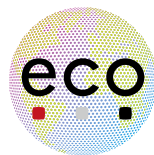


Access to cyber security services (sample)



Total access to cyber security services





6.3 eco Media

eco Media: Voices of the Industry

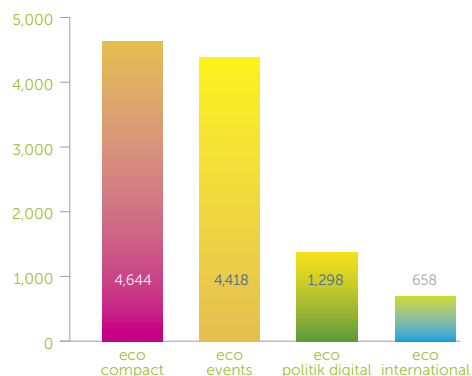
Alongside its press work, the factor that particularly shapes the voice of the industry is eco's own media. These channels are directed at members on the one hand, but they also articulate the demands of the Internet industry for the public and document its achievements.

eco relies on three forms of digital media: email newsletters, social media, and podcasts. Even though the editorship of each is guided by the reception patterns of the respective users, they are all equally guided by the principles of continuity, integrity, and relevance.

Newsletters: Old but gold

Since as early as April 2003, eco has been operating its most successful channel: the email newsletters. "eco compact" and "eco events" are published on alternate weeks. Through these channels, every 14 days the association can inform newsletter subscribers about its activities and its active engagement and can introduce its new members. In the alternate weeks, the focus is on eco's own events, as well as those of the industry.

eco Newsletter Subscribers
December 2017



Twice a month, "eco politik digital" summarizes politically interesting information both from the capital Berlin and from Brussels.

The English language newsletters "eco international" and "eco Inside" were previously published once a month for international members, and contained tips on interesting activities and events as well as useful information on "business in Germany". These newsletters were replaced by the new dotmagazine in February 2017. Read more on this in the chapter on eco International.

Social media: On the pulse of time

eco publishes more than a dozen tweets and posts a day via its social media channels,



which offer high topicality, direct dialog with the association and, with "eco zum Anfassen" ("eco at Your Fingertips"), provide a glimpse behind the eco scenes. The main streams of communication stem from the two German language twitter channels @eco_de and @eco_politik, the English language channel @eco_en, and the Facebook page "ecoverband". Read more in the section on Social Media.

Podcast: Topical "deep diving"

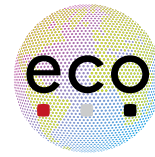
Once a month, the eco audio magazine delivers especially detailed background information in the German language. The main topic of each issue is illuminated from various perspectives and through interviews with experts. Those

interviewed are selected specialists, who provide both an intensive and critical analysis of the topic at hand. Published as podcasts, the association offers an in-depth, informative treat for the ears. The eco audio magazine is available at www.eco.de/podcasts, or can be subscribed to free of charge on Apple's iTunes.

The editorial office responsible for the website news, the eco audio magazine, the Cologne newsletter, and the social media channels is FRESH INFO +++ (fresh-info.agency).

Further information is available at:

www.eco.de/newsletter
www.dotmagazine.online
www.eco.de/podcasts



Kathrin Jennewein
PR Specialist

6.4 Social Media

For the eco social media channels, 2017 marked a period of change. This year saw the social media team strengthening its information provision on eco events and the association's services for members and interested parties.

The eco Facebook channel deployed a range of different formats, including press releases, images and reports of eco events, studies, figures, interviews, and information on forthcoming events. It also offered some glimpses of day-to-day work at eco.


In particular, the video activities were further developed and thus the mix of media broadened, due to the support which Ben Kasselmann with his extensive video-

making experience contributed to the team. The social media team was therefore not only able to significantly increase its number of video reports, but also to try out new formats. The video column "Ben Backstage", for example, in which Ben Kasselmann provides a glimpse behind the scenes at eco from his personal perspective, was created in early 2017. The increase in video activities meant members and interested parties could gain better insight into eco's work, events, and structures.

eco has been active on Twitter since 2008, and the number of followers continued to increase throughout 2017. Along with the German and English language channels, [@eco_de](#) and [@eco_en](#), eco is also

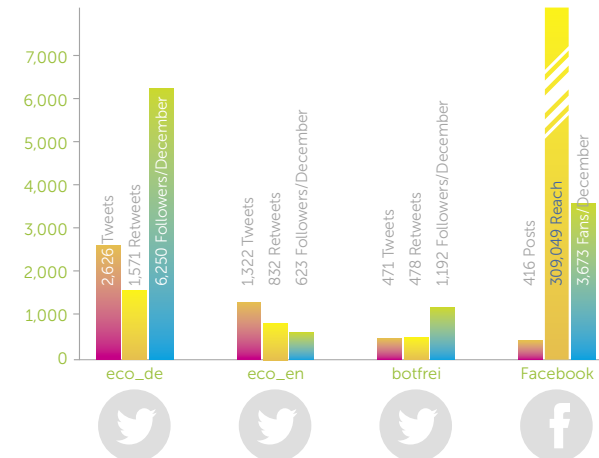
represented by a digital policy related channel, [@eco_politik](#).

For further information, see:

 [@eco_de](#)
[@eco_politik](#)
[@eco_en](#)
[@botfrei](#)
[@AntiBotnet](#)
[@EuroCloud_DE](#)
[@DCStarAudit](#)
[@CSA_eco](#)

 [www.flickr.com/ecoev](#)

eco in Social Media 2017




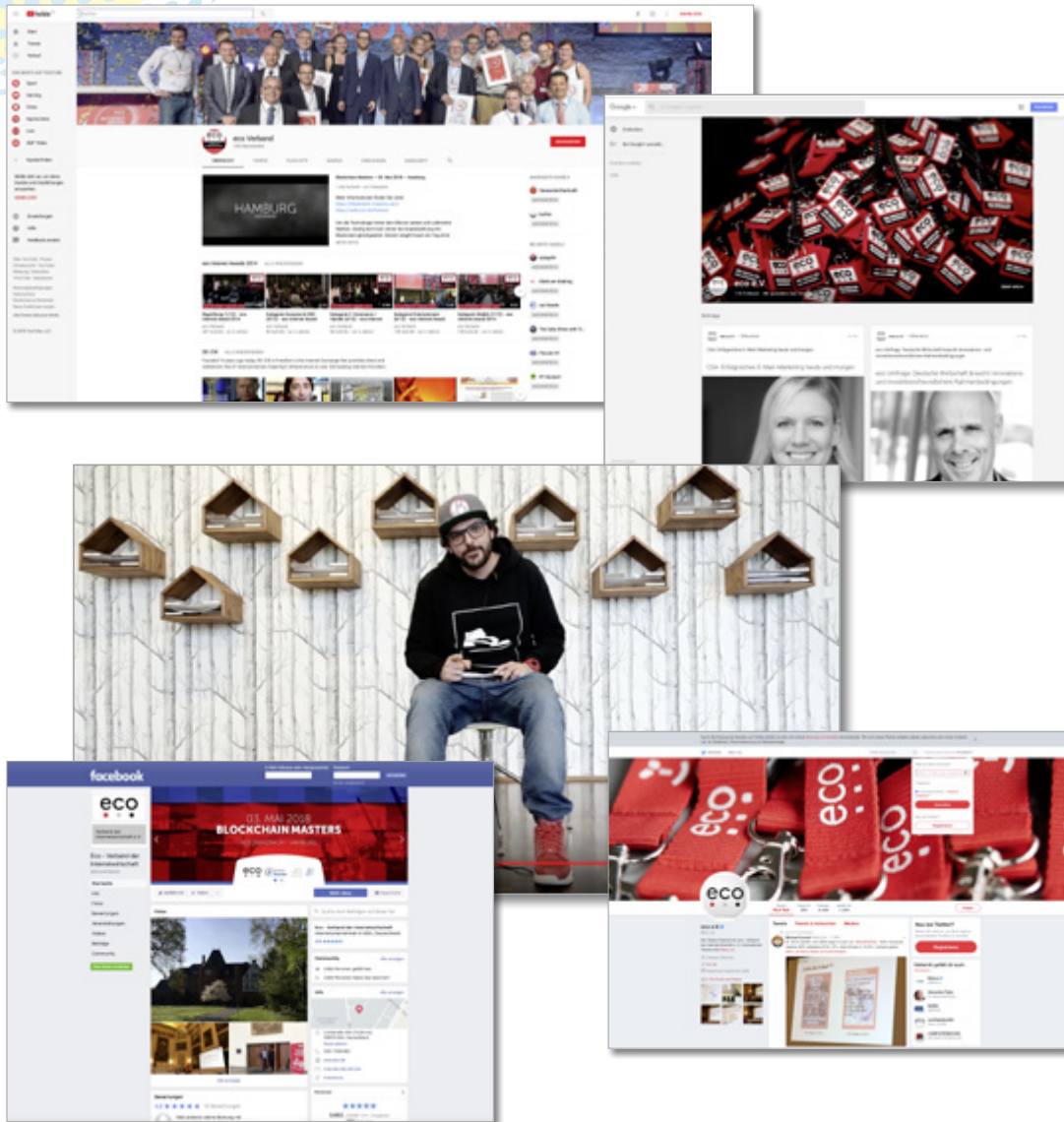
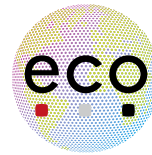
 [www.facebook.com/ecoverband](#)
[www.facebook.com/botfrei](#)
[www.facebook.com/CertifiedSenders](#)
[www.facebook.com/siwecos](#)

 [www.xing.com/net/ecoassociation](#)

 [www.eco.de/linkedin](#)

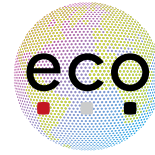
 [www.eco.de/gplus](#)

 [www.youtube.com/ecoAssociation](#)
[www.youtube.com/eurocloud](#)
[www.youtube.com/Datacenter-StarAudit](#)



Farewell

On September 10, 2017, Tom Müller passed away unexpectedly. For a number of years, he molded eco's communication and represented the association to the outside world. We, his eco and DE-CIX colleagues, but also the eco members, media representatives and partners, knew Tom Müller as a passionate communications professional and as an exceptionally committed member of the eco family. He enriched our association's work and left behind a legacy that will last for many years to come. We will always remember him gladly and with great gratitude.



Judith Ellis
Project Manager and
Team Head International Communications



C  it Kinsella
International Member Services



Eil  n Geraghty
Junior Project Manager
eco International

7. eco International

eco's international activities were further strengthened during 2017, with the launch of the association magazine dotmagazine, the development of new services and membership offers, and the establishment of the International Steering Committee to oversee planning and strategy development for the increased internationalization of the association.

International Members

In 2017, a total of 471 eco member companies were based outside of Germany, spread over more than 60 countries. The top ten countries in 2017 (aside from Germany) were the Russian Federation, the USA, the UK, France, Austria, the Netherlands, Switzerland, Bulgaria, Italy, and Poland.

International Steering Committee

To guide the future strategy of International for eco, on 19 December 2016, the eco International Steering Committee was established to develop a comprehensive international strategy for the association and its members. This body will continue as an advisory board

to support the work of the eco International department.

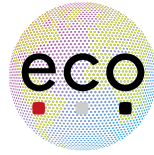
The members of the eco International Steering Committee are:

- Klaus Landefeld, Member of the Board for Infrastructure & Networks, since 11/2017 Deputy Chair of the Board
- Henning Lesch, Deputy Head of the Capital Office, Deputy Head of eco Division Policy, Law & Regulations
- Thomas Rickert, Director eco Names & Numbers Forum
- Judith Ellis, Project Manager and Team Head International Communications
- Lars Steffen, Business Development Member Services

Cooperative Ventures

One cooperative venture which was undertaken in late 2017 was the finalization of the Memorandum of Understanding between eco and the North American Internet association, the Internet Infrastructure Coalition (i2C). This resulted in the development of an "MVP" membership offer for members interested in both associations.

eco and CENTR also came to an agreement in 2017 to undertake reciprocal membership. In the context of this agreement, Thomas Rickert took part in several working group meetings at CENTR during the year.



Béla Herting
Junior Project Manager
eco International



can take the form of text, audio and video interviews, scientific papers or white papers, and articles offering advice or tips & tricks for companies. Topics are chosen to enable eco members from anywhere along the value chain to become involved – from the basic infrastructure through to the service layers.

Events

eco was represented at a range of events in an international context in 2017. This began with WHD.global in March, where eco organized political panel discussions at the eco booth. Lars Steffen and Thomas Rickert represented eco at all ICANN meetings. Other events where eco was present included M3AAWG, the OX Summit, Domaining Europe, Brands & Domains, Data Centre World/Cloud Expo Europe, and the RSA Conference.

New Services

The International team worked together with the legal department to roll out a service that supports international members with European data protection topics. As a result, the eco Data Protection Service (international.eco.de/eco-data-protection-service) was launched in late 2017.

International Communications

The main undertaking of the International team in 2017 was the launch of the new e-magazine, www.dotmagazine.online. Set up as a monthly magazine with changing Internet-related topics, it offers eco members the express possibility to bring themselves in on relevant topics through submission of "Industry Insights". dotmagazine serves multiple purposes and target readers: It offers an English-language presence for eco topics and services and eco personalities. It also offers eco members an opportunity to position themselves as specialists in a wide range of Internet topics, and it acts as a B2B platform for eco members to target enterprises facing the challenges of digitalization.

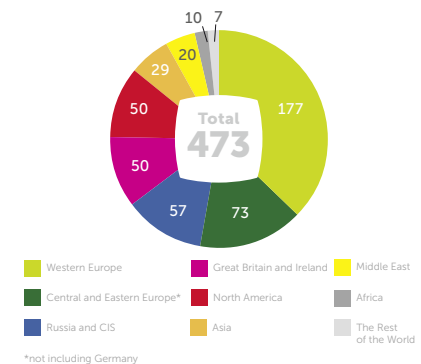
dotmagazine is open to international and German members alike, and contributions

Interested members can contact dotmagazine@eco.de for more information.

During 2017, there was continual growth in the traffic numbers to the dotmagazine website, doubling each quarter. Topics covered in 2017 included security, Internet governance, e-commerce, digital infrastructure, Green IT, cloud, IoT, and data protection, and over 150 articles and interviews were published during the year. Subscriptions to the eco International newsletter, relaunched in February for dotmagazine (initially monthly, moving to fortnightly in October 2017), grew by 30 percent during the year.

The maintenance of the English-language website international.eco.de was also continued in 2017, with over 100 articles published during the year.

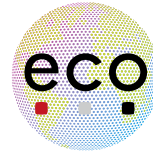
Geographical Distribution of International Members 2017



Studies & Reports

The eco International team translated or composed several larger scale publications in 2017. This included the white papers "Best Practices for Email Marketing", "Infrastructure for Live Broadcasting – State of Play and Future Challenges", "BREXIT – Challenges for the Domain Industry?", "Results of the Study on the Acceptance Factors for Electronic Invoices", the studies "Cloud Project Marketing Guidelines", "The eco Survey IT Security 2017", and the three studies from eco/Arthur D. Little on Smart City, Smart Home, and Industrial IoT (published in early 2018), as well as the eco Annual Report 2016 and the first-ever eco Complaints Office Annual report 2016.

Further information is available at: international.eco.de



Markus Schaffrin
Head of Member Services



8. Member Services

8.1 Cyber Security Services

8.1.1 botfrei (Anti-Botnet Advisory Center)

In 2017 as in previous years, there was no let-up in the threat posed by botnets and cyber attacks. A large growth rate of botnet infections was detected again in the mobile area. What's more, in 2017, there was an unfortunate continuation of the trend detected in the previous year of increasing numbers of IoT devices infected with botnets.

The important role of botfrei in the fight against botnets showed itself most recently in early December 2017, when international law enforcement agencies succeeded in taking

down the Andromeda botnet. Users were referred to botfrei by the Federal Office for Information Security (BSI) and law enforcement agencies, as well as by online magazines, with such referral not being unusual; this happens regularly, particularly where recommendations for free tools for removing malware are concerned.

The cooperation between botfrei and the many Internet Service Providers (ISPs) involved continues to develop very positively. The ISPs regularly refer to botfrei's services customers who send botnet-related abuse

notifications. The free botfrei EU-Cleaners then help their customers remove malware. Security tips and instructions, especially those found in the botfrei Wiki, help Internet users protect themselves against viruses and Trojans in the long term.

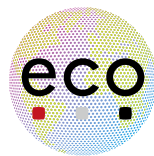
Quick and understandable assistance

botfrei is also recognized by many for the fact that it manages to convey complex issues in simple language and in a manner which is easy to understand for those who visit its websites and blog and are not familiar with technology. A further important pillar here is the botfrei forum, which thrives especially from the involvement of many voluntary helpers in the botfrei community, and which was

again successful in helping users remove malware in 2017.

botfrei extended its awareness work in social media in 2017, where it regularly reported on new phishing campaigns, current blackmail Trojans, and other fraud schemes such as fake calls. In addition, botfrei continues to strive to assist Internet users when creating backups, choosing secure passwords, and implementing useful tools.

Further information is available at:
www.botfrei.de / Twitter: [@botfrei](https://twitter.com/botfrei)
www.botfree.eu / Twitter: [@antibotnet](https://twitter.com/antibotnet)



Peter Meyer
Head of Cyber Security Services



Sebastian Fitting
Consultant, Complaints Office



8.1.2 Smart-and-Safe-in-the-Internet (SUSII.nrw)

SUSII is a joint project between botfrei and the eco Complaints Office, and sees itself as a local complement to their existing services. The project is implemented in cooperation with local police authorities.

The security portal is the first port of call for both citizens and small and medium-size enterprises (SMEs) in instances of damage caused by cyber crime. It also summarizes important tips on cyber crime prevention in simple language.

After its successful kick-off in cooperation with the Cologne Police Department in the previous year, the initiative was also put online for the city of Leverkusen in early 2017. This fall will see first cooperation with an entire German district, that of Rhein-Erft. The local services are now accessible via the central website www.susii.nrw.

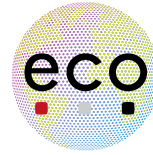
In Leverkusen, the Mayor and the District Administrator of the Rhein-Erft district could be successfully secured as patrons. Both patrons attended the respective project launches in the town hall and district house, along with a number of media representatives. SUSII is also supported by the Chambers of Trades, Chambers of Commerce, media partners, and NetCologne.

Within the framework of this cooperation, joint events such as the Safer Internet Day in February and the Cyber Security Month in October were organized. Presentations were also given at a security trade fair in the Rhein-Erft district and to the Chamber of Trades. Since 2017, the SUSII initiative Cologne has also been supported by the City of Cologne, with a joint event being held in the municipal library during the Internet Impulses event.

The SUSII project contributes not only to strengthening the cooperation with local law enforcement agencies, but also to deepening the existing IT security-related contact to local businesses.

SUSII is also supported by the State Police of North Rhine-Westphalia – the collaboration with SUSII is a component of the cooperation agreement between the State Police, networker NRW, and the eco Association, signed in September 2017. In 2018, it is planned to extend the SUSII project to further cities and regions in North Rhine-Westphalia.

Further information is available at:
www.susii.nrw



Peter Meyer
Head of Cyber Security Services

8.1.3 SIWECOS & Initiative-S – on the Safe Side

The externally-funded project SIWECOS, launched in 2016, was continued in 2017. The first beta version of the project was presented to the press and public during the Internet Security Days in Phantasialand, and the project was taken into operation shortly thereafter.

SIWECOS is meant first and foremost to assist small and medium-size enterprises in detecting and repairing security vulnerabilities on their websites. In cooperation with the Ruhr University Bochum, a number of free website scanners are available that check registered Internet pages for security vulnerabilities daily. An improved website scanner from Initiative-S is also in use, which will continue to be used as an element of SIWECOS in future. Should any

security vulnerability be detected, the website operators receive an automatic message and can find easy-to-understand recommendations as to how the vulnerability can be repaired on the project's website.

Now including a Hoster Service

In cooperation with CMS Garden, the SIWECOS Hoster Service was also put into operation in 2017. This project module provides assistance to web hosters in order to prevent attacks on content management systems on the server side, eliminating the necessity for the immediate involvement of a website operator. This service is a worldwide first, and has led to invitations for the project partners to present it at international conferences. There are currently over 80 companies registered with

the SIWECOS Hoster Service worldwide.

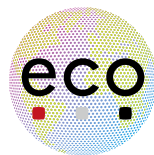
The project SIWECOS was presented at over 50 congresses, trade fairs, community events, and roadshows in 2017, including renowned events such as CeBIT, it-sa, a M3AAWG meeting, the fair for manual trades in Munich, and the 15th German IT Security Congress in Bonn.

SIWECOS will be funded by the Federal Ministry for Economic Affairs and Energy until the end of October 2018, within the framework of the initiative "IT Security in the Economy". The project is based on cooperation between the eco Association and the Ruhr-University Bochum. Technical support is provided by CMS Garden – the umbrella association of the open source content management systems



in Germany – as well as by the IT security start-up Hackmanit GmbH, based in Bochum. Responsibility for the project management is vested in eco.

Further information is available at:
www.siwecos.de



Peter Meyer
Head of Cyber Security Services



Michael Weirich
Security Analyst



8.1.4 Advanced Cyber Defence Centre (ACDC)

In 2015, the Advanced Cyber Defence Centre project came officially to a successful end as an EU-funded project under the FP7 program. The project and its core topic of data sharing nonetheless continued to enjoy favor with the IT security sector in 2017.

The DFN-CERT took over operation of the central database from DE-CIX in 2017 and, in so doing, revised and optimized the database and the associated infrastructure. Once a project partner, this department of the German National Research and Education Network now employs the ACDC database for the exchange of abuse incident information within the global CERT community.

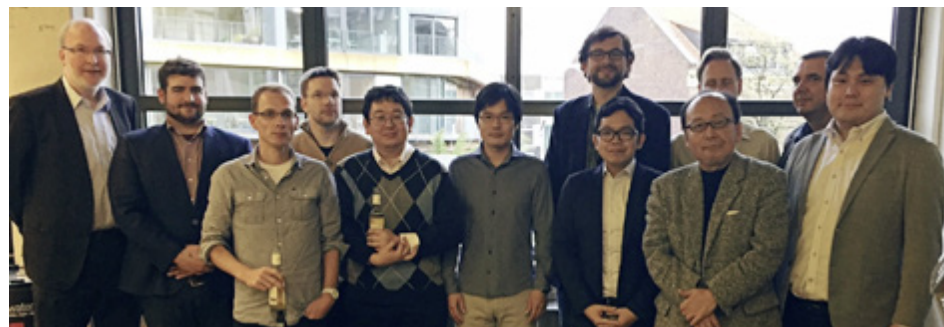
Along with the DFN-CERT, eco has remained as a contact partner for companies and institutions interested in free, bilateral exchange of abuse information with other companies and institutions.

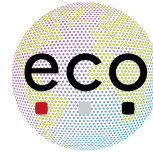
Additional cooperation with another former project partner was agreed upon in 2017, namely with the Belgian security cluster LSEC. The Belgian counterparts are planning to modify their own version of the ACDC database for the exchange of abuse information, based on STIX, and to then implement it internationally.

2017 also saw a meeting being held once more with a Japanese delegation in Cologne. Japan intends to extend its national early-warning

system for the detection of DDoS attacks with a sensor network in Europe, to which purposes the ACDC database would also lend itself. The meeting was attended by eco employees and representatives of a number of German universities.

Further information is available at:
www.botfree.eu





Cornelia Schildt
Project Management IT Security



Michael Weirich
Security Analyst



8.2 nrw.uniTS

The IT security network nrw.uniTS has taken on the task of supporting cooperation amongst all IT security parties in North Rhine-Westphalia in the long-term. A particular focus is placed on structured exchange between academia and industry. In addition, work is undertaken to heighten the awareness amongst other sectors and divisions of the topic of IT security and to establish their exchange with experts.

These primary goals are pursued by the four project partners, the Horst Görtz Institute for IT Security (HGI) of the Ruhr University Bochum, eco – Association of the Internet Industry, networker NRW, and the Institute for

Internet Security (if(is)) of the Westphalian University of Applied Sciences.

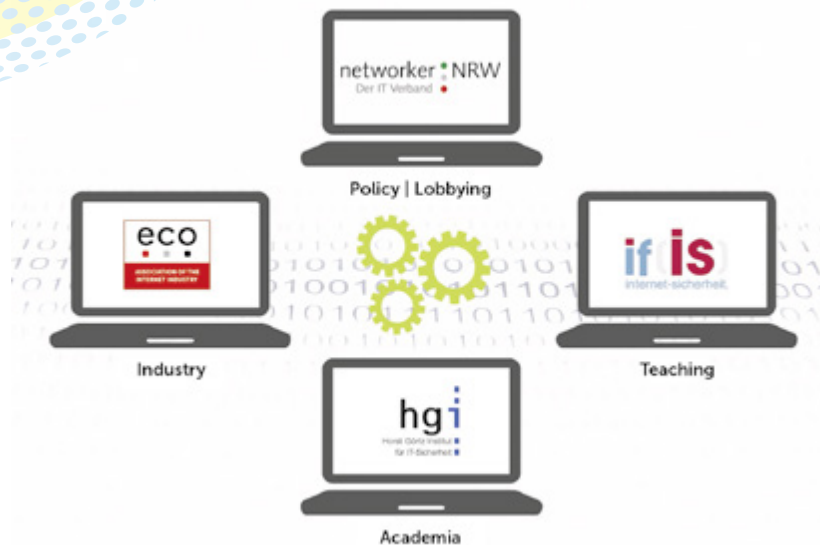
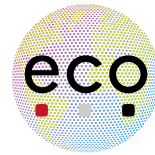
Since 1 July 2015, nrw.uniTS has been funded by the Ministry for Innovation, Science, and Research of the state North Rhine-Westphalia (NRW). Along with the continued development of established concepts, formats, and events, the collaboration between academia and industry was strengthened and joint (research) projects were initiated. By the end of the year 2017, the network had received letters of intent to actively cooperate from 150 companies and research institutes based in NRW. Speakers from the network presented select topics at both the network's own events and external organizers' events.

The established event formats were also continued in 2017, and the existing structures were used to help form new business relationships and trans- and interdisciplinary research partnerships; partnerships which, were it not for the network, would not have emerged. Small and medium-size enterprises benefit from this collaboration in particular, as they usually do not have the resources to independently search for and maintain such contacts.

Alongside the work on specialist topics which is organized by the working groups for risk management, web security, IT forensics, and data protection, established formats such as "nrw.uniTS meets..." and the format "IT'S

Breakfast" were successfully continued and further developed.

"IT's Breakfast" is a half-day event in cooperation with G Data in Bochum, during which anyone interested in matters of IT security can, in a relaxed atmosphere over bread rolls and coffee, exchange ideas about alternating topics of IT security. The events start with a keynote address delivered by speakers from small and large companies or from research institutes. The talks deal with either the newest developments in the ITS area or with current research results. Afterwards, there is time set aside for discussions, and attendees have the opportunity to establish contact with other IT experts. The format "IT's Breakfast" has also



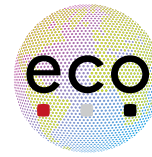
been successfully introduced and established in the East-Westphalian city of Lippe on the basis of cooperation between its Chambers of Industry and Commerce and nrw.uniTS.

The formats "nrw.uniTS meets trades" and "nrw.uniTS meets the creative industry" were developed over a number of events. Speakers from the nrw.uniTS network were invited to present on current topics. In cooperation with the German Red Cross, a workshop on the topic of risk management was held in the Red Cross conference hotel in Münster, which numerous participants from the Red Cross environment attended.

The network presented itself at every important German event related to IT security within and outside of NRW. nrw.uniTS was, for example, represented at the Internet Security Days, organized by eco in Phantasialand Brühl in September, and at the IT Security Day in Essen. In addition, nrw.uniTS provided a joint stand at the Hanover Trade Fair for its members, and took part in the it-sa in Nuremberg. The fourth Research Day IT Security NRW was organized by nrw.uniTS in cooperation with the University of Hagen on 27 July.

Further information is available at:
www.nrw-units.de





Matthias Kurzhals
Coordinator CEBRA and Coordinator
School Development, Berufskolleg Ennepetal

8.3 CEBRA

With the CEBRA initiative, eco imparts up-to-date and immediately applicable business knowledge, and the participants qualify with a Certificate of "Counselor for E-Business Related Assignments".

The accreditation, participant administration, test administration, and certification are processed in cooperation with the Vocational College Ennepetal. In addition to the coordination input of Matthias Kurzhals, Divisional Coordinator of School Development at the Vocational College Ennepetal, a student assistant supports the administrative processes as well as the maintenance and further development of the learning platform and the learning content.

On the one hand, the initiative is geared in particular towards vocational schools or comparable educational institutions who choose to provide their students/participants with up-to-date e-business training. On the other hand, it is aimed at companies seeking further training opportunities for employees working in e-business related areas. The action-oriented CEBRA learning modules allow cloud-based learning over the eco-cebra.de moodle server.

Certified e-business knowledge – practical and flexible

Applying a case study approach, the training offers practical content and places the focus on imparting competence-oriented action strategies for solving real problems encountered



in e-business. Having acquired the multi-layered learning, the participants demonstrate their progress in regular online tests and in a final examination. After successfully passing their exam, the participants receive a certificate issued by eco – Association of the Internet Industry, which certifies their extensive knowledge and skills in the topic of e-business.

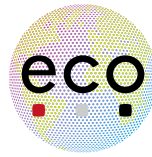
In 2017, approximately 250 participants from vocational colleges and other educational institutions took advantage of the service – both during and outside of their actual lesson times – and successfully qualified.

The number of students who participate has

continued to increase slightly. Along with public vocational schools, there are also, for example, a number of educational institutions connected to "Übungsfirmenring" (the German network for practice enterprises), who are either availing of the program or are in the process of testing it out.

Apart from its support and certification of the accredited schools and other educational providers, CEBRA also once again presented the initiative at the International Practice Enterprise Trade Fair in Sinsheim and continued to generate interest in the CEBRA certification.

Further information is available at:
www.eco-cebra.de



Hubert Martens
CEO networker NRW e. V.

8.4 networker NRW

The close collaboration between eco and networker NRW, which has been underway since early 2016, has proven itself effective and will continue to be further developed.

In 2017, political topics were successfully and effectively positioned, whether during the meetings between eco, networker NRW, and the parties represented in the newly elected state parliament of North Rhine-Westphalia, or during the meeting which took place in late November 2017 with Prof. Dr. Andreas Pinkwart, Minister for Economic Affairs, Innovation, Digitalization, and Energy. Central to these meetings was the need to convince the representatives of the state of NRW to

undertake a cooperative approach in further advancing the topic of IT security.

During the Internet Security Days on 29 September, a cooperation agreement between the State Police of NRW, eco, and networker NRW was signed. It is their mutual goal to improve the security of information and communication technologies and to fight cyber crime. The cooperation will help intensify the collaboration between private and state institutions, in order to create synergies and together raise awareness of the dangers of cyber crime.

Constructive Collaboration

Constructive and regular exchange takes place between eco's Competence Groups and the

working groups of networker NRW, as do joint meetings and events. Two events were held in 2017 for the social media sector. In Dortmund in March, the focus topic was "Games without Borders – Gamification as a Marketing Instrument", with the speakers including Prof. Tim Bruysten of the MD.H. University of Applied Science, Roman Rackwitz, founder of the first gamification agency in Europe, and Stefanie Waschk of the initiative "Engage.NRW". The topic of the SoMedia evening in Cologne in November was "Clubs and Social Media". The speakers at this event were Prof. Dr. Tobias Kollmann, the social media representative of the Prinzen-Garde Cologne 1906, Magdalena Misiura of DKMS, and Jonathan Müller, leader of the club media team of the 1. FC Cologne football club.



networker  NRW
Der IT Verband 

Regular Coordination

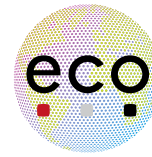
On the part of the associations' staff, there is regular exchange, both at the monthly "eco all hands" meetings and at coordination meetings between the eco CEO and Heads of Departments and the CEO of networker NRW. Joint projects and events are arranged, as is strategic planning aimed at increasing membership numbers for both associations and increasing political recognition in NRW.

Outlook 2018

The collaboration between the Competence Groups and working groups will continue to be strengthened in 2018. In addition, the topic portal launched by eco in November 2017 will be further developed, in order to offer more added value to the members of both associations. The goal is to become the central contact partner for questions related to IT in the political arena in NRW, to provide experts who can answer technical questions, and to support the process of digitalization professionally through both associations' members.

Further information is available at:

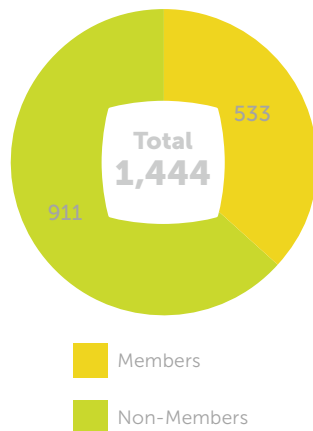
www.networker.nrw



9. Reports from the Competence Groups

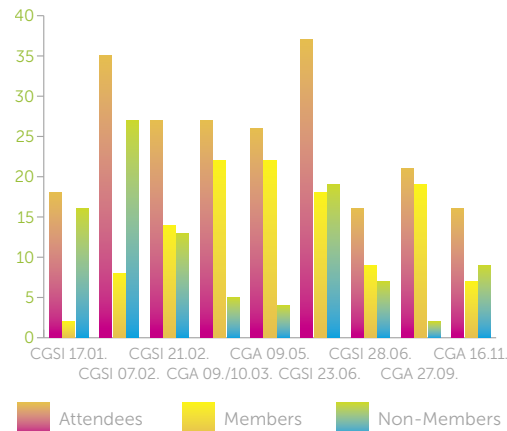
eco shapes the Internet – in all of its facets. Through active participation in one of its wide range of Competence Groups, members and experts work together in developing guidelines and quality standards for the market, as well as position statements on legislative initiatives and political developments that impact the business models of the Internet industry.

Attendees CG Meetings
Total

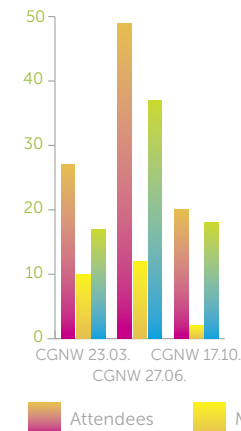


Overview of the Attendees at the Competence Group Meetings 2017

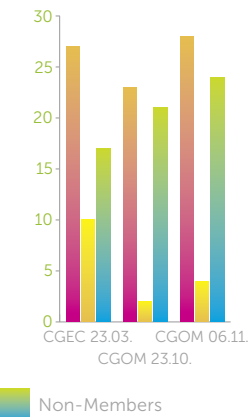
CG (Infrastructure-) Security & CG Abuse



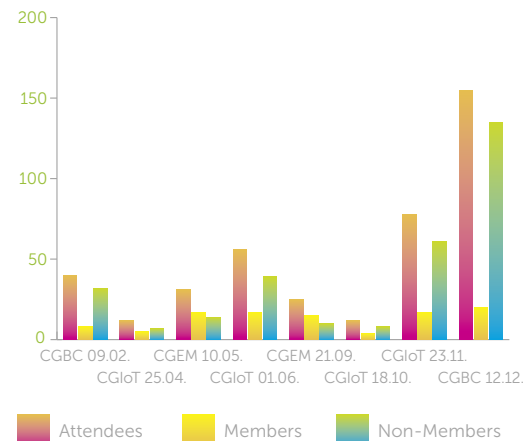
CG New Work



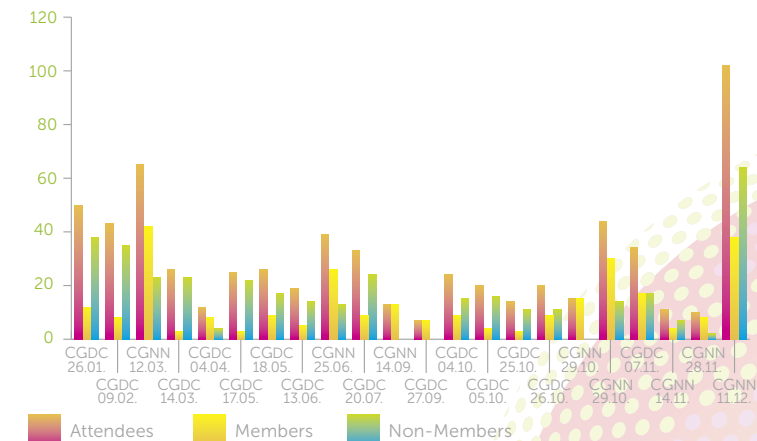
CG E-Commerce, CG Online Marketing

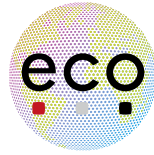


CG Email, CG IoT, CG Blockchain



CG Data Center, CG Names & Numbers





Stephan Zimprich
Leader, Competence Group Blockchain



Lars Steffen
Business Development
Member Services
eco Point of Contact for Blockchain

9.1 Competence Group Blockchain

As the youngest working group in the association, the CG presented itself at numerous events to both position itself and to raise awareness of its work. The consistent focal points in 2017 were the identification of hands-on use cases, discussions of the advantages and disadvantages of blockchain, and the legal and technical framework conditions for the use of blockchain technology.

Founded at the end of 2016, CG Blockchain kicked off the new year in 2017 with a press release on 24 January. In this, CG Leader Stephan Zimprich stated, "Blockchain is a cross-sectional technology with high disrupt-

tive potential for many industries. 2017 is a decisive year for the blockchain, in which standards, interfaces, and protocols will be defined. There is great potential in particular in the areas of the Internet of Things (IoT), in the finance industry, and Digital Rights Management, as well as in the e-commerce and e-government sectors."

Working meeting in Frankfurt

The CG's first working meeting took place on 9 February in Frankfurt, where over 40 experts spent a day in the DE-CIX MeetingCenter discussing new blockchain business models and areas of application, as well as the technology's legal issues.

Dr. Stefan Teis of the German Stock Exchange spoke about blockchain in the finance industry, while Prof. Philipp Sandern of the Frankfurt School of Finance & Management and Henri de Jong of Quantoz N. V. looked at blockchain in the automobile and insurance sectors. Lufthansa's Carsten Breithaupt examined the potential of blockchain in the airline industry, and Daniel Groß of the law firm DWF Germany explored the question "Is Code Law?"

YouGov survey

On 22 February, the CG presented the results of a survey about the prospects of blockchain technology, carried out among SMEs. The survey was conducted by the market research and

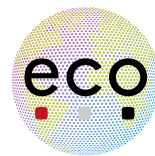
consultancy insitute YouGov on behalf of the eco Association. Only 34 percent of SMEs had even heard of blockchain. "However, of all those survey participants who did know of blockchain and had looked into it or used it already, 65 percent expect fundamental commercial changes," Stephan Zimprich pointed out.

eco Future Talk at the CeBIT fair

With the motto "d!conomy – no limits" the CeBIT 2017 trade fair – the world's most important event for the digitalization in the economy, public administration, and society – centered attention on the possibilities of digital transformation. In keeping with this focus, eco's Future Talk at the fair looked at the cross-sectional technology blockchain. Prof. Katarina Adam from the BlockchainHub Berlin, Alexander Tettenborn from the German Federal Ministry for Economic Affairs and Energy (BMWi), eco Board Member Prof. Norbert Pohlmann, and Stephan Zimprich discussed the question of "Blockchain – Hype or cross-industry disruption?"

Night of the Networks

On 27 April, the CG Blockchain was a guest at the WZ-N Night of the Networks in Munich. At the event, Stephan Zimprich, Andreas Keck of "Liberaler Mittelstand", Dr. Dirk Siegel from Deloitte, and Manuel Gerres from Deutsche Bahn AG debated the potential, possible business models, and the necessary framework conditions for the use of blockchain technology.



Evening symposium

On 18 May, at an evening symposium organized by the Fraunhofer Group ICT Technology and the GI informatics association, Stephan Zimprich gave a talk in the Spree Palace in Berlin on the applications and potential of blockchain technology. After the welcome from the GI's Prof. Peter Liggesmeyer and Alexander Nouak from Fraunhofer IUK, the following experts spoke: Dr. Daniela Brönstrup from the German Federal Ministry for Economic Affairs and Energy (BMWi), Prof. Gilbert Fridgen from the Fraunhofer Institute for Applied Information Technology, Dr. Shermin Voshmgir from BlockchainHub Berlin, Stephan Zimprich, Dirk Röder from MaibornWolff, Joachim Lohkamp from Jolocom, and Manuel Utz from StromDAO.



DISTRIBUTE Blockchain Conference

Lars Steffen and Stephan Zimprich attended the DISTRIBUTE Blockchain Conference in Hamburg on 16 June. In his talk on "Blockchain – The hype and the law", Stephan Zimprich spoke about how blockchain projects mostly are not compatible with today's legal structures. He explained why blockchain collides with the legal system in many places and what is nonetheless still already possible.

Blockchain in the energy industry

networker NRW invited the CG to the 27th ComIn Talk on "Blockchain in the Energy Industry" in Essen on 11 September. Participants explored the topics from various perspectives with the experts. Dr. Ansgar Steinkamp from

Open Grid Europe GmbH and Stephan Zimprich both delivered keynote speeches.

Further activities

On 17 October, eco called in a statement for the creation of an innovation-friendly environment for the testing of blockchain solutions in public institutions and administrations.

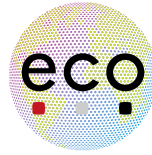
In the Nordakademie Hamburg, the "Innovation Forum Blockchain" took place on 14 and 15 November. eco Board Member Oliver Süme spoke on the topic of "Blockchain Legal". On 7 December, eco issued a press release entitled "Blockchain will revolutionize the Internet of Things in 2018", thereby offering a preview of the coming year.



Blockchain PreMasters

The CG's final activity of the year was the Blockchain PreMasters event on 12 December. The conference brought more than 200 participants to Cologne. For more on the event, see the event highlights in Chapter 11.1.6.

Further information is available at:
international.eco.de/topics/blockchain



Roland Broch
Head of Member Development
Coordination, Data Center Expert Group

Dr. Béla Waldhauser
Leader, Competence Group Data Center Infrastructure

Marc Wilkens
Leader, Competence Group Data Center Efficiency

9.2 Data Center Expert Group

In 2017, the eco Data Center Expert Group was again able to look back at a wide range of meetings, seminars, and event cooperations, along with participation in trade fairs and congresses – in Frankfurt (seven times), Munich (three times), and Cologne (twice), as well as in Berlin, Darmstadt, Essen, Hanover, and Vienna.

Fresh into the new year, eco welcomed almost 50 data center experts to the Kraftwerksschule (school for power stations) Essen on 26 January for a knowledge exchange on the topic of efficient DC infrastructure, as part of the seminar series "The eco 5 Star Data Center". Follow-

ing the specialist presentations, there was the opportunity for participants to get an exclusive view of the training campus' practice control rooms, in which power station managers are trained.

Over 40 infrastructure experts took advantage of the invitation on 9 February to the Frankfurt-based training center "stockzwo" to inform themselves about the newest developments in the area of DC infrastructure in a further event in the "eco 5 Star Data Center" series. In the opening keynote, host Ulrich Terrahe raised the question of what a data center costs. He provided an answer for the participating DC experts on the basis of

example calculations for operating models.

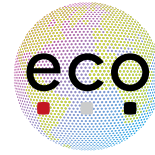
On 14 March, at the invitation of the Öko-Institut e. V., the Business Engineering Institute St. Gallen, and the proRZ Rechenzentrumsbau GmbH, almost 20 IT and DC specialists met in the eco Capital Office for the 2nd Advisory Committee meeting of the research initiative KPI4DCE. The project has set the goal of developing Key Performance Indicators for assessing the resource efficiency of data centers and examining their feasibility.

What does an ecological view of the Internet industry look like? This and further questions were in the focus on 23 March in Frankfurt for the joint discussion of the Competence Groups E-Commerce, New Work, and Data Center Infrastructure. With contributions from the

CG leaders Dr. Béla Waldhauser, Prof. Dr. Rainer Hofmann, and Lucia Falkenberg, the participants discussed energy efficiency and the eco-balance of a data center, as well as holistic methods of assessing the sustainable design of ICT.

Under the leadership of Marc Wilkens, Leader of the eco CG Data Center Efficiency, standardization experts from the areas of DC and IT operations met on 4 April in the DE-CIX MeetingCenter in Frankfurt, in order to discuss the current status of the EN 50600. The event was one of a three-part update series especially on the new parts of the norm: -3 (Management and Operation) and -4 (KPIs).

On 25 - 26 April, representatives of the eco Data Center Expert Group were available to



answer questions regarding DC operations at the eco booth at the specialist conference "future thinking" in Darmstadt.

eco invited participants to a discussion round on the premises of Efficient Energy GmbH in Munich on 17 May, entitled "Technology Drivers in Bavaria – Chances and Challenges for SMEs". Moderated by Roland Broch, around 30 experts from industry, politics and research discussed tools and strategies to increase the competitiveness of German SMEs.

Data centers & cloud – drivers of the digital economy in metropolitan areas

As part of an eco DC Strategy Talk on 18 May, association representatives were able to welcome almost 30 DC and IT experts from Austria and Germany to the municipal data center of the city of Vienna. Five short presentations on the topic of DC and cloud operations were on the agenda, as were a tour of the data center and an evening reception hosted by the Vienna Business Agency.

On 30 May and 1 June, association representatives were on location at the eco booth at ANGACOM, Europe's leading fair for broadband topics, to answer specialist questions about the Internet industry for interested visitors and eco member companies.

At the initiative of Prior1 GmbH, the DC Dialog took place on 31 May for the third consecutive year on the Cologne eco premises. Initiator and



moderator Stefan Maier offered interested companies the opportunity to discuss topics, problems, and questions regarding DC operations.

What do future-proof KPIs for data centers look like? This and further questions were answered by Competence Group Leader Marc Wilkens for the 20 participating standardization experts during the second EN 50600 Workshop on 13 June in Frankfurt.

On 20 July, the eco Data Center Expert Group invited participants to an expert discussion in one of the most modern data centers in Europe: The newly-opened noris network AG

data center in east Munich. Moderated by Werner Theiner, the evening round of talks was opened with a greeting from host Joachim Astel.

After the summer break, the stage was again set for the "eco 5 Star Data Center" series. In two breakfast events on 4 October in Munich and on 25 October in Frankfurt respectively, moderator Werner Theiner welcomed close to 20 participants to an information exchange in a relaxed atmosphere.

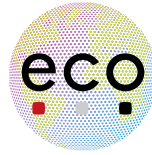
The CG Leader Marc Wilkens was on stage on 9 October at the conference SMART ENERGY 2017 in Dortmund, and in his presentation

"Data centers as part of the Smart Grid", he emphasized the need for a rapid expansion of data networks.

The third and final part of the workshop series on EN 50600 took place on 26 October in the DE-CIX MeetingCenter in Frankfurt. CG Leader Marc Wilkens reported from the norming committee on current developments. In his guest presentation, Staffan Reveman showed the potential for data centers of the utilization of waste heat.

The conclusion of the 2017 seminar series "eco 5 Star Data Center" was the event at the Hanover-Langenhagen Airport on 7 November. The event was moderated by Roland Broch, and eight solution providers reported on current trends and technological developments in the area of DC infrastructure.

On 29 November, interested visitors to the Data Centre World Frankfurt were able to enter into discussions with representatives from the Data Center Expert Group at the eco booth. In conjunction with a podium discussion, CG Leader Dr. Béla Waldhauser was available to discuss the topics of cloud connectivity and service strategies.



From working group to expert network – 10 years Data Center Expert Group

The eco Data Center Expert Group can now look back on ten extremely successful years. Established as the Data Center Working Group on 8 November 2007 by Patrick Pulvermüller, the committee set itself the goal of promoting an open and confidential exchange of information between data center operators, planners, and manufacturers.

On the occasion of its 10-year anniversary, they talked to initiator Patrick Pulvermüller and the two Competence Group Leaders – Dr. Béla Waldhauser and Marc Wilkens – about the developments of recent years and asked about their prognosis for the future of the industry.

Which technological developments has the data center industry experienced in the last 10 years?

Patrick Pulvermüller: The “direct free cooling” of data centers gained acceptance over the course of the decade. Efficiency is still a core issue which preoccupies the data center industry, even in 2017. An integrated approach – incorporating the servers – has led to even higher efficiency. Open source designs are increasingly influencing the industry.

Dr. Béla Waldhauser: The data center infrastructure (electricity and cooling) has become far more efficient, at considerably lower loads. The data center providers are now developing their infrastructure on a more modular basis. This means that, with optimized load, the efficiency also increases. Customers are more and more willing to invest in cold and/or hot aisle

containment, which is further boosting the efficiency of cooling. The same applies to a willingness to accept higher temperatures in the cold aisle.

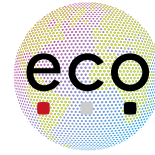
Marc Wilkens: In the ICT sector, we have witnessed a growing trend towards virtualization and the use of blade technology. This is resulting in higher power densities (electric power capacity per rack). In the area of data center infrastructure, the trend towards new innovative cooling concepts (containment, higher temperatures in the server room and in cold water, more “free cooling”) has continued. Modular UPS concepts have gained in importance. Overall, it is fair to say that, for companies, a “multi-site strategy” for their data centers is playing a greater role from the point of view of availability and energy efficiency. The data centers reciprocally create redundancy. The prerequisite here is that the cables

between the data center locations are physically redundant and have sufficient capacity.

How have the markets continued to develop over the past 10 years? What do customers today want from a competent colo-/hosting service provider?

Patrick Pulvermüller: Three points: Flexibility, flexibility, flexibility – customers demand the know-how required to make hybrid setups (colo, hosting, public cloud) possible. Data center designs are therefore tailored even more closely to the actual usage profile.

Dr. Béla Waldhauser: The large colo providers in particular are increasingly opting for standardization of their infrastructure. Overall, the caliber (of technology, personnel, processes) has risen further. Customers expect significantly more from certifications (and not just



an ISO 9001). The number of internal and external audits has increased. The large colo operators are now part of the critical infrastructure of the Federal Republic of Germany. Over the past 20 years, the "carrier-hotels" have increasingly become "cloud hotels". The different business models of cloud providers mean that colo operators must also become significantly more flexible. Concerning consolidation: Here the markets are dominated by a few large providers. Since Edward Snowden and the NSA scandal, Germany has become "attractive" again for the major US cloud providers. In Germany, Frankfurt in particular has experienced huge growth rates in the colo business with cloud providers.

Marc Wilkens: Customers want overarching know-how on the different sub-disciplines for secure and efficient IT operations: IT hardware, IT software, IT service management, data



center building automation, information security management (ISMS e.g. compliant with ISO 27001), etc.

Where do you see the greatest future challenge for your industry?

Patrick Pulvermüller: The wave of consolidation in recent years will concentrate the market on a few global providers – with all the advantages and disadvantages that this entails. On top of that, we are seeing increasing regulatory requirements in all countries around the world. The growth is no longer taking place in the western markets. Finally, more and more "hyperscalers" are starting to produce their own "silicon", designed for special IT workloads. This could lead to completely new, completely contained systems.

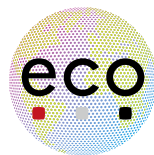
Dr. Béla Waldhauser: The process of consolidation will continue. This means that the market will be dominated by a small number of global suppliers. I would also expect a disproportionately high surge in growth to occur in the next few years, driven by Cloud, IoT, Smart City, Smart Home, Industry 4.0, autonomous driving, etc. We will also see an increase in internal and external audits and process requirements, and the like. It is only a matter of time until we also have a data center campus boasting a capacity of at least 100 MW (a hyperscaler data center) in Germany. So-called "edge data centers" will complement the large data centers. The shortage of specialist workers will become a problem.

Marc Wilkens: The biggest challenge will be the integration and close coordination of IT management and data center facility management. Two fundamentally different worlds will



have to collaborate closely in the future and must initially find a language that they can both speak. Here, the interfaces between information security management based on ISO 27001 and the new data center standard EN 50600 offer good starting-points.

Further information is available at:
international.eco.de/topics/datacenter



*Prof. Dr. Georg Rainer Hofmann
Leader, Competence Group E-Commerce*

*Karin Karakaya
Project Manager Member Services
eco Point of Contact for E-Commerce since 07/2017*

*Lars Steffen
Business Development
Member Services
eco Point of Contact for E-Commerce until 07/2017*

9.3 Competence Group E-Commerce

The eco Competence Group E-Commerce explores issues related to digital business models online. Under the leadership of Prof. Georg Rainer Hofmann, the group focused on the topics of “e-invoicing” and “new business models in the Internet industry” in 2017.

Rethinking eco-balance with the Internet industry

Eco-balance has long been more than just a marketing instrument for businesses. It also helps companies to recognize weaknesses and identify potential for savings. On 23 March 2017, specialists from the CGs E-Commerce and New Work and the eco Data Center Expert

Group met in Frankfurt to explore ecological balance sheets. A variety of potential savings were identified, ranging from reductions in work time and other resources through to New Work models. Further savings could come from smart factories, smart cities, and smart homes. The event weighed up costs and savings in order to get a feel for the overall economic and ecological impact.

The electronic invoice

On 27 and 28 June, Prof. Georg Rainer Hofmann represented the eco Association at the 3rd E-Invoicing Summit in Wiesbaden. He joined the panel discussion on the impact of the ordinance accompanying the (German) e-invoicing law on companies,

public administration, and service providers. His contribution focused on the acceptance factors for e-invoicing – which eco sees as a central element of digital transformation.

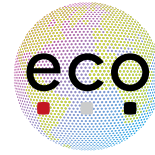
E-invoices must be reliable, be a secure investment, and allow a transfer of liability. Trust in e-invoices and their usefulness is also crucial for acceptance. Prof. Georg Rainer Hofmann explored possible future scenarios and made concrete suggestions for action.

Shortly afterwards, the German Ministry for the Interior published a draft law which will make electronic invoices compulsory in the public sector. eco and, in particular, the CG E-Commerce welcomed the draft, as this move

will provide the necessary security of investment to drive this central element of digital transformation forward. The development of the e-invoice will remain as one of the core topics of the CG.

Why do start-ups fail?

As part of the Internet Impulses 2017, Prof. Georg Rainer Hofmann gave a talk on 19 October in Cologne on the pathology of failure. In dialog with young entrepreneurs, he worked through the most common reasons for the failure of start-ups. The challenges of setting up a business range from the assumed needs of customers to creating acceptance and trust, combined with the problem that the Internet industry is seen as a copy-cat industry.



Together with Philippa Pauen, the founder of multiple start-ups, Prof. Georg Rainer Hofmann looked at the particular challenges of the start-up scene. Philippa Pauen drew on her own experience of setting up businesses to give concrete recommendations for action.

Acceptance factors in the Internet industry

On 1 November, Prof. Georg Rainer Hofmann represented the CG at the Ment-you! conference of the Junior Chamber (Wirtschaftsjunioren) in Leipzig. At the conference, he spoke about the acceptance factors for

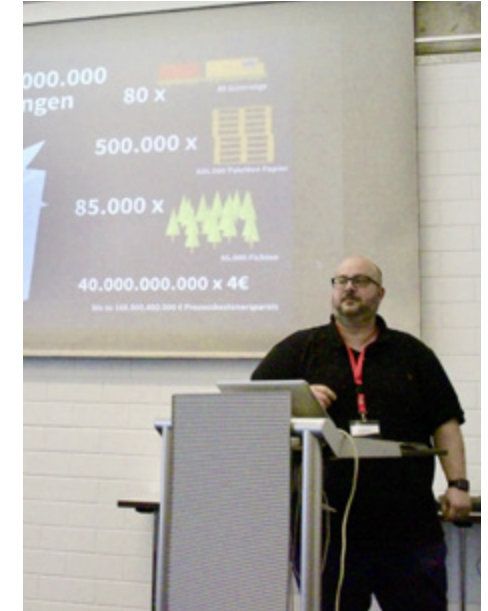


information technology, and explained these using cloud computing and e-invoicing as examples. Acceptance factors are crucial in the field of e-commerce in particular, as trust between the parties involved is a fundamental aspect of business processes.

As a result, identifying these acceptance factors and how to build a business relationship based on trust are ongoing and important topics for the eco CG E-Commerce.

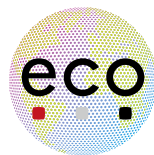
How PHP and E-Commerce belong together

On 9 November, the CG took part in the PHP.RUHR's E-Commerce Lounge in Dortmund. The main topic under discussion was the effects and successes of developments in the Internet industry. Innovations in e-commerce have given rise to new and sometimes revolutionary business models. Several of these models did not, by any stretch of the imagination, get off to a good start and were often seen critically by both the "Old Economy" and users. At the E-Commerce Lounge, Prof. Georg Rainer Hofmann reported on new digital businesses



and how they have changed the market. Tim Schumacher of eye/o/Adblock Plus, renowned as an entrepreneur, investor, business angel, and mentor, discussed the challenges and changes in the start-up sector from the perspective of someone who has started multiple businesses and thus gave the viewpoint of a start-up on the disruption of the market.

Further information is available at: international.eco.de/topics/e-commerce



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9.4 Competence Group E-Mail

The Competence Group E-Mail is a well-established part of the German Internet industry and has been instrumental in the development of common standards for the sending and receipt of emails.

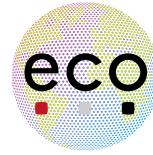
Via the group, technical problems of all kinds are resolved informally and unbureaucratically and agreements on new developments are reached. The CG E-Mail is a closed group, as the handling of email is a sensitive subject; the data is valuable and needs protecting and participants have to be able to talk more openly about their systems than would be possible in a public forum, in order to find solutions to new challenges. Participation in the groups is possible for all eco ISPs. The group may also extend invitations to participate to qualified persons. In 2017, guest speakers from AOL, Microsoft, Cisco, and Yandex enriched the content of two meetings, each of which was attended by about 30 participants.

The CG E-Mail is headed by two recognized experts: André Görmer (MAPP), who represents the perspective of the senders (ESP), and Sven Krohlas (1&t1 Mail Security), who represents the ISPs. In March 2018, Sven Krohlas will step down as leader of the CG.

The business year 2017 was another year of security-relevant topics. eco experts gave the CG a focused update on the GDPR as it applies to the field of email (senders and recipients). A lot of attention was also given to the introduction and dissemination of the "signaling of one-click-unsubscribe functionality" in newsletters. This new standard is described in RFC 8058. New technologies were also discussed, including Brand Indicators for

Message Identification (BIMI), the security standards for Captcha, and the introduction of form sub headers in order to limit the problem of subscription bombing.

Further information is available at:
international.eco.de/topics/e-mail



Oliver Werner

Leader, Competence Group Infrastructure Security

Cornelia Schildt

Project Management IT Security

9.5 Competence Group Infrastructure Security

Five years after the formation of the CG Infrastructure Security, the topic DDoS still persists as a burning issue for all network operators. No day goes by in which there are no reports of new attacks. As a result, the topic is also moving increasingly into the radar for politicians and governmental authorities.

On 23 June 2017, close to 40 network operators met for a CG meeting in the DE-CIX Meeting-Center in Frankfurt and discussed how to deal with this threat from the technical, economic, and regulatory perspectives.

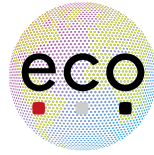
Oliver Werner from netcup GmbH, who has led the group since 2016, welcomed the participants and introduced the day's topic. Next up, Markus de Brün from the German Federal Office for Information Security (BSI) presented the current DDoS situation. He showed how the threat has developed over the past few years and what the new trends are, and emphasized just how important the topic is, including for the government and for the cooperation of operators.

After this, Oliver Werner presented the current activities of the group in the development of Best Practices for the defense against DDoS attacks. There is no panacea for these kinds of attacks – rather, solutions for the individual usage environment must be sought. The CG has often focused on such solutions, and will continue to do so in 2018.

Cooperation is sensible not only in the area of DDoS defense. In recognition of the cross-sectoral nature of security as a topic, there was a meeting of the steering committees together with the CGs Security and Anti-Abuse in November 2017. Joint planning for the coming year was initiated to ensure that security aspects are not only viewed in isolation, but

also take account of the business models behind them.

Further information is available at:
international.eco.de/topics/security



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9.6 Competence Group Internet of Things

The core of eco's IoT activities in 2017 was made up of three events and three studies. At the IoT Business Trends and the IoT Future Trends, the CG Internet of Things discussed the topics of security and Artificial Intelligence. Another highlight was the joint visit to and guided tour of the Hanover Trade Fair. The studies focused on the development of the smart city, smart home, and industrial IoT markets over the next five years.

First CG Meeting 2017

In April, the CG and nrw.uniTS together organized a guided tour on the topic of "Industry 4.0 and the Industrial Internet" at the Hanover Trade Fair. The participants were able not only

to experience simple presentations at selected stands, but also comprehensive and entertaining demonstrations of the integrated industry's products, services, and solutions: Products that program their own construction plans, machines that communicate via sensors, and functioning, individualized mass production. A trade fair visit accompanied by other experts with whom one can discuss and exchange experiences is the great added value of such an event.

IoT Business Trends

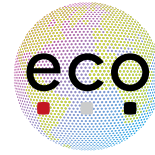
Almost 60 representatives of the digital industry from in or around Dusseldorf met at the acclaimed Wirtschaftsklub in Dusseldorf on 1 June, in order to learn about security risks in

the area of IoT. At the 10th cooperative event between the Dusseldorf Chamber of Commerce and eco, there were a number of highlights. The first speaker, Criminal Investigator Dirk Kunze of the North Rhine-Westphalia Criminal Police Office, explained the damage which threatens companies that fail to protect themselves adequately against external attacks. Dr. Nicolas Krämer of the Lukas Hospital in Neuss then described what happens when a modern hospital is attacked: The hospital under his management had to shut down the majority of its IT systems because of an attack in February 2016. This meant that staff were forced to conduct all work processes with pen and paper for the first time since the nineties, while some services had to be either postponed completely or handled externally. Marco Di Filippo of Koramis demonstrated how easy it can be to attack critical infrastructures.

Using publicly available information and a freely accessible search engine for IoT, he was able to show live the current status of the control systems of a cogeneration unit, as well as a number of solar power panels, mostly on private roofs. After a panel discussion and networking opportunities, the event drew to a close.

IoT Future Trends 2017

What does the interplay between data, Artificial Intelligence and smart assistants mean for the functionality of IoT systems? This was the central question at the IoT Future Trends on 23 November in Cologne. As at the IoT Business Trends, CG Leader Dr. Bettina Horster and eco expert Thorsten Stuke guided the attendees deftly through the program. eco, as host of the event, welcomed approximately 80 participants who had a keen interest in the Internet



of Things. These were offered not only high quality presentations, but also AI to touch and feel: The event partner hack.institute provided the guests with a small robot to interact with in the foyer. As at previous events, IoT Future Trends was supported by cooperation partners the City of Cologne and the Cologne Chamber of Commerce.

The first two speakers, Jörg Bienert of aiso-lab GmbH and Prof. Dr. Dietrich Klakow of Saarland University, discussed the greatest challenge facing companies wanting to make use of intelligent machines: compiling data in such a way that it can be used for specific analysis. Dr. Bettina Horster then presented an example of best practices for intelligent assistant

systems. Under the consortium management of her company VIVAI Software AG, experts have brought to life the joint project "Smart Service Power" for age-appropriate technologically-supported living. The goal is to build a common platform that links data to activity and behavior profiles, in order to sound the alarm or suggest measures for prevention at the right moment. eco is also part of the consortium.

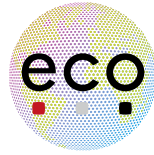
Michael Sahnau of Microsoft presented further use cases with AI as a component of IoT platforms. In his presentation, Prof. Rainer Georg Hofmann of the Aschaffenburg University of Applied Sciences assessed the ethics and consciousness of AI in his characteristic

critical and humorous manner. The concluding panel then discussed the challenges of AI and assistance systems for industry and society, with the event then culminating with pleasant networking in the Filmforum's foyer.

Other Activities

The CG organized two events with the smart city study as their basis: Within the framework of the Digital Week in Kiel, the topics on 21 September were the interplay between technologies, the mobility of the future, and the use of digital hubs. At the Internet Impulses in Cologne on 18 September, presenters demonstrated which smart city projects were already integrated into the city and its institutions. At partner networker NRW's ComIn Talk on

20 November, the topic of discussion was "Smart City – Digitalization as the Driving Force behind Modern Urban Development". Based on the study, Markus Schaffrin, eco Head of Member Services, provided a current outlook for the German smart city market up until 2022 in his opening presentation. On November 10, he participated in the eighth ZVEI Colloquium on the topic "IoT as the Driving Market Force behind Building Automation" in Frankfurt, where he moderated the concluding panel discussion on "Business Models – Does Networking Create New Value Creation Networks?".



Outlook

In 2018, the CG will complement the established program of IoT Business Trends, Future Trends and the tour of the Hanover Trade Fair with new formats: A trade fair stand and content contribution are planned for the ConCarExpo Berlin in June. The results of the studies will also be presented at high-level round tables concerned with taking stock and analyzing the respective markets.

Three studies on IoT market development

Smart City, Smart Home, and Industrial IoT – these are not empty buzzwords, they are in fact exceptionally lucrative business sectors. This was the finding of the studies of each respective market's development up until 2022, conducted by eco and Arthur D. Little (ADL). The conclusion of all of the studies: In order to benefit from the enormously expanding markets, it is essential that companies identify shortfalls in competencies and enter into strategic partnerships – possibly even with the competition, or with companies outside of the industry. This comes down to the fact that the IoT ecosystem – which ranges from sensor systems, to the provision of infrastructure, to service enabling and integration, and right through to contractual service providers – is so complex that no individual company would be capable of covering the entire value chain alone.

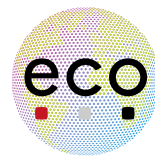


Holistic smart city approach leads to success

Over the next few years, the smart city market will be one of the fastest growing sectors both worldwide and within Germany. According to the study conducted by eco and ADL, this market recorded a revenue of approximately 20.4 billion Euro in 2017. By 2022, this amount is projected to more than double, to approxi-

mately 43.8 billion Euro – this would mean an average annual growth rate of 16.5 percent. The area with the largest market volume in the smart city ecosystem is and will remain the transport and logistics sector. The education market segment will increase sharply at an annual growth rate of around 27 percent. The study also predicts high investments in the area of healthcare infrastructure.

"If German cities want to rise to the ranks of leading smart cities in the coming years, they will have to work together more closely and find a holistic approach," recommends eco CEO Harald A. Summa. This means finding a coherent strategy that integrates a multitude of different smart city services – from mobility, to energy management, right through to security solutions. That can be best achieved



with a cross-segmental smart city platform which acts as a nexus for all services.

Artificial Intelligence will control the smart home

The German smart home market is booming, and its volume will increase threefold by 2022, to 4.3 billion Euro, as revealed in the study conducted by eco and ADL. Accordingly, the average annual growth rate over the next five years is 26.4 percent. The greatest revenues will be generated in the two market segments energy management, with 1.3 billion Euro, and light and window controls, with 1.2 billion Euro. The penetration of the smart home mar-

ket will even increase fourfold by 2022, from currently 2 million to approximately 8 million homes. The growing and ever broader range of services includes window sensors, voice activated digital assistants, robot vacuum cleaners, and intelligent mirrors.

"In the smart home, all devices in and around the house are connected and interact intelligently," explains eco CEO Harald A. Summa. "The Internet provides the foundation for this, in so far as it connects the devices with each other and enables reciprocal data exchange. The intelligence is created on the basis of analyzing user data and combining this with



context data in order to improve functionality and increase user-friendliness." The study identifies the recipe for success as the capacity to exchange data and information between devices from different manufacturers as well as with user-friendly smart home solutions.

Germany is world leader in area of industrial IoT

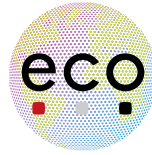
The German industrial IoT market's revenue will double in the next five years to approximately 16.8 billion Euro in the year 2022, as demonstrated in eco and ADL's study. This means a future growth rate of around 19 percent per

year. The largest market segment today, the automotive industry, will have the fastest growth rate at 20.2 percent. Mechanical engineering and construction will also experience strong growth of 18.9 percent a year. Both segments combined make up over 50 percent of the entire industrial IoT market in Germany. "Industrial IoT is fundamental for maintaining and increasing competitiveness of German companies on the world market," states eco CEO Harald A. Summa. "The seven industries examined in the study will have enormous potential if their strengths are combined with those of the Internet industry."

According to the study, the German market for industrial IoT is highly developed by international standards. Germany's broad and innovative industry structure and the high density of robots make it one of the largest Industry 4.0 markets worldwide. The driving force behind growth in the coming years will mainly be the advancing digitalization of currently analog production and delivery processes. With the help of industrial IoT solutions, for example, companies can increase their flexibility through to the point of delivery and ready themselves for the future with "as-a-Service" business models.

Members can request the three studies free of charge at: member@eco.de

For further information, see: international.eco.de/topics/internet-of-things



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*Lars Steffen
Business Development
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9.7 Competence Group Names & Numbers Forum

The work in the eco Names & Numbers Forum in 2017 was strongly influenced by the General Data Protection Regulation (GDPR), the continuing work on Workstream 2 of the IANA Stewardship Transition, and involvement in the Universal Acceptance Steering Group. With the newly-established eco Names & Numbers Steering Committee, the work was further professionalized and the forum's influence was further expanded on the international level through the partnerships with CENTR and the i2Coalition.

Domain pulse, CENTR, & the 58th ICANN Meeting

Hosted by eco member nic.at, the congress Domain pulse took place in Vienna in mid-February. Here, Thomas Rickert discussed the consequences of the IANA Transition with Prof. Wolfgang Kleinwächter from the University of Aarhus, Thomas Schneider from BAKOM, and Prof. Dr. Erich Schweighofer from the University of Vienna. The starting signal for the year's top issue was delivered by eco Board Member Oliver Sume, with his presentation "The New EU Data Protection and its Impact on the Domain Sector".

In March, during the 57th General Assembly of the Council of European National Top-Level

Domain Registries (CENTR) in Riga, eco was accepted as a member with observer status.

From 9 to 16 March, the 58th ICANN Meeting took place in Copenhagen. Here, the "Cross Community Working Group on Enhancing ICANN Accountability", with Thomas Rickert as Co-Chair, met to drive forward its work. The Universal Acceptance Steering Group (UASG) also met. The importance of internationalized domain names and the associated topic Universal Acceptance was again emphasized by ICANN Board Chair, Dr. Stephen Crocker. At the meeting of the ISP and Connectivity Providers (ISPCP), a change was effected, whereby the long-standing ISPCP Chair Tony Holmes passed the leadership baton over to Wolf-Ulrich Knoben (DE-CIX).

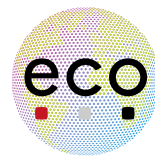
WHD.global

At the WHD.global, Thomas Rickert moderated several discussions – "Retain the Tension with Data Retention", "Critical Infrastructures at Risk – Are you doing enough?", and "Transatlantic Business at Stake – Will Europe draw its Trumps?" – with Astrid Oosenbrug (Member of the Dutch Parliament), Jimmy Schulz (from the German political party FDP), Peter Schaar (German Federal Officer for Data Protection and Freedom of Information), and eco Board Member Klaus Landefeld.

During the WHD.global, eco and the i2Coalition availed of the chance to intensify their cooperation. Klaus Landefeld and David Snead, Chair of the Board at i2Coalition, signed a new Memorandum of Understanding. The night.TALK was hosted by the UASG. Moderated by Lars Steffen and Christian Dawson from the i2Coalition, the panel members Blake Irving from GoDaddy, Ram Mohan from Afiliias, Michele Neylon from Blacknight, Rafael Laguna from Open-Xchange, and the inventor of DNS and SMTP, Paul Mockapetris, engaged in lively discussion.

eco Names & Numbers Steering Committee

In mid-May, the "Steering Committee", a new committee within the eco Names & Numbers Forum, began its work. Thomas Rickert believes that: "The group helps us to utilize our resources in the best way possible in the interests of our members. For us, it is



an honor that globally renowned experts from the sector are willing to be involved."

Domaining Europe

The conference Domaining Europe took place in Berlin in May, with eco as a partner. Thomas Rickert discussed the relationship between domain investors and ICANN together with Jörg Schweiger from DENIC, Michele Neylon from Blacknight, Erika Mann from Covington & Burling LLP, and Prof. Wolfgang Kleinwächter from the University of Aarhus. Lars Steffen discussed ICANN's gTLD Marketplace Health Index with Ana Paula Vazquez from SEDO, Jackson Elsegood from Escrow.com, Michael Gilmour from Park Logic, Ron Jackson from Domain Name Journal, and Thomas Rickert.



59th ICANN Meeting, CENTR & Brands and Domains

The 59th ICANN Meeting took place in Johannesburg at the end of June. Here again, the impact of the GDPR was a topic of discussion. Oliver Süme and Peter Vergote from DNS-Belgium jointly moderated a cross-community session on this topic. In June, Thomas Rickert also took part in the 54th CENTR Legal & Regulatory Workshop and in the ICANN Studienkreis in Stockholm.

On 2 and 3 October, the eco Names & Numbers Forum was a partner of the conference "Brands and Domains" in The Hague. Thomas Rickert was involved in a discussion with Jeff Neuman from Com Laude, Frédéric Guillemaut

from dotstories, and Brian Beckham from the WIPO. Lars Steffen honored Verisign for ten years of eco membership. Thomas Rickert and Lars Steffen were also on the ground at the 58th CENTR General Assembly.

60th ICANN Meeting & GDPR Domain Industry Playbook

At the end of October in Abu Dhabi, eco stepped forward and announced the initiative "GDPR Domain Industry Playbook" with the goal of developing a comprehensive solution for the industry. The ISPCP used the occasion of the meeting to hold an outreach event. Lars Steffen represented eco and DE-CIX on the discussion panels.

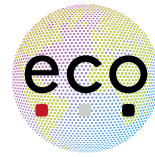
At the 60th ICANN Meeting, Steve Crocker handed over the position of Chair of the Board to Cherine Chalaby. Naturally, DENIC and eco were delighted that Cherine Chalaby accepted their invitation to the German Evening, in order to discuss the objectives of his time in office. At the end of November, Thomas Rickert was invited to the Nordic Domain Days to moderate a GDPR Workshop.

Together with its members, in the fourth quarter of 2017, eco presented its practical guide for the implementation of the GDPR with the "GDPR Domain Industry Playbook". For this, eco carried out a public consultation in Brussels. Approximately 100 representatives of registries, registrars, the EU Commission, ICANN,



law enforcement agencies, and others participated in the event. eco received a very positive response to the draft.

Further information is available at: international.eco.de/topics/names-numbers



Roland Broch
Head of Business Development
Provisional Leader, Competence Group Networks

9.8 Competence Group Networks

The eco CG Networks, newly created in 2016, is intended to become established as a platform that deals on a broad basis with traffic-based business models. The provisional leadership is currently in the hands of Roland Broch, and a leader of the CG is to be appointed in 2018.

The emphasis of activities in 2017 was on cooperation in events and involvement in trade fairs and congresses. As such, at ANGACOM, Europe's leading trade fair for broadband topics, eco representatives were available at the eco booth on 30 May and 1 June to answer specialist questions regarding network operations for interested visitors and member companies.

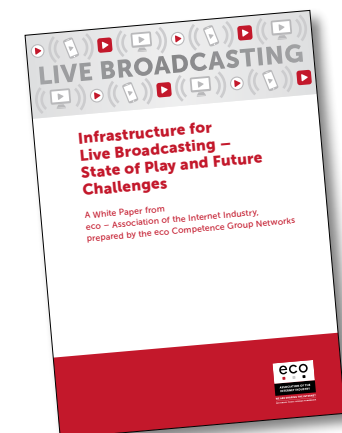
On 5 and 6 September, representatives of the CG were present at the iCU conference, which took place in Frankfurt for the first time. Visitors were also able to get informed about the activities of the CG at the eco booth at Data Centre World 2017, which took place on 28 and 29 November in Frankfurt.

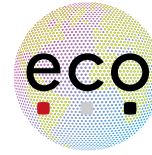
In May 2017, on the basis of the "eco Report – Broadcasting Infrastructure" published in September 2016, the white paper "Infrastructure for Live Broadcasting" was published. By means of seven practical reports, the publication deals with the question of the technical requirements for network infrastructure provisioning, based on current consumption behavior.

Also in May, the eco dotmagazine featured the topic "Connecting the World" as the focus of its monthly publication. Member contributions were published in the format of specialist articles and podcast interviews, including "The Journey of a Data Packet", "Anycast: The State-of-the-Art Technology to Secure Your Online Presence", and "Broadband Expansion: Digital Infrastructure in Germany".

Any member who is interested in the topic and who would like to drive it forward actively within the association community is warmly invited to apply for the position of Leader of the Competence Group by contacting roland.broch@eco.de.

Further information is available at: international.eco.de/topics/networks





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9.9 Competence Group New Work

The working world is on the cusp of a major transformation: digital work and New Work. Long considered as just talking points, these phenomena are now coming to life. Digital transformation will have a lasting influence on career paths, working processes, and job specifications. It will also usher in new opportunities. These new possibilities and their practical relevance for the world of work were in the pole position for the CG New Work in 2017.

Ecological view of the Internet industry

On 23 March, the CG New Work kicked off the year's activities with a joint event in Frankfurt with the eco CG E-Commerce and the Data Center Expert Group, which examined the ecological balance sheet of the Internet industry. Here, various experts from the industry discussed the impacts of digitalization on the ecological situation. The focus of the overarching topic New Work was on the energy-saving potential of the digital world of work. Many aspects of the new approach to work, such as the paperless office, flexible working hours, and arrangements for working from home, were agreed to have a positive impact on the ecological balance sheet of

the Internet industry and to be good for the environment.

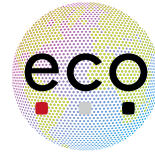
Change IT – Digital Work Day

What opportunities and possibilities are opened up by new digital worlds of work? Around 60 HR staff, New Work experts, and interested participants sought to answer this question at the 1st Digital Work Days event in Cologne. The eco Association and heise Events invited the participants to lively discussions on New Work and Work 4.0 in eco's Cologne premises on 27 June with the challenge "Change IT!".

The first talks from experts were underpinned by real-life knowledge transfer for future-

oriented and meaningful work concepts. Dr. Andrea Hammermann from the German Economic Institute spoke about skills shortages, life-long learning, and more flexibility in her keynote speech. In the second keynote contribution, Marcus Reif of Kienbaum Consultants offered a new perspective on New Work: he spoke about different corporate cultures and possible conflicts between different generations in companies. Later in the morning, experts shared their knowledge and experience in two parallel tracks, giving exciting insights, combined with practical advice.

The topic of recruiting was the focus of Jan Kirchner, CEO of Wollmilchsau. He gave useful advice on how to successfully recruit



top performers online. Daniel Wahlen of Indeed followed, using Big Data analysis to show how top performers think. Marina Treude showed how Microsoft enables self-directed work in Munich with the right combination of people, environment, and technology. The lunch break then gave everyone the chance to network, with a variety of creative, playful or sporting activities to choose from.

"Ladies First" was the motto for the afternoon. Two successful entrepreneurs, Franziska von Hadenberg of Bloomy Days and Birgit Ströbel, founder of ImmobilienScout24, talked about New Work at start-ups. Both told the story of how they set up their businesses, the challenges of growing, and how they managed to find the best allies and staff on the path to success. In the second parallel workshop, Jürgen Wilke from the Fraunhofer Institute spoke about new challenges in management and HR.

A highlight of the day was undoubtedly the final panel discussion. Here, eco CEO Harald A. Summa, Katharina Heuer of the German Association for Human Resource Management (DGFP), Karl-Heinz Land from the consultancy Neuland, and Lucia Falkenberg, eco Chief People Officer and the Leader of CG New Work, had a lively discussion about digital transformation in the workplace and how this affects business processes.

At the end of the 1st Digital Work Days event, whilst enjoying a bbq and cold drinks, the



participants had a chance to review the day's results and came to the conclusion: With courage, strategy, and openness for new work concepts, digital transformation will be a success. All were able to go home equipped with practical tips on how to make New Work a success and how to use it to make a valuable contribution to corporate strategy.

THINK & CHANGE

As part of the Internet Impulses in Cologne on 17 October with the motto "THINK & CHANGE: A Week Full of Digital Inspiration", the CG New Work organized a World Café on the topic of



living and working in a digital city. More than 30 participants joined the small working groups that are a feature of this format and together developed ideas and drafted framework conditions for the digital future of cities.

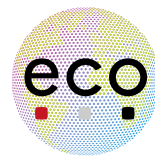
In constantly changing group constellations, the participants met at the tables, developed ideas, and had lively discussions on the infrastructure of a digital city, the race for the best talents, and the balance between everyday life and digital work. The next and final step involved compiling the results and findings around new work processes, modern

methods of recruitment, automation, and globalization, as well as the intertwining of work and digital technology.

The CG New Work looks back on an eventful 2017 and looks forward to exploring current HR trends and to shaping the impact of digital change on the workplace, together with eco members.

Further information is available at:
international.eco.de/topics/new-work





*Dr. Torsten Schwarz
Leader, Competence Group Online Marketing*

*Karin Karakaya
Project Manager Member Services
eco Point of Contact for Online Marketing since 07/2017*

*Lars Steffen
Business Development
Member Services
eco Point of Contact for Online Marketing until 07/2017*

9.10 Competence Group Online Marketing

The eco CG Online Marketing deals with key issues related to online marketing, in particular email marketing. Under the leadership of Dr. Torsten Schwarz, the CG concentrated on the focus topic of “predictive targeting” in 2017 and dealt with practitioner-related issues in its meetings.

Standardization in professional email marketing

36 professional email marketing companies committed themselves in 2017 to higher standards in the sending of mass emails. The signatories of the Manifest for Serious Email Marketing agreed to an international declaration which defined concrete specifica-

tions for the sending of newsletters and commercial emails. The manifest, which was drafted by the Certified Senders Alliance (CSA) and the eco Association, includes both legal and technical quality standards for mass emails with several thousand recipients. In a press release on 11 April, the CG Leader Dr. Torsten Schwarz welcomed these concrete measures, which eco helped to define, to make trustworthy customer communication by email easier.

e-Marketingday Rheinland

On 26 April, around 500 decision-makers from the Rhineland region and further afield met in Cologne for the 7th e-Marketingday Rheinland to discuss current trends in online marketing.

As part of the annual event, the Chambers of Commerce of the Rhineland region informed the member companies about the possibilities, trends, and developments in the field of digital marketing. eco has been a partner of the event for many years and was represented at the accompanying trade fair. Lars Steffen, eco Point of Contact for the topic of online marketing, represented eco at the event and moderated several sessions.

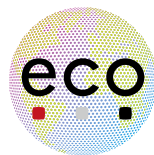
SEO – more important than ever

Search engine optimization is becoming ever more important in online marketing. Reason enough for the CG to invite members to the SEO Round Table in Cologne on 1 August, together with the team from SEOday. The

motivational talks by René Dhermant on “JavaScript Crawling – What does Google Understand?” and by Michael Weber on the possibilities of content optimization and creation with machine learning encouraged a lively debate on the value of SEO among the more than 150 participants.

Knowing what customers want

The CG meeting on 23 October in Cologne focused on the topic of predictive targeting. Dr. Torsten Schwarz started the meeting with a talk on how data-driven marketing can actually work and how to use it properly. Information about target groups can be presented in a simplified form in CRM systems, and websites can deliver anonymized



information about potential new customers. Such tips can make online marketing much more successful, assuming they are implemented correctly. Not only did the participants hear practical tips on, for example, how to design a dynamic website, but they were also offered guidance on how to use predictive targeting to deliver advertising and content recommendations to prospective target groups. The losses through advertising incurred when addressing new customers – and the associated costs – can thus be significantly reduced.

On 2 November, the CG Online Marketing issued a press release on the squandered business potential of wrongly-used predictive

targeting. Focused customer communication is an underestimated competitive factor, particularly for SMEs.

Just for practitioners

As part of the IV. Anwenderforum (Practitioners' Forum) in Frankfurt on 6 November, CG Leader Dr. Torsten Schwarz invited members to an informal industry meet-up. Inspired by talks by representatives of Betty Barclay, Air Berlin, GoDaddy, pronova BKK, Best Western Hotels, mymuesli GmbH, and Lidl E-Commerce, the representatives of well-known companies shared their everyday experiences and challenges as well as their best practices for email marketing. This very successful format will be continued next year.

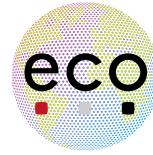


Social media has now also arrived in the club sector

On 16 November, the CG hosted the 10th SoMedia Evening in Cologne together with the SoMedia working group of the partner association networker NRW, on the topic of "Clubs and Social Media". Most companies have understood by now that social media is a natural part of press relations. As such, this event focused on the methods, channels, and approaches of clubs. The speakers were Prof. Tobias Kollmann (social media representative of the Prinzen-Garde Cologne 1906), Magdalena Misiura (Online Marketing and Social Media at the DKMS), and Jonathan Müller (head of the club media team at the 1. FC Cologne football club). They offered

the participants insights into the social media work of a carnival club, an NGO, and a football club, and the resulting various strategies and formats.

Further information is available at: international.eco.de/topics/online-marketing



9.11 Competence Group Law & Regulations

The Competence Group Law & Regulations is a platform for discussion and information for eco members. It is where content coordination happens, position papers are prepared, inquiries on legal and regulatory topics are answered, and where eco's general positioning on the relevant Internet and network policy topics and questions is discussed. Members are given the opportunity through the Competence Group to actively participate in legislation at German federal and state, as well as the EU level, and thus to participate in the development of legal policy.

In 2017, the Competence Group Law & Regulations had numerous points of contact with the political and regulatory arena. The meetings were used to give an overview and preview of current legal and political topics and planned legislation and to discuss these with member companies.

Challenges in the field of data protection and IT security

A thematic priority continued to be the discussion on IT security, which has become a focus of digital policy in Germany and Europe in recent years. A meeting with Dr. Christian Mrugalla from the German Federal Ministry of the Interior was dedicated to discussing current developments and challenges in protecting users in Germany and Europe.

Against the backdrop of the General Data Protection Regulation (GDPR) which will come into force in May 2018, at the various meetings member companies were brought up to speed concerning the most recent developments in the GDPR's implementation and discussed the associated challenges. The draft for an ePrivacy Regulation which the EU Commission presented in January 2017 triggered further questions

about its interplay with, relationship to, and delineation from the GDPR. The ePrivacy Regulation is intended to replace the outdated ePrivacy Directive and to complement the GDPR.

Further topics of interest for the meetings were the Network Enforcement Act (NetzDG) and the law on blanket data retention in Germany.

Further information is available at:
www.eco.de/politik-recht

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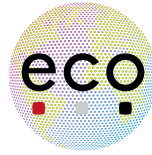


Photo: ©antispameurope

*Oliver Dehning**Leader, Competence Group Security**Cornelia Schildt**Project Manager, IT Security*

9.12 Competence Group Security

The eco Competence Group Security deals with all questions concerning the security of the (IT) infrastructures of the Internet industry. The topics range from personal and organizational security to the protection of IT systems (servers, networks) and the security of mobile communications technology (tablets, smartphones, Wi-Fi), to questions of security management and employee awareness.

The CG Security held a joint session with EuroCloud Deutschland on 28 June on the topic "We are in the cloud, but are we safe!?". The focus was on solutions and strategies for the safe use of cloud services in companies.

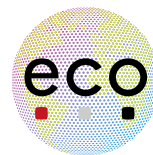
After the participants were briefly welcomed by the CG Leader Oliver Dehning and Andreas Weiss from EuroCloud Deutschland, Kristina Vervoort of Netskope Inc. introduced the concept of Cloud Access Security Brokers (CASB) in her talk on "CASB: Secure Cloud Enablement!". An average of over 1,000 cloud services are being used by the corporate networks studied by Netskope for its current cloud report, with this creating a need to be able to monitor these, and not only for data protection and compliance reasons. In the CASB concept, originally developed by Gartner, there are four pillars in the foreground: visibility, compliance, data security, and threat protection. These give rise to the three main tasks of such a system: uncovering shadow IT, the secure

use of IT-approved cloud services, and checks on all cloud services and their data.

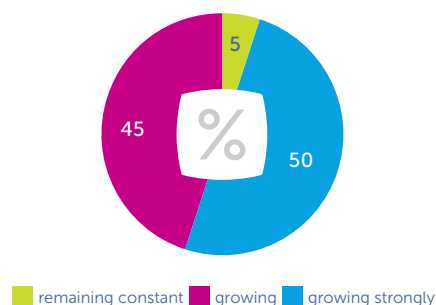
In his talk entitled "Sealed Cloud – Sealed processing allows the most sensitive applications to be used in a public cloud", Dr. Ralf Rieken from unicon GmbH looked at how the security of public cloud services can be guaranteed just by technical means. To do this, the concept of the sealed cloud was developed within the Trusted Cloud program, supported by the German Federal Ministry for Economic Affairs and Energy (BMWi). The aim is to ensure that nobody apart from the users themselves can access their data, and that access for the provider and administration can be blocked by technical means. This is guaranteed by

consistent encryption when transferring and storing data, a special distribution of the encryption key, and innovative ways to clean up data. He wrapped up by presenting a few of the services that unicon developed based on the concept.

After the networking break, Rainer Stecken of Verizon Germany introduced an approach to securing cloud usage on a network level. At first, he stressed that the classical perimeter protection is no longer sufficient today and that it is not enough to think of separated networks when securing, but rather to think of the users' needs. One solution is the concept of the Software Defined Perimeter (SDP), which was developed by a working group of the Cloud

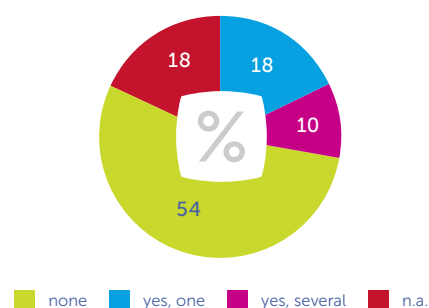


Threat Situation is Seen to be Further Growing



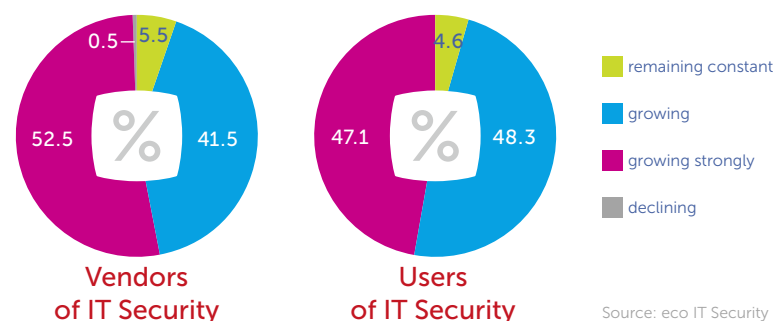
Source: eco IT Security Study 2017

Significant Incidents in Recent Years



Source: eco IT Security Study 2017

Threat Situation according to Vendors/Users Vendors assess the situation as more critical than users



Source: eco IT Security Study 2017

Security Alliance. This follows the maxim of "you can't attack what you can't see!". Similar to the principle of a Dark Cloud, the protected cloud service only becomes visible and usable after a multi-layered authentication and authorization process. The service must be first isolated, then after authentication or authorization on the device and user level, a dynamically provisioned connection is made.

In the last talk of the afternoon, Kathrin Odette from Deloitte brought light into the jungle of cloud certificates. She analyzed the various content and core statements and looked at exactly which certification helps which provider and/or user. The C5 certificate (Cloud Computing Compliance Controls Catalogue) of the German Federal Office for Information Security (BSI) was explained in detail. The comprehensive catalog of require-

ments mainly considers technical issues. The differentiating feature of C5 is that it can only be awarded by an auditor, who is then also liable. This type of audit is particularly sought after in the finance sector. A complementary certificate to the C5 is the ISO/IEC 27018, which includes internal guidelines and the specific risk environment as well as technical matters in its considerations.

Next up, Andreas Weiss also stressed the importance of certifications on both the customer and provider side and referred to the requirements to prove the existence of data protection measures in line with the upcoming General Data Protection Regulation (GDPR). In general, it is necessary to create a common basis (Trusted Cloud Label) with the multitude of certifications and to use new methods of automated auditing (Next

Generation Certification – NGCert).

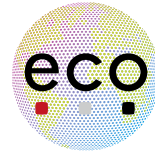
In order to adequately address the cross-sectoral character of the topic security, the CG steering committee met with the CG Infrastructure Security and the CG Anti-Abuse in November 2017. The CGs coordinated their planning for the coming year to ensure that the topic of security is not dealt with in an isolated manner, but rather in connection with the underlying business models.

eco IT Security Study 2017: Ransomware like WannaCry is spreading dramatically

Security incidents caused by ransomware like WannaCry & Co. have drastically increased. This was one of the findings of the eco IT Security Study 2017, for which the association surveyed 590 IT security experts on the current

security situation. Around every third respondent (31 percent) had recently had at least one ransomware incident in their company. In order to restore data, 78 percent restored a backup. This way the damage was limited in the most cases to a temporary IT outage and the loss of data since the last backup. Ten percent of those affected managed to decrypt their own data. Three percent paid the ransom, whereas seven percent did not react at all and just accepted the data loss.

"The many incidents with WannaCry & Co. are an important reason behind why many companies feel the security situation is becoming more and more threatening," Oliver Dehning, Leader of the CG Security said. 95 percent of IT security experts responded that the threat from cyber criminals is increasing; every second expert sees it as strongly increasing.



IT security incidents in ever more companies

"The increasing perception of threat by the experts really does tally with reality; that is what the number of actual cyber security incidents shows," Oliver Dehning commented. Only around 54 percent of companies had no recent security incidents worth mentioning. That number was much higher in 2016, at 69 percent. "Not only that, many companies were victims of a cyber attack without even knowing it. The dark unknown figure of companies attacked is therefore much higher," Oliver Dehning stressed.

Aggressive malware is often spread by waves of spam emails, delivered, for example, as a compromised email attachment or with a link to an infected website. As a consequence, in the surveyed experts' perception of important

security topics, spam filters have jumped up the list. Anti-spam/anti-virus measures for email jumped from place 15 in 2016 to place 6 in 2017 in the ranking of the most important security topics. As in the year before, data protection (1st place) and encryption (3rd place) are still very important. Another factor that has become more important is raising awareness among staff for the protection of their own IT infrastructure (2nd place). "Prompt updates of all systems, constant backups, and strong passwords are musts to ensure a high level of security," Oliver Dehning added.

Cloud is more secure than realized

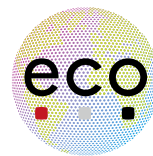
Many security experts are skeptical when it comes to cloud services. 57 percent believe that the cloud will lead to less IT security in companies, just two percentage points

lower than the year before. These worries are unfounded: In nearly all security incidents the cloud is not a factor. Respondents connect cloud computing to a security incident in only six percent of cases.

The eco IT Security Study 2017 can be downloaded for free from go.eco.de/it-security-study-2017.

Further information is available at: international.eco.de/topics/security





Patrick Koetter

Leader, Competence Group Anti-Abuse



Peter Meyer

Head of Cyber Security Services

9.13 Competence Group Anti-Abuse

The eco Competence Group Anti-Abuse (CG Abuse) is comprised of representatives from the anti-abuse departments of German web hosting companies and Internet Service Providers, as well as select experts from the anti-abuse environment.

The CG Abuse has a particularly strong culture of confidentiality and this allows a positive and open exchange between the specialist units of companies, many of whom are ordinarily each others' competitors. At the end of 2017, the CG comprised of 61 participants from 33 companies and institutions.

In 2017 the CG met four times, each time with a different topical focus. The first two-day meeting in March, at M-net in Munich, included participants from Austria and Switzerland for the first time. Technical presentations and a lively exchange on similarities and differences in how abuse is handled in the three countries were the highlights of the meeting. This first meeting with an international mix of participants was warmly welcomed by the group and will be repeated in 2018 in Switzerland.

The second meeting took place in Cologne and focused on legal topics as well as the cooperation with law enforcement agencies. Two highlights were the presentation of the

guidelines for cloud and hosting providers for cooperation with law enforcement agencies, and the talk given by an IT forensics specialist who is a consultant for law enforcement agencies.

Cologne was again the venue for the third meeting, this time with the focus on technical topics such as data traffic analysis and the legal basis required for their implementation. One part of the meeting was dedicated to an extensive report on the outbreak of WannaCry/Petya.

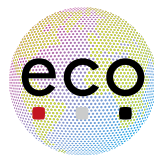
While the first three meetings were only open to CG members, the fourth meeting in Munich in November was open to all. Local and regional hosting providers, ISPs, and cloud providers joined the CG members. The meeting encouraged in particular networking with

other companies who deal with abuse, whilst the webhosters and ISPs who are members of the CG presented their anti-abuse processes and measures.

The plan for 2018 builds on the successful 2017 concept and foresees four meetings with the established format involving specialist presentations and confidential exchange of knowledge among the members.

In 2018 the Competence Group plans on preparing a strategy paper for the CG work in the years to come, including a definition of what exactly the abuse staff in the member companies understand abuse to be.

Further information is available at:
international.eco.de/topics/security



Ivo Ivanov
Head of Professional Services



10. Professional Services

10.1 Certified Senders Alliance

The Certified Senders Alliance (CSA) has been operating since 2003 as a central certifier of email senders. The joint project with the German Dialog Marketing Association (DDV) sets high legal and technical quality standards and certifies companies who comply with these. A certification offers numerous advantages: In addition to the improved delivery of emails to recipients, companies can proactively guard against a bad domain reputation, unhappy recipients, and fines for legal infringements.

Growth with an international focus

The CSA continued to grow steadily in 2017, as in the previous years. With 250 certification inquiries, interest in the CSA has grown by 25 percent year-over-year. Out of the 250 inquiries, 17 companies fulfilled the CSA's strict requirements and were welcomed into the Alliance. There was also growth in the number of partners in 2017: Six new ISP and technology partners joined the CSA, including Microsoft, one of the largest mailbox providers worldwide, bringing the total number of partners up to 48. The number of certified IP addresses rose by 30 percent in comparison to 2016, to reach 60,577 at the end of the year. The cooperation with further international

anti-spam associations was intensified. An eco representative joined the Board of Signal Spam in France in 2017. The majority of newly certified companies and partners are from outside of Germany, testifying to the successful implementation of the CSA's internationalization strategy.

Added value for participants

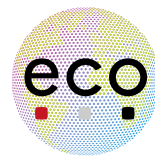
International growth and the internationalization of the participants has encouraged the CSA in further expanding its international presence and disseminating its quality standards well beyond Germany's borders. A communication concept centered around Europe-wide press relations was developed to this end. The European email marketing market was informed about existing standards and developments, with over 100 clippings in Germany, France, Spain, and Italy.

The relaunch of the CSA website (www.certi-fied-senders.org) now gives access to a substantial library of relevant topics.

Dissemination of quality standards

As a means of educating the market, the CSA issued numerous white papers in 2017, which were accompanied by specialist articles and international expert presentations. The General Data Protection Regulation was at the center of the 2017 awareness-raising campaign.

In addition, the CSA presented itself in talks at international fairs and conferences – for example, at the dmexco in Cologne and the Internet World in Munich. In these, the relevance and importance of quality standards for email marketing for commercial companies was clarified, and the CSA was able to position itself even more strongly in this field. The CSA



Summit was yet again an unqualified success, with 120 participants from twelve countries and talks from 18 international experts from well-known companies (including 1&1, Microsoft, Yandex, AOL, and Cisco). Read more about the Summit in Chapter 11.1.2.

Automation of quality control

The quality control of the CSA Whitelist always has absolute priority for the CSA. Manual checks of certified senders have been largely automated by tools developed by the CSA. The result of continual and intensive checks guarantees certified companies a better overview of their traffic and fulfills the CSA's promise of quality towards its partners.

The CSA looks back on a successful 2017, with a growing international focus, and continues to work on legal and technical standards and their implementation in order to improve the quality of commercial emails.

Further information is available at:
www.certified-senders.org



Julia Janssen-Holldiek
 Director CSA

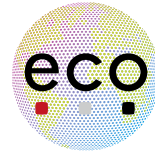
Maike Marx
 Marketing & Customer Relations CSA

Qadir Rostamzada
 Marketing & Business Development CSA

Nikolai Furmanczak
 Systems Engineer & Software Developer

Rosa Hafezi
 Attorney-at-Law
 Professional Services Division

Alexander Zeh
 Engineering Manager CSA



Roland Broch
Project Leader Datacenter Star Audit

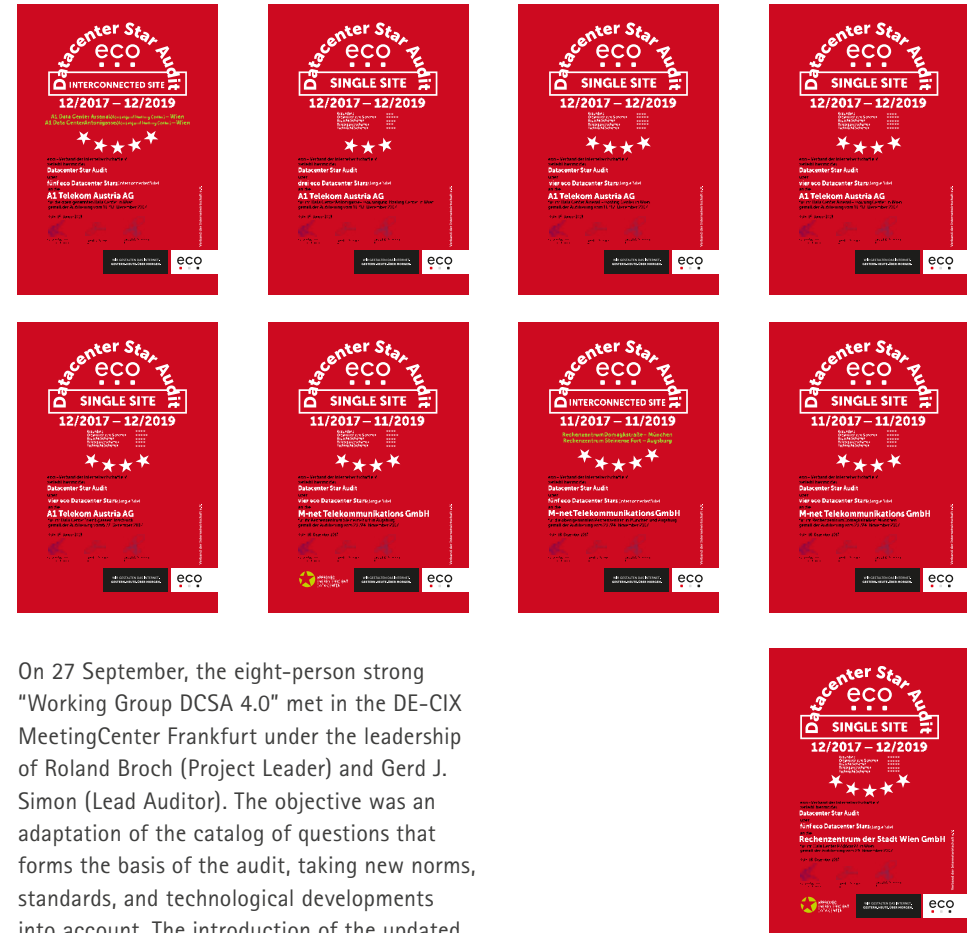
10.2 Datacenter Star Audit

The goal of the Datacenter Star Audit is the assessment of the performance of data center infrastructure on the basis of an objective catalog of criteria. In 2005, the first ideas for the Datacenter Star Audit were already being mooted. A year later came the market introduction and since then, numerous data centers have been certified with this independent assessment instrument.

Alongside the holistic look at the redundancy of the data center, the following security aspects also flow into the assessment:

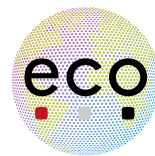
1. Organizational Security, 2. Structural Building Security, 3. Supply Security and 4. Technical Security.

In 2017, another nine audits (two Interconnected Sites, and seven Single Sites) were carried out for operators in Munich, Augsburg, Vienna, and Innsbruck. Two of the data centers audited were presented with "green stars" as Approved Energy Efficient Data Centers. Added to this were further preparatory workshops and two reviews of an operator in Hanover.



On 27 September, the eight-person strong "Working Group DCSA 4.0" met in the DE-CIX MeetingCenter Frankfurt under the leadership of Roland Broch (Project Leader) and Gerd J. Simon (Lead Auditor). The objective was an adaptation of the catalog of questions that forms the basis of the audit, taking new norms, standards, and technological developments into account. The introduction of the updated catalog of questions is planned for 2018.

Further information is available at:
www.dcaudit.com



Clarissa Benner, LL.M.,
Professional Services Division



Ivo Ivanov,
Head of Professional Services Division

DATA PROTECTION OFFICER

10.3 eco Data Protection Services

With the eco External Data Protection Officer service, the association provides on request an external data protection officer for German-based companies, trains staff members or managers on data protection-related legal topics, and carries out data protection audits.

Growing data protection demands

Most telecommunications and Internet industry companies have a legal obligation to nominate a data protection officer for their company. However, for small and medium-sized companies in particular, charging a member of staff with the task of acting as data protection officer is often not an option. Internal data protection officers have to split their

work between their own profession and the new challenges, and have to complete costly training and further education measures in order to stay up to speed with current legal requirements. Using an external data protection officer avoids any conflicts of interest which can arise from an internal data protection officer's other roles in the company. The risk of liability is also outsourced when using an external data protection officer.

General Data Protection Regulation

With the GDPR, a uniform data protection law for the whole of the EU will be created for the first time. Companies have until 25 May 2018 to adjust their systems and processes to the new provisions; after that, the GDPR becomes solely applicable and the preceding German

Data Protection Act (BDSG) will be dissolved. National provisions will only exist in a limited capacity. These are regulated in the new German Data Protection Law (BDSG-neu), which will also come into force on 25 May 2018.

eco External Data Protection Officer Service

eco members based in Germany can commission the services of an external data protection officer for their company from the association. The eco data protection officers are qualified data protection experts with a focus on the telecommunications and Internet industry. With this service, eco offers its members a good alternative to the internal nomination of a data protection officer in order to fulfill the legal requirements for data protection.

Data Protection Service for International Companies

International companies are facing an uphill battle to ensure they are compliant with the forthcoming General Data Protection Regulation (GDPR). The law is not only relevant for European companies – it applies to any company that has customers within the EU,

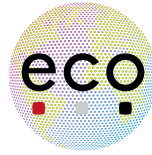
regardless of where they are based.

eco can provide the expert know-how that international companies need to ensure their processes are compliant and to keep them that way, to train their staff, and to react effectively to security incidents. eco can also act as the EU Representative for non-European companies that are required by law to appoint one.

eco supports its members in operating in a data protection-compliant manner and in presenting themselves optimally on the market. Members are continually kept abreast of current data protection legal topics. eco thus contributes to the stronger sensitization of companies for the relevance and significance of data protection.

The data protection services are provided in cooperation with the law firm Rickert Rechtsanwaltsgesellschaft mbH.

Further information is available at:
international.eco.de/eco-services/external-data-protection-officer



Harald A. Summa

CEO, DE-CIX Group AG

CEO, DE-CIX Management GmbH

Ivo Ivanov

COO, DE-CIX Group AG

CEO, DE-CIX International GmbH



10.4 DE-CIX

DE-CIX is growing from a peering platform to a global interconnection company, offering a new world of interconnection services. Its experience of more than 22 years in the interconnection business – always adapting and expanding its reach across the globe, wherever its customers need us – makes it the outstanding IX operator worldwide.

The digital world is ever changing and it influences our lives more and more – both privately and in business. We can see the beginnings of this new world today in the transformation of our cities, and in whole branches of industry – and this interconnected digital world will profoundly change how we all do business in

the future. Even organizations that are already digital will become increasingly more so over time, as new and transformative technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), and 5G are accelerating the pace of change. Fundamental to the success of digitalization is above all a stable infrastructure that reliably interconnects areas, sectors, and ecosystems, in order to transport, store, share, manage, and analyze the vastly increasing amounts of data these industries are producing and are dependent on. DE-CIX offers this interconnection at high quality, complemented by its new service world, which offers its customers a greater flexibility to react to the upcoming challenges and better monetize the existing connection to DE-CIX.

DE-CIX, the world's leading Internet Exchange operator, once again continued its unabated growth across its businesses around the world in 2017. The DE-CIX Internet Exchanges in Europe, Asia, and the Middle East, as well as in North America, increased the company's consolidated global customer base by close to 14 percent to more than 1,230 customers. This also led into an increased overall connected capacity of 34 Terabits (Tbit), which rose by more than 30 percent in comparison to 2016. Also, global customers' needs for more bandwidth was recognizable in the growth of 100 Gigabit Ethernet (GE) ports, which grew by 50 percent to more than 200 ports worldwide.

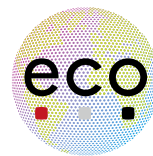
In the consolidated annual financial statement for 2017, global turnover across all companies

grew by nine percent in comparison to the previous year to 31.9 million Euro. Turnover from international activities rose in comparison to 2016 by almost 30 percent and represented almost 10 percent¹ of total turnover for 2017. In order to be able to better coordinate the global structure, the DE-CIX Group AG was founded in 2017, which in future will function as the holding company for all of DE-CIX's activities and investments. For this, DE-CIX International AG was transformed into a GmbH. More on this topic can be found in the chapter eco Association Development.

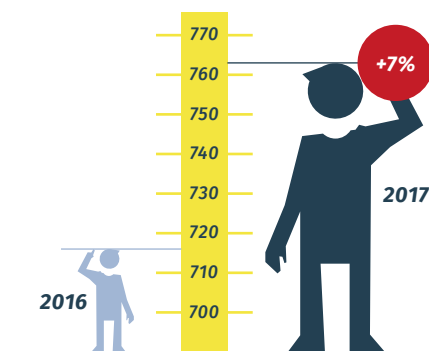
DE-CIX Frankfurt continues to achieve record growth

DE-CIX Frankfurt retained and strengthened its global position as the flagship Internet

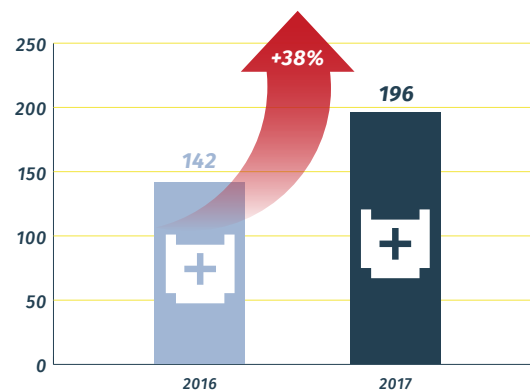
¹ Figures based on the official GmbH audit report.



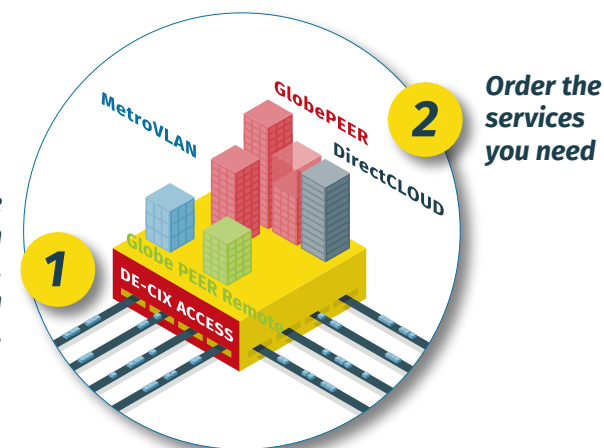
DE-CIX Frankfurt Customer Growth 2017



DE-CIX Frankfurt 100GE Port Growth 2017



Get access to the DE-CIX platform (1, 10, 100 GE, depending on location).



Exchange with a 38 percent growth in 100 GE ports and the resulting 23 percent increase in connected capacity – bringing the exchange up to a staggering connected capacity of 27.79 Tbit. The world record of peak traffic at an Internet Exchange was broken a stunning three times in 2017, reaching +6 Tbit/s at the end of the year. Thus, DE-CIX Frankfurt retained its leading position as the Internet Exchange with the highest data through-put worldwide at peak times. The already large customer base experienced further growth of 7 percent during the year, bringing the total number up to nearly 800 for this exchange alone.

The other German DE-CIX Internet Exchanges in Hamburg, Munich, and Dusseldorf experienced consolidated growth of nearly

20 percent during the year. Since April 2017, DE-CIX customers at the Internet Exchanges in Hamburg and Munich can connect to DE-CIX Frankfurt via the DE-CIX GlobePEER Remote Service. Access is possible through an additional VLAN on the existing port – making a direct data exchange with networks connected to DE-CIX Frankfurt possible. GlobePEER Remote had already been in use between Dusseldorf and Frankfurt, and between Frankfurt, New York, and Istanbul.

New Service World introduced

At DE-CIX, its customers are always at the center of the activities. Unlike other IX operators, its job does not end at the access to its Internet Exchanges across the planet. Every day, DE-CIX is looking for new ways that its

customers can make the most out of their business with DE-CIX. For this reason, in 2017 the new DE-CIX Service World was launched, in which customers can use multiple different interconnection services with a single physical connection. This means greater efficiency, less effort, and lower costs.

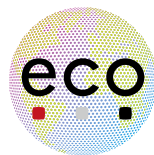
GlobePEER and GlobePEER Remote make it possible for networks to peer with hundreds of other networks almost instantly via the DE-CIX route servers. DE-CIX also offers networks the possibility to peer privately or connect directly to a network at a different DE-CIX location, by using the MetroVLAN service.

To help its customers mitigate the effects of Distributed Denial of Service (DDoS) attacks

against their networks, DE-CIX offers customer-triggered Blackholing. This service is available at all DE-CIX locations except Dubai and Mumbai. In 2017 the DE-CIX Cloud Exchange, with the service DirectCLOUD, also developed successfully: Through this service ISPs can securely, quickly, and simply connect with diverse cloud service providers via VLAN – with just a single port at DE-CIX. Thirty certified cloud service providers are now accessible, including not only the large players like Microsoft, Amazon, and Google, but also many niche and specialist providers.

Customers in focus

The goal of DE-CIX, as a reliable partner, is to support and advise its customers, make services available, and help solve customer



DE-CIX Group AG – Supervisory Board

*Felix Höger
Chair of the Supervisory Board
Board Member for eco
CEO Höger Management GmbH*

*Klaus Landefeld
Deputy Chair of the Supervisory Board
Board Member for eco
Deputy Chair of eco since 11/2017*

*Rudolf van Megen
Member of the Supervisory Board
CEO S.T.O.L. Verwaltung GmbH*

problems around the clock and seven days a week. The success of this service concept can be seen, among other things, in the fact that DE-CIX was, for the third consecutive time, recognized as the Best Internet Exchange worldwide during the Annual Global Carrier Awards ceremony in 2017. The annual Global Carrier Awards recognize innovation, vision, and excellence across the global and regional data center and Internet Exchange market. A panel of telecoms analysts, industry experts, and the senior editorial team of Capacity magazine judge the awards.

**Experience – interact – network:
The DE-CIX events**

At DE-CIX, meeting and interacting with its customers personally is one of the essentials

of its business, which is why DE-CIX actively supported global community events, among others PTC, ITW, NANOG, ENOG, RIPE, AfPIF, and Capacity events in 2017. The DE-CIX team also reported on recent technical developments, market trends, and news from the company in a range of their own events. One of the highlights was the DE-CIX Tech Meeting held in Frankfurt in June. 100+ interconnection professionals met in the DE-CIX headquarters to be brought up to speed on the most recent insights into research and development on the future of the Internet. A further high point was the DE-CIX Summit, which took place as a one-day conference in Frankfurt, Madrid, Istanbul, and New York under the motto "Journey into an interconnected digital world".

Well informed with the DE-CIX Academy

In 2017, the DE-CIX Academy provided more than 50 webinars with over 500 participants. The DE-CIX Academy offers free-of-charge web-based trainings twice a week in German and English, focusing on technical, network, and peering related topics. The academy has also released a set of "Knowledge Cards" – useful reference guides, each summarizing one technical topic, along with a range of white papers.

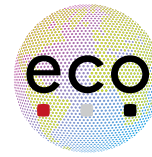
DE-CIX international continues to grow strongly

North America experiencing considerable customer growth

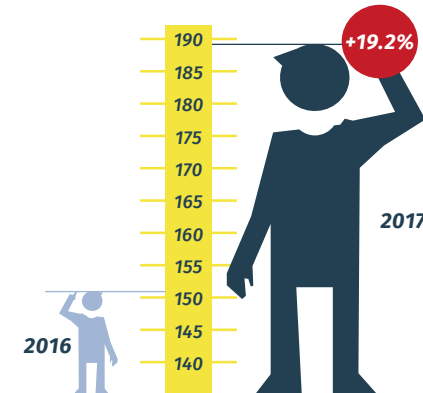
DE-CIX North America is the fastest growing

carrier and data center-neutral U.S. Internet Exchange operator. Both DE-CIX New York and DE-CIX Dallas are Open-IX certified by the OPEN-IX Association (OIX), and experienced steady growth in all areas. As one example, the consolidated customer base grew by 19.2 percent in 2017. Both exchanges became 100 GE-ready and connected their first 100 GE ports in 2017.

DE-CIX New York experienced a strong growth in connected capacity during 2017, increasing by 72 percent to 2.5 Terabits. This led to an associated increase in traffic over the platform, with peak traffic rising by 61.4 percent to nearly 270 Gbps. Strong growth in customers and ASNs (with more than 150 networks signed by the end of 2017) led to a 25 percent



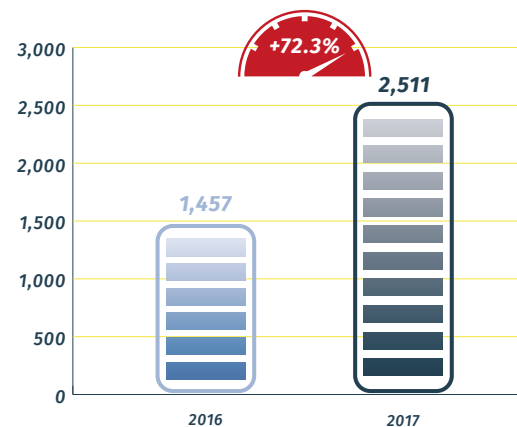
DE-CIX North America Customer Growth



increase in 10 GE ports connected at DE-CIX New York. DE-CIX New York is ranked as the second largest IX in the New York/New Jersey/Long Island metro region, a market with an uncharacteristically high volume of IX operators.

In little more than a year, DE-CIX Dallas has developed strong traction, becoming a competitive force ranking second in the Dallas market. As the only data center neutral Internet Exchange in the Dallas/Fort Worth market, connected capacity tripled in relation to 2016 levels. Customer numbers and ASNs rose strongly throughout the year, finishing the year with almost 40 networks signed.

DE-CIX New York Connected Capacity Growth (Gbit)



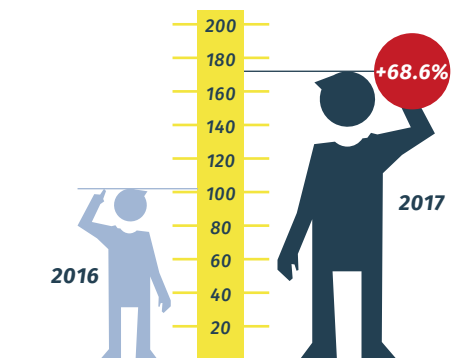
Southern Europe becoming increasingly important

Traditional traffic flows are changing, heading towards Southern Europe, especially the Iberian Peninsula and the Mediterranean coast, due to its strategic position and an ever-increasing number of submarine cables landing there. With its three Internet Exchanges in Madrid, Marseille, and Palermo, DE-CIX drives forward the booming interconnection ecosystem by growing the digital gateways for traffic coming from and going to Africa, Asia, and the Americas. In 2017, the southern European exchanges all experienced a strong consolidated growth, with at least a doubling in 10 GE ports and connected capacity.

DE-CIX Madrid growing rapidly

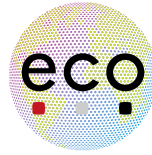
During 2017, DE-CIX Madrid became the fastest growing IX globally. The platform connected over 100 networks by the end of 2017, customer numbers grew by almost 60 percent during the year and the data traffic broke records on a week-to-week basis. On top, the connected capacity rose by 145 percent. In August 2017, DE-CIX Madrid announced its agreement with Itconic (now Equinix), one of the main providers of IT infrastructure in the country, allowing customers to access DE-CIX services through five Itconic data centers.

DE-CIX Southern Europe Customer Growth 2017

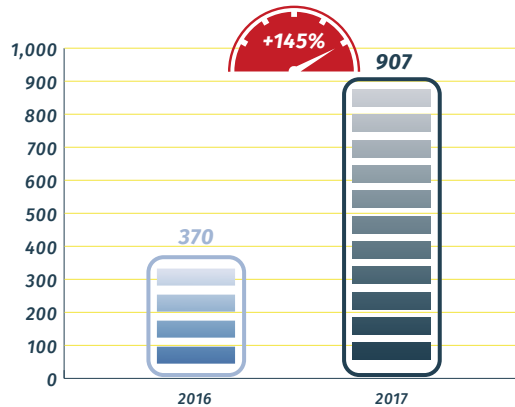


Building bridges from east to west: DE-CIX Istanbul and UAE-IX powered by DE-CIX

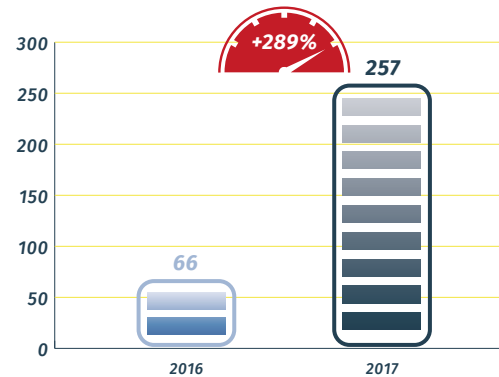
DE-CIX Istanbul is a neutral interconnection and peering point for networks from Turkey, Iran, the Caucasus region, and the Middle East. The IX took a new Point of Presence (PoP) at the Zenium Istanbul One (now Equinix) data center in Turkey into operation in 2017. DE-CIX Istanbul experienced strong growth throughout 2017, with a tripling of 10 GE ports, and an associated almost quadrupling of connected capacity. Customer numbers increased by 38 percent during the year. Peak traffic shot up from around 6 Gbps early in the year to around 45 Gbps in December 2017.



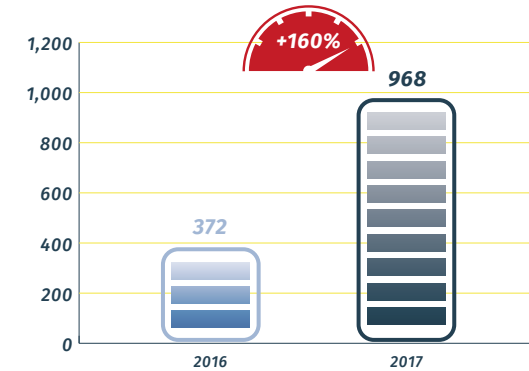
DE-CIX Madrid Connected Capacity Growth 2017 (Gbit)



Istanbul Connected Capacity Growth (Gbit)



UAE-IX Connected Capacity Growth (Gbit)



UAE-IX
powered by DE-CIX

UAE-IX powered by DE-CIX is a carrier and data center-neutral Internet Exchange for the Middle East that interconnects global networks and, above all, network operators and content providers in the GCC region. Initiated by Emirates Integrated Telecommunications Company (EITC) with the support of the UAE's Telecommunications Regulatory Authority (TRA), it dramatically improves IP network

resilience, routing efficiency, and the quality of the Internet experience for end-users. At the end of 2017, UAE-IX was upgraded to the powerful DE-CIX Apollon technology platform, made 100 GE-ready, and prepared for further interconnection services. The Internet Exchange enjoyed 19 percent growth in customers in 2017, and ended the year having almost tripled the number of 10 GE ports connected. Peak traffic grew steadily throughout the year, from a high of 65 Gbps in 2016 to over 80 Gbps in 2017.

Mumbai IX powered by DE-CIX

After signing a Memorandum of Understanding (MoU) earlier in 2017, in October, DE-CIX announced the establishment of a joint

venture to serve the Indian market. The partnership brings together DE-CIX and "Interwire", a local technology group that operates the Mumbai Internet Exchange "Mumbai IX". The newly founded DE-CIX Interwire India PLC is operating under the "Mumbai IX powered by DE-CIX" brand. With close to 100 connected customer networks by the end of 2017, Mumbai IX has already developed into the leading provider on the Indian subcontinent.

Prepared for the future

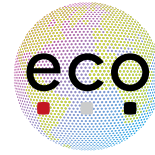
DE-CIX's goal for the coming years is to enable new and existing ecosystems in all major telecommunication markets across the globe. The geographic coverage of DE-CIX – twelve Internet Exchanges on four continents – paired

with the variety of different interconnection services, will allow connected networks to get DE-CIX interconnection services customized to their needs from both a geographical perspective and in terms of their respective business models.

Further information is available at:

www.de-cix.net





Andreas Weiss

Director EuroCloud Deutschland_eco e. V.

Peter Koller

Senior Project Manager



10.5 EuroCloud Deutschland_eco e.V.

2017 was dominated by the topic of digitalization. The misconception that this topic is only relevant for large companies and corporations has fortunately been largely eliminated. Small and medium-size enterprises have recognized the signs of the times and intensified their efforts in this area.

Regardless of the size of the company, cloud solutions played a key – or often the fundamental – role in 2017 for trend topics like IoT, Big Data, Artificial Intelligence, and Connected Car. The use and spread of cloud services thus received a further boost, meaning that the important discussions in 2017 no longer concerned the acceptance of, or fundamental questions regarding, cloud transformation – but rather concentrated on the implementation of specific projects and the management of hybrid and multi-cloud scenarios.

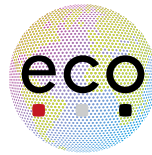
Of course, this also resulted in an intensive year at EuroCloud Deutschland_eco e. V. The independent industry association has been championing the advancement of the cloud

market since 2009 and supports both providers and users of cloud services with guidelines, tools, practical recommendations, and informative events. In addition, the association is involved in industry-relevant initiatives and projects. The work for members, however, is not limited to the German marketplace, but – through the umbrella association EuroCloud Europe – is also taken to the European level.

Alongside topics like system security, multi-cloud, and cloud in the education sector, the General Data Protection Regulation was in the focus for EuroCloud Deutschland in 2017. The regulation comes into force in May 2018 and will then regulate the handling of data in the EU in a unified manner. This is, of course,

not purely for the cloud, but for all areas with digital and also analog data processing. However, in the context of the AUDITOR project, EuroCloud is concerned with the concrete requirements in the area of cloud computing.

With the service DirectCLOUD at DE-CIX, a high-performance and attractive service for secure access to diverse cloud services is offered. This is supplemented by the certification service StarAudit for Cloud Services, which was taken up by three companies via EuroCloud and eco in 2017, including for the first time a U.S. company.



Projects

NGCert

The subsidized project "Next Generation Certification – NGCert", in which EuroCloud Deutschland and eco were involved as partners, was concluded according to plan in September 2017. The objective was to develop the foundations and processes for a dynamic certification that should guarantee compliance at any point in time with all relevant quality and security requirements of the certificate. The results were published by SpringerGabler publishers at the end of the year in German as a book entitled "Management sicherer Cloud Services".

Trusted Cloud

The competence network Trusted Cloud is a platform for users and providers for the dissemination of knowledge about cloud

technologies, especially in conjunction with the digital transformation of the economy. In addition, support in decision-making for the use of cloud solutions is made available. EuroCloud Deutschland is a founding member of the association and continued to support it in its work in 2017. In this way, EuroCloud strongly supported the further spread and use of cloud services with a variety of measures at national and international levels.

AUDITOR

The research project "AUDITOR" began at the end of 2017 with the involvement of EuroCloud Deutschland and further project partners. The consortium is led by Prof. Dr. Ali Sunyaev from the Karlsruhe Institute of Technology (KIT). The objective of the project is the conception, exemplary implementation, and trialing of a long-term EU-wide data protection certification of cloud services. It is the follow-up

project to the Trusted Cloud Data Protection Profile for Cloud Services (TCDP) and represents the first certification schema specifically tailored for the requirements of the GDPR. The project has already received broad interest and is being supported by multiple renowned companies of various sizes as associated partners. Initial results and the catalog of criteria will be presented in time for the 25 May 2018, when the GDPR comes into effect.

Events and trade fairs

This year again, EuroCloud was represented at important trade fairs and industry events.

BME-eLösungstage

The involvement at the BME eLösungstage organized by the Association of Supply Chain Management, Procurement and Logistics in Düsseldorf has become almost tradition. On 14 and 15 March, Andreas Weiss moderated

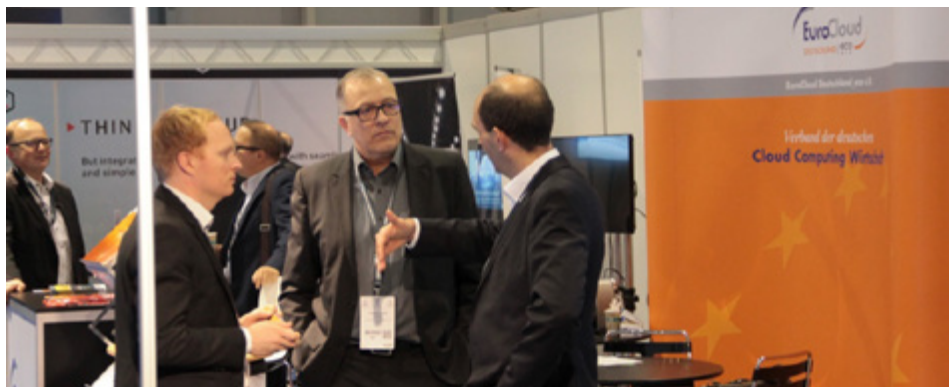
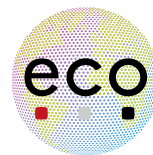
a roundtable discussion on the topic "Cloud-Hygiene – Avoidance of unnecessary risks". He explained to participants the importance and interrelationships involved in a holistic risk assessment for the use of cloud services, and presented a corresponding checklist.

WHD.global

For the first time, EuroCloud had its own presence at WHD.global, one of the largest international events of the cloud and hosting industry, from 27 to 31 March in Europapark Rust. At the community stand with eco, EuroCloud was able to be in touch with existing contacts and have interesting discussions with potential new members.

Systemhauskongress CHANCEN

For the first time, EuroCloud was present with its own booth at the Systemhauskongress CHANCEN on 7 and 8 September in Düsseldorf.



The congress for systems integrators and service providers addressed the key topics of digitalization and there was a lively exchange on this at the booth.

CEEf

The Cloud Expo Europe Frankfurt (CEEf) on 28 and 29 November, supported since the early days by EuroCloud as a partner, was the last large event in 2017 and again a real highlight. Certainly, the good discussions and new contacts with the diverse visitors from the three target sectors – cloud service providers, security, and data centers – ensured satisfied exhibitors at the community stand. Co-exhibitors were Myra Cloud Security, DE-CIX, netskope, and Pfalzkom | Manet. Along with the official opening by Andreas Weiss, EuroCloud was involved in the shaping of the topics and organized podium discussions with its members on the topics "OpenStack –

Experiences from the provider perspective", "IoT – Platforms and digital business models", and "Multi Cloud Management – Market, Use Cases & Integration".

Competence Groups

In addition to presence at trade fairs and congresses, the topic-related work was naturally also driven forward within the Competence Groups.

The CG Business Communications, under the leadership of Detlev Artelt, met on 19 October in Cologne under the motto "Analog was yesterday – Hello Cloud". During the meeting, practical examples of communication from the cloud were presented. Detlev Artelt was also a guest at the CEEf with the format Working Simply Online (Einfach Online Arbeiten EOA) and streamed live interviews with exhibitors from the Video Cube. At the end

of the year, work was carried out on guidelines on the topic of WebRTC, to be published at the beginning of 2018.

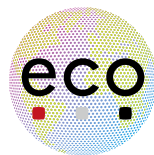
The CG Open Cloud initially worked on the translation of the orientation guide "Open Cloud – flexible & secure", which describes the advantages of open source in the IaaS area. The Leader of the CG, John Fitzgerald, moderated a panel at the CEEf on experiences with OpenStack. The interest in this topic was enormous and so there was subsequently a spontaneous expert discussion between participants and visitors to the trade fair.

Other activities

On 28 June, a joint meeting of EuroCloud and the eco CG Security took place in Cologne. The participants were shown approaches to solutions for a secure and transparent use of cloud services in companies.

Together with the DLR project backers and BITMi, EuroCloud also offered an information event on participation in European and German national funding programs on 19 September in Cologne. The particulars of and open calls for the Horizon 2020 program and the SME tool were clarified. In general, EuroCloud, together with eco, supports the participation of members in national and European funding measures.

Further information is available at:
www.eurocloud.de



Christiane Skiba
Branch Manager Cologne
Head of Marketing & Events

11. eco Events 2017

A finger on the pulse of time with new and established events

Events are an important mainstay for eco and its member companies because this is where eco combines the latest know-how with networking power. A broad range of CG meetings and industry events in 2017 ensured that members (and others) learned about what was happening in their fields of business, and what they now have to do to be successful in the market. During the events, they had the opportunity to exchange knowledge with high-profile experts, decision-makers from large companies, and senior politicians. In addition, the member companies were able to present themselves through interesting sponsorship offers and establish valuable business contacts.

To accomplish these objectives, the eco Event Team in 2017 mainly opted for popular existing formats, such as the New Year's Reception, the Internet Security Days, and the CSA Summit. On the other hand, the association is constantly on the lookout for new topics and event formats to provide inspiring impetus and to promote industry networking. The Blockchain PreMasters, for example, was in perfect sync with the changing winds of time – and at the same time, met the diverse needs of the members. The new, innovative setup of the Internet Week as "Internet Impulses" also clearly resonated strongly with members and the public.

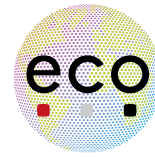


In addition, eco was present at many trade fairs, seminars, and conferences around the globe, where it represented the interests of the Internet industry. At the same time, the association was able to attract the attention of companies in the industry, and in the process gain new members.

The eco Event Team has once again done an excellent job – and put in some long hours – as can be seen in the report on the major events.

The current overview of scheduled events can be found at: international.eco.de/events





11.1 Event Highlights

11.1.1 eco New Year's Reception as part of the PASSAGEN

The Internet industry celebrated the start of the year on January 19, 2017: eco had invited all member companies and partners to the traditional New Year's Reception on its premises on the Vulkan site in Cologne's Ehrenfeld. More than 300 guests enjoyed drinks and finger food, as well as lounge reggae and jazz from the live band Maceedo. Running on until the early hours of the morning, the guests took the opportunity to talk to personalities from business, politics, art, and culture.

1,000 eco member companies

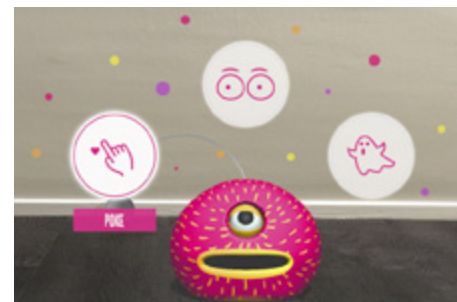
At the New Year's Reception, eco welcomed Heise Medien, one of Germany's leading publishers, as its thousandth member. eco's

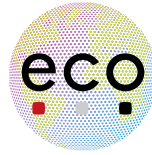
CEO Harald A. Summa and Honorary President Prof. Michael Rotert ceremoniously presented the membership certificate to Gisela Strnad, Head of Events at Heise.

Mixed-reality creatures in the eco Kubus

In the green Kubus room, visitors had the chance to encounter creatures from the virtual world. A mixed-reality installation as part of IMM/PASSAGEN 2017 transformed objects into virtual and colorful creatures, so-called "abstractures", which live in a world between physical and virtual reality. To establish contact with them, the visitors extended the perception limits of their senses with the help of a Microsoft HoloLens.

After the personal abstractures had left the physical world, the PASSAGEN visitors found their creatures again with the help of a code on the Internet. As a souvenir, everyone received a photo of his or her own creature.





11.1.2 CSA Summit

In April 2016, the CSA welcomed their certified senders, partners, and interested parties to the CSA Summit in the German Sports Museum in Cologne. With 120 participants from 12 nations and top-ranking speakers from the industry, the CSA Summit was another successful international congress. 18 email experts from well-known companies gave their take on the event motto: "Back to the Future".

Ivo Ivanov, Director of the CSA, introduced the motto and topic and reported on the development of the CSA over the previous years; for example, going from nine certification criteria in 2004 to nine pages of certification criteria

in 2017. He then officially handed over the reins of the CSA to the new Director, Julia Janssen-Holldiek.

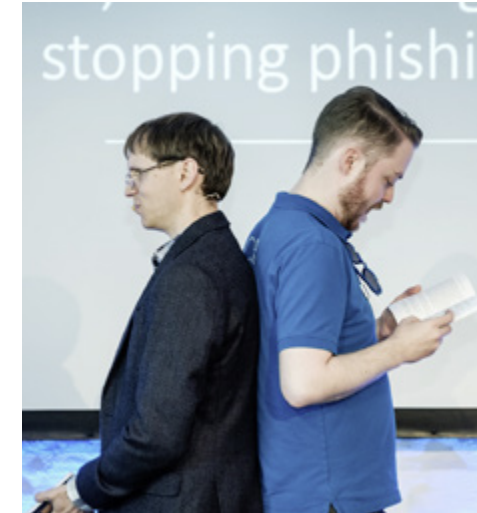
Several authors then presented the latest CSA publications. In one, the new "eco Directive for Permissible E-Mail Marketing" outlines the legal requirements for email marketing. In another, "Best Practices for E-Mail Marketing", there is an overview of how to ensure that emails reach recipients' inboxes.

Marcel Becker from AOL and 250ok's Paul Midgin introduced current best practices and their relevance. Up until now, low engagement and/or frustration in email marketing have led to reduced revenue in the long-term and many



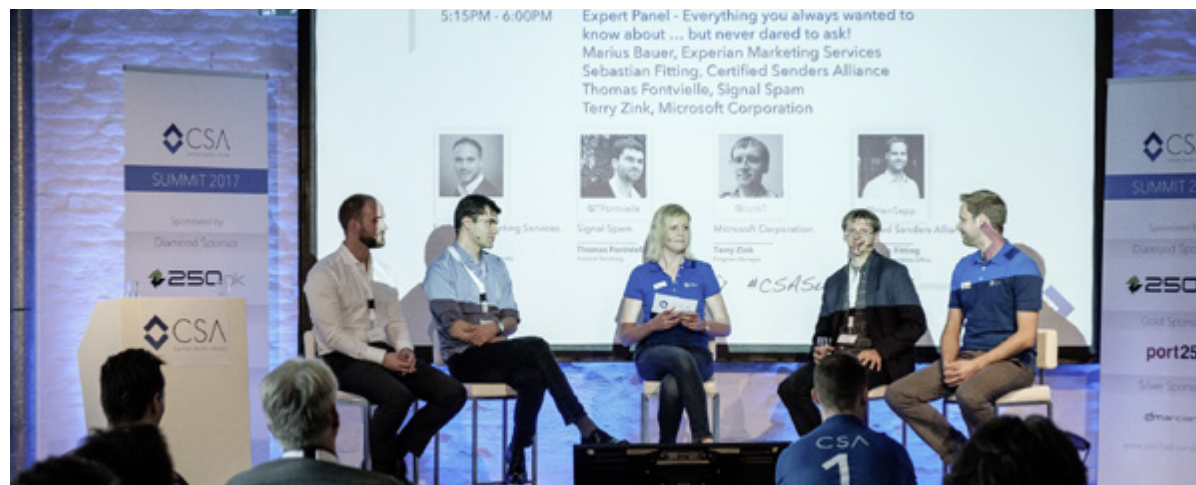
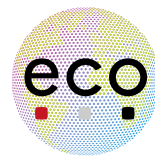
marketing messages today just look like spam. Emails need to begin with something relevant and should speak to the customer directly. The new challenge for senders is to find a way of exchanging information in order to improve relevance and services, while simultaneously respecting trust and security. Marcel Becker stressed that trust agencies like the CSA are becoming ever more important for ISPs and ESPs in building confidence among consumers.

Next up, Udem Ukutt of SPLIO and Don Owens from Cisco explored the secrets behind a good reputation. Senders must ensure that they don't look like one of the "baddies" and need to authenticate themselves as senders. The two speakers believe that, in future, the



reputation of domains will gradually be weighted more strongly than the reputation of IPs.

"The Internet is for cats. Therefore everything on the Internet can be justified with a cat analogy." Sven Krohla from 1&1, and Tobias Herkula from optivo GmbH, started with a story about the once-off purchase of a cat-scratching post and the subsequent newsletter for cat-scratching posts that was almost impossible to unsubscribe from. RFC 8058 solves this problem with one-click functionality for list email headers; by clicking on unsubscribe, a URL is opened and the user is unsubscribed, with no need for an email to be sent. Senders can very easily protect their reputation,



avoid frustrated customers, and prevent their newsletters being sent to the spam folder, simply by implementing this new standard.

Martijn Groeneweg and Nick Hristov from dmarcian presented the lessons they learned from introducing DMARC at PostNL. In recent years, the Dutch postal service, PostNL made it into the TV news because of large numbers of spam and phishing mails sent in their name. To prevent this from happening, dmarcian were hired to help the company implement DMARC. The technical aspects of implementing DMARC were just 30 percent of the project; 70 percent was process. Once DMARC was successfully activated, 99.8 percent of threats/unknown emails sent through PostNL domains were blocked.

Microsoft's Terry Zink kicked off his talk with a magic trick, illustrating where email authentication is great, and where there are still problems: phishing. The good news is that lots of domains now do authenticate with SPF, DKIM, and DMARC. Spam filters have got very good at detecting phishing using traditional methods. However, the bad news is: Lots of domains in the enterprise sphere still do not authenticate at all and there has been a large increase in spear phishing. This makes things easy for cyber criminals. Microsoft is involved in the development of Branded Indicators for Message Identification (BIMI), the logo for trustworthy senders.

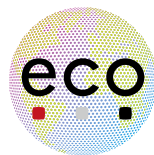
Aleksey Shelkovin and Ilya Vorobiev, both from Yandex, gave an overview of the Russian email

market and the origins of spam and abusive emails. Yandex is the #1 search engine in Russia with 56 percent market share. Yandex Mail has 32.5 percent market share in Russia with a monthly audience of 26 million users and over 300 million email accounts. Yandex Mail also strongly recommends that senders use double opt-in for mailing lists, One Click to unsubscribe, and that addresses are automatically unsubscribed after bouncing. The From-address must be clearly associated with the brand, and blacklists must be monitored.

The day ended with a question and answer session with a panel of experts on all things related to email authentication and best practices. The Director of the CSA, Julia Janssen-Holldiek, moderated the panel with

Marius Bauer from Experian Marketing Services, Sebastian Fitting from the eco Complaints Office, Thomas Fontvielle from Signal Spam, and Terry Zink. Afterwards, attendees had the chance to play hockey on the roof of the Sports Museum – parallel to the World Hockey Championship that took place in Cologne that week. Then dinner, drinks, and music gave everyone a chance to network and continue discussions on the banks of the river Rhine.

Further information is available at:
go.eco.de/csa-summit-2017



11.1.3 Internet Security Days: Secure. Digital. Connected

How can we shape the Internet to be secure and trustworthy? This was the question at the center of the Internet Security Days (ISDs) 2017 on 28 and 29 September, held at Phantasia in Brühl. As in previous years, the eco Association and Heise Events jointly ran the ISDs. The focus topics of advanced cyber crime, the human factor, connected world, and security by design were discussed in keynote addresses, presentations, and workshops, and the approximately 600 participants exchanged ideas on how to avoid malware and protect devices, passwords, and identities. In parallel to the talks on both days, partners and sponsors presented their solutions for IT and Internet security at the accompanying Security Fair.

"The Internet is the motor and basis for well-being of our modern and global information and knowledge-based society," eco Board Member, Prof. Norbert Pohlmann, said in his opening address. "And yet year for year, since the emergence of the Internet, IT security issues have been increasing rather than decreasing." The speakers at the ISDs gave plenty of examples of this – for instance in the form of "War Stories" from the antivirus manufacturers, who recounted impressive accounts of their daily fight against cyber crime.

The particular threat to small and medium-size enterprises (SMEs) was also a topic of the ISDs. The project partners introduced

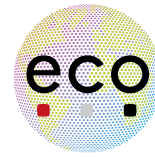
the security project SIWECOS, funded by the Federal Ministry for Economic Affairs and Energy, to the press and public; with this project designed to allow for an easier implementation of IT security. SIWECOS scans web sites and content management systems for security vulnerabilities, a service from which especially SMEs can benefit.

Considering security from the outset with software projects

In his keynote talk on "Security by Design", cyber security expert Felix von Leitner called for the consideration of security as early as at the design and development stage of any new software. "Costs can be reduced considerably if software manufacturers consider security

from the outset, rather than continuously providing new patches." During the second keynote of the day, Christian Pursche of the Lower Saxon State Police Department demonstrated by means of real-life examples of policing just how important it is to raise awareness of and educate people on cyber threats.

Afterwards, Stefan Strobel of cirosec gave concrete tips on how to detect and prevent targeted cyber attacks. Nadin Ebel of MATERNA's talk focused on the question of how to effectively raise employees' awareness of security-conscious handling of day-to-day work. A solution for confronting contemporary threats such as WannaCry, Locky,



Goldeneye, & Co. was presented at midday by Michael Veit of Sophos.

In the evening, the event venue Phantasialand provided the premises for an exceptional networking event. Participants met in the theme park Klugheim and enjoyed cold drinks and sumptuous fare in a rustic atmosphere.

The guests experienced a particular thrill on the multi launched coaster Taron: The roller coaster that holds a number of world records was reserved exclusively for ISD visitors.

Better protection of cars from hacker attacks

Friday also delivered numerous event highlights.

Markus Bartsch from TÜViT presented possible solutions for data security and protection in vehicles with the help of an automotive platform. Thomas Uhlemann from ESET reported on the fight against malware that can attack industrial control systems worldwide. Another highlight of the program was the announcement of a collaboration between eco, networker NRW, and the Lower Saxon State Police Department.

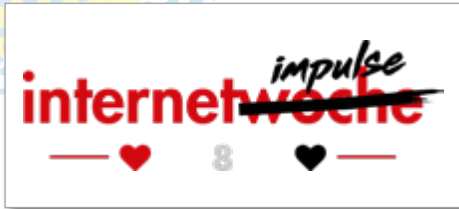
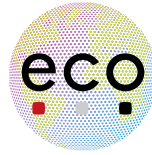
During a panel discussion, experts discussed the question of how an IT security seal could in future ensure security in an increasingly interconnected world. The keynote address that concluded the seventh ISDs was given by Arne Schönbohm of the Federal Office for

Information Security (BSI), during which he stated, "The high number of affected companies underlines the fact that Germany needs to catch up in the area of cyber security," and demanded that "IT security must be an issue for management, because information security is the prerequisite of successful digitalization." A challenge we face today and tomorrow, and that is bound to be an important topic again at the ISD 2018.

For further information and a video retrospective, visit the German-language page:

www.eco.de/isd





11.1.4 Internet Impulses

How can digitalization be successfully implemented for society, the economy, and administration? This was the topic of discussion for over 2,500 citizens during the Internet Impulses in Cologne, at 63 events held between 16 and 21 October 2017. Over the space of a week, attendees drafted concrete proposals for the city and the economy on how to achieve successful digital transformation. Every third event was booked out. At the event VISION.LOGISTIK.3, for example, around 400 participants concentrated on the subject of "Blockchain. Revolution of the Supply Chain?". Another meeting place for digital visionaries, which included several nominees and award winners of the Grimme Online Awards, was the SOCIAL COMMUNITY DAY 2017.

THINK & CHANGE: A week full of digital impulses

"Our society is in the midst of digital transformation. Throughout the 63 events, citizens, companies, and public administration delivered valuable ideas on how the new concepts of life and work can succeed," eco's CEO, Harald A. Summa, commented on the week. "With the eighth annual Internet Impulses in Cologne, we were able to create a forum for a necessary civic debate."

The participants' ideas, for example, included an enhanced digital depiction of municipalities' everyday processes. The citizens also developed suggestions as to how fears and reservations concerning digitalization can

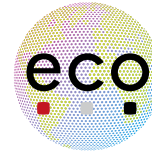
be abated. One main focus was on the new educational opportunities that arise through digitalization, and how the media literacy of children and adolescents can be strengthened.

Digital transformation from Cologne's perspective

The City of Cologne placed its multitude of services at the center of its event series "KölnDigital" ("Digital Cologne"). The city displayed its activities from the field of smart city, as well as presenting the Cologne municipal library's digital services – the use of 3D printers and robot assistants were explained in the library's "Makerspace". Meanwhile, the eco Association and the Cologne Police Department showed how cyber security in digital day-to-day life can be improved in order to better protect oneself and one's personal data.

"We have spent one week developing impulses for successful digitalization. The results, of which we are very proud, will be presented in detail to the City of Cologne, companies, and interested citizens," were Harald A. Summa's words at "#IW8 Change Together", the final event of the Internet Impulses. The participants indicated their high level of motivation to continue shaping the digitalization of city, society, and companies, above and beyond the week of events.

Further information is available at:
www.internet-impulse.de



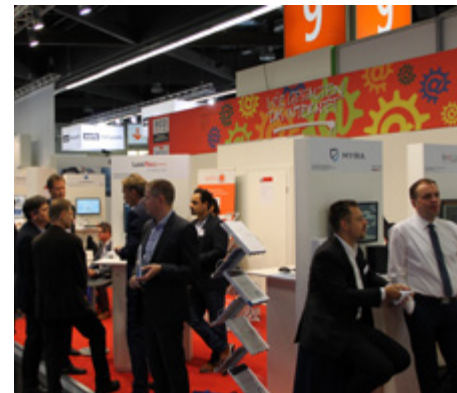
11.1.5 it-sa

From 10 to 12 October, cyber security experts were able to update their knowledge and get the newest information at it-sa, Europe's most important IT security trade fair.

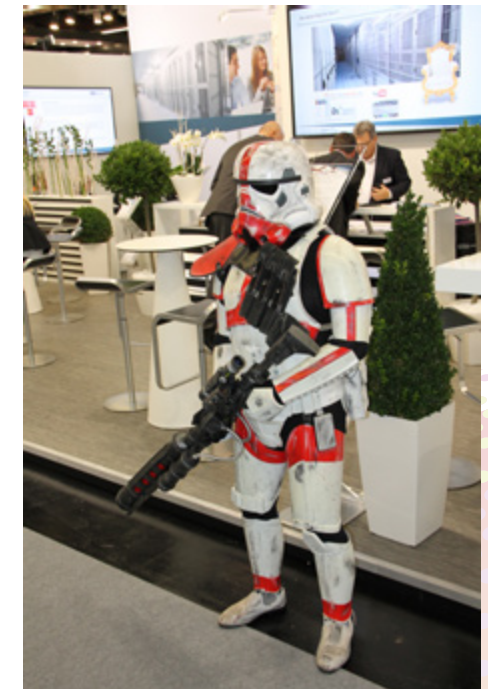
The 630 exhibitors from 24 countries were happy to welcome more than 12,500 trade visitors (25 percent more than in 2016). At eco's joint stand, 14 partners presented their solutions for the IT security industry, and had the opportunity for in-depth exchange with interested parties and potential German and international customers.

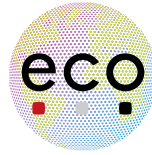
In addition, Congress@it-sa offered participants the opportunity to get informed and

exchange ideas on the hottest topics of debate concerning IT security. On the eco panel at the "it-sa insights", Peter Meyer, Head of Cyber Security Services at eco, David Jardin from CMS Garden, and Marcus Niemietz from Hackmanit presented the joint project SIWECOS. The name stands for "Safe Websites and Content Management Systems", and helps small and medium-sized enterprises (SMEs) detect and repair security vulnerabilities on their websites. The panel discussion that followed involved an exchange between Peter Meyer, David Jardin, Robert Merget of the Ruhr University Bochum, and Oliver Werner of netcup on the challenges for SMEs with respect to IT Security.



Also within the framework of the it-sa insights, Werner Theiner of eco joined the roundtable discussion on "Secure Digitalization – Challenges to technology and the human being". He emphasized the fact that we need to impress upon companies the urgency of digitalization and accompany their process continuously.





11.1.6 Blockchain PreMasters

Over 200 participants met at the event “Blockchain PreMasters – Between disruptive potential & hype?” on 12 December in the Altes Pfandhaus in Cologne. During the expert conference, not only were possible areas for blockchain applications and business cases for the new technology explained, but also aspects such as law, security, and trust. Along with eco, the event was run by the City of Cologne, the deutsche medienakademie GmbH (German Media Academy), InsurLab Germany, and the German ICT & Media Institute (GIMI).

The participants were welcomed to the event by Dr. Ralf Heinen, Mayor of the City of Cologne, Rudolf van Megen, Board Member of the GIMI, and Dr. Torsten Oletzky, CEO of InsurLab Germany. A first overview of the topic of blockchain was then presented by Sven Korschowski of the financial auditing company KPMG AG.

Next followed a number of keynote addresses. Prof. Dr. Wolfgang Prinz of the Fraunhofer Institute for Applied Information Technology (FIT) explained the technological functioning of blockchain, and was able to bridge a number of gaps in knowledge. Andrei Martchouk of KI decentralized gave a talk on changes to IT architecture, and Prof. Dr. Norbert Pohlmann

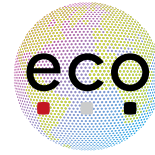
of the Institute for Internet Security (ifis) of the Westphalian University of Applied Sciences provided a closer look at aspects of security.

After a short lunch break, the afternoon began with a panel discussion. Those on the panel were Stephan Zimprich, Head of the eco CG Blockchain, Joanna Schmölz of the German Institute for Trust and Security Online (DIVSI), Dr. Jasmin Franz of the German Aerospace Center (DLR), Dr. Nina-Luise Siedler of the law firm DWF Germany, and Luisa R. Geiling of Linklaters LLP. The discussion focused primarily on topics such as authority and law & regulations, but also looked at social aspects, opportunities, and areas of added value.

Areas of application and added value

After a short coffee break, which the participants took advantage of for intensive networking, the audience was separated into two parallel streams that presented and discussed selected areas of applications and their added value.

Stream A dealt with the topics of banking and payment, crowdfunding based on blockchain, insurance, e-government, and copyright. The speakers were Sven Knop of Finanz Informatik Technologie Service GmbH & Co. KG (fi-ts), Dr. Nina-Luise Siedler, Ralph Papendiek of IBM Germany, Prof. Dr. Andreas Engel of the City of Cologne, and Christian Solmecke of the law firm Wilde Beuger Solmecke.

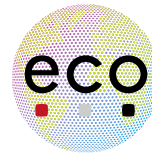


Stream B explored the topics of IoT, software testing, logistics, health, and energy. The speakers on stage were Dr. Kai-Uwe Gawlik of SQS Software Quality Systems, Emeritus Prof. Klaus Spicher, Dr. Tobias D. Ganter of Healthcare Futurists, and Dr. Michael Merz of Ponton.

After the participants had all been updated on the topic of blockchain, there was a lively exchange of newly gained knowledge over the tasty buffet and Kölsch beer.



A retrospective of the event and statements from some of the interesting speakers can be found on video at: www.blockchain-premasters.com



11.1.7 eco <IMTEAM>

eco has grown enormously in recent years due to its stronger international orientation and the multifaceted development of the Internet. Digitalization is leading to increasing interconnectedness, so that the various topics, especially in the fields of events and communication, cannot usually be directly assigned to one specialist area or all-encompassing theme.

The Marketing & Communication team looked at this as an opportunity and, as part of the preceding event highlights, developed an overarching identifying image for the association. eco will continue to work on this in the future – both in its internal and external communication.

The underpinning idea was the development of an integrated communication framework that would place the team's cooperation at center stage – that is, the cooperation of employees, core groups, members, and partners of the association in the pursuit of common objectives and successes.

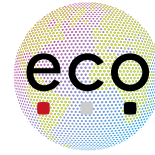
In order to "merge" all topic areas, teamed with the employees, members and partners involved, in mid-2017, the Marketing & Communication team introduced the <INTEAMAREA>, created for everyone. All of us together form the team and for this reason <INTEAM> is to be understood as a communication framework for the entire internal association work/communication.

As this progresses, in the future there will be adaptations depending on the specific application, for example the claim <INDATACENTER> stands for the Datacenter Expert Group or a division leader's title could quickly become <TEAMHEAD>.

The design element of the communication is the < open bracket and close bracket > familiar from programming which, as in the source code, directs attention to the content that is at the heart of the respective medium.

"Strong together, with focus!"





Werner Theiner
Head of eco South Office

11.1.8 Highlights eco South

The goal of the eco South Office in 2017 was to continue to strengthen eco's visibility and responsiveness to current and potential members in the region of southern Germany, Austria, and Switzerland.

On the basis of almost 40 event days, visited by more than 1,000 visitors, eco was able to realize this goal successfully, with over 90 per cent of those reached being part of eco's main target groups – decision-makers from the industry and politics, resellers, and the media. In this way, the association achieved year-round market visibility for its members, who in addition were also able to establish valuable contacts and generate leads. All eco events

were financed entirely through sponsoring. Werner Theiner, Head of the eco South Office, acted as moderator, keynote speaker, and participant in discussion rounds at over 15 events.

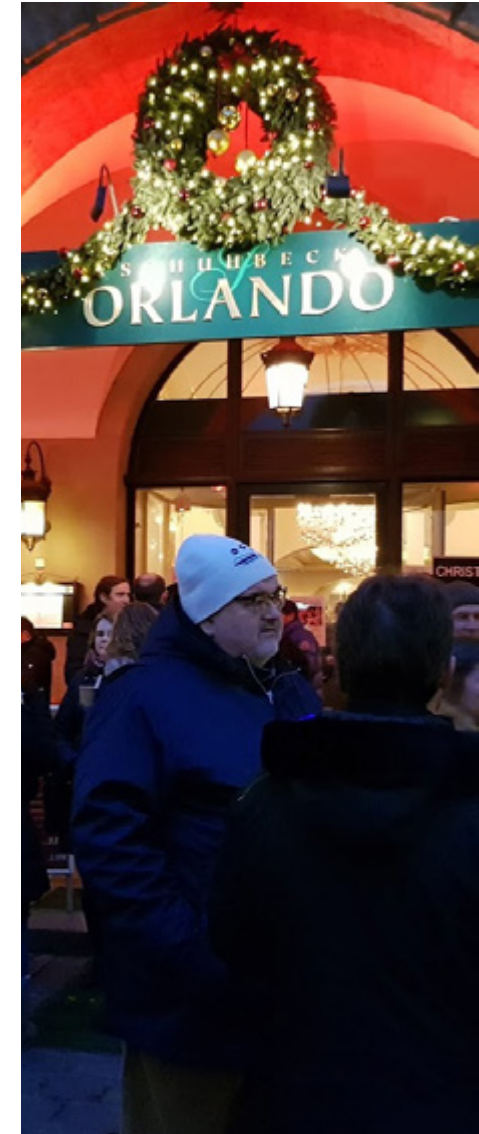
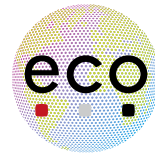
Recurring event formats, such as the Munich Breakfast Roundtable, the Vienna Meet-up, Technology Drivers in Bavaria (where members have the opportunity to introduce themselves), and roadshows focusing on security and data centers were very popular amongst members and guests. These formats were successfully further established, and their popularity and recognition have increased significantly.



- At each of six meetings of the Bavarian entrepreneurs' meeting format **Munich Breakfast Roundtable** – established in 2016 – 24 guests came together in an exclusive round to pick up valuable information on how to prepare for the challenges of tomorrow in a relaxed environment.
- At the new version of the roadshow **"The eco 5 Star Data Center Plus"**, a total of approximately 200 visitors at four stations learned everything worth knowing about the secure and resource-efficient operation of their data centers.
- The Roadshow **"Secure and Stable Company Networks"** visited four locations and pro-



- vided information to a total of approximately 250 guests.
- In 2017, eco successfully organized **"Strategy Talks"** in Munich and Vienna concerning the topics of security and data centers.
- 180 visitors attended the **"Night of the Networks"** – of which the eco CG Blockchain was a part – at which Andreas Keck, Deputy Federal Chairman of Liberaler Mittelstand, Manuel Gerres, CEO of Deutsche Bahn Digital Ventures, and Dr. Dirk Siegel, Head of the Deloitte Blockchain Institute, amongst others, provided information on and discussed the versatile application possibilities of blockchain.



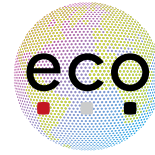
- The networking event "How digital is the Oktoberfest?", which was held within the framework of the **eco Night of the Networks**, was also well attended, with 120 guests. Companies presented their ideas on the digital world in short pitches. In the subsequent discussion, the participants examined how the hospitality and event sector have implemented digitalization within the Oktoberfest. Participants in the discussion included State Secretary and Member of Parliament Dorothee Bär; Michael Käfer,

Oktoberfest host (Käfer-Wiesn-Schänke) and gastronomy and events expert; and Alexander Wunschel of the Marketing Club Munich.

- The eco South Office was also responsible for the organization and marketing of the **partner stands** of 14 co-exhibitors at the it-sa security fair in Nuremberg and six co-exhibitors at the Cloud Expo/Data Center World in Frankfurt. Thanks to a mix of member companies and new manufacturers in the areas of security, cloud, and data

centers, eco was able to offer sponsors and visitors to the trade fairs an attractive platform for initiating and developing business.

- Approximately 80 guests from industry, politics, and the media took advantage of the special eco event **Christmas Joy** in order to exchange ideas in a relaxed environment over mulled wine and delicacies from the kitchen of Alfons Schuhbeck.



11.1.9 Events Outlook 2018

In 2018, eco plans to further develop its various event formats and to strengthen their function as market visibility tools for its members. This will mean more interesting opportunities for companies to present and inform themselves in person, to create synergies and revenue potential, and to relax at pleasant get-togethers away from day-to-day business.

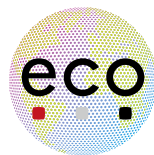
The following events, amongst others, are being organized:

- eco Congress and the eco Awards Ceremony,
- Blockchain Masters,
- Internet Security Days,
- four to six Breakfast Roundtables,

- four roadshow dates for "The eco 5 Star Data Center Plus",
- six roadshow dates for Safety & Security,
- three roadshow dates with a focus on the cloud,
- Technology Drivers in Bavaria and Vienna,
- Initiative Digital Bavaria, four regional events in the districts,
- a joint stand at the it-sa in Nuremberg,
- a joint stand at the Data Center World/ Cloud Expo in Frankfurt,
- Christmas Joy.

If interested, please contact
werner.theiner@eco.de.





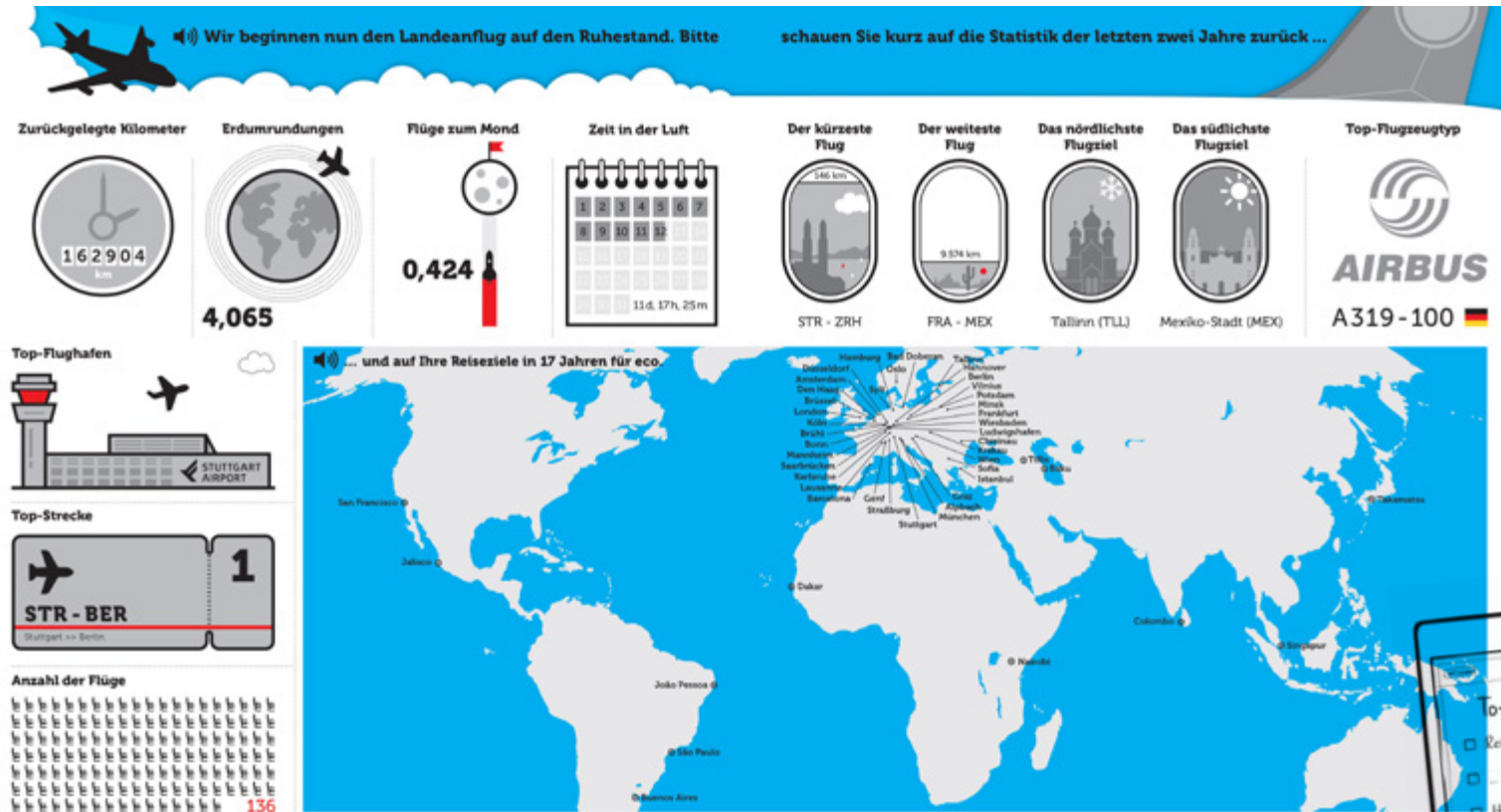
11.1.10 From Internet Pioneer to Political Whisperer

During a stylish celebration with an exclusive guest-list on 24 November 2017 in the Hotel de Rome in Berlin, Prof. Michael Rotert was officially bid farewell from his position as eco Chair of the Board. For 17 years, he led and developed the association with its now over 1,000 member companies to become the largest representation of the Internet industry in all of Europe. In this time, he played a central role in shaping not only eco, but also German and European Internet policy and digital policy.

During the festivities, the association thanked him for his successful work and his exceptional engagement. "The entire history of the Internet

– at least in Germany, and also in part internationally – is based in many areas on the work of Michael Rotert. He helped lay the fundamental building blocks for everything which distinguishes the Internet," said Oliver Sümé, who will be following in Prof. Michael Rotert's footsteps as the new eco Chair of the Board. In addition, the association showed its appreciation for Prof. Michael Rotert with an award and an impressive book entitled "Vom Netzpionier zum Politikflüsterer" (From Internet Pioneer to Political Whisperer), which documents his career vividly and with a dash of humor.

Amongst the guests were companions of many years from the industry and from politics, one of whom was Sabine Leutheusser-Schnarrenberger, former Federal Minister of




AUF EIN WORT



To-do-Liste für den Unruhestand

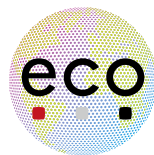
- ☐ Reisen/idee? Gutes Essen gibt es auch dabei ...
- ☐ ... und Kaffee/liebhaber können hier zum Barista werden!
- ☐ Hellwack geht's weiter zum Entdecken der 5 weltbesten Hotels -
- ☐ ... und zum Schreiben der Memoiren in der Senator Lounge.
- ☐ 10.000 Schritte pro Tag müssen sein.
- ☐ Für Speed sorgt das Jaguar Race Taxi.
- ☐ Wenn das nicht reicht: auf zur Jaguar Ice Academy in Schweden.
- ☐ Danach weiter den Überblick behalten mit einem Helikopter-Rundflug.
- ☐ Allerdings: Nichtstun ist auch mal ganz angebracht.
- ☐ Und offline gehen.



Justice. She emphasized that, "Dependability and reliability are the characteristics that particularly distinguish Prof. Rotert. And that is precisely what we need in complex and demanding times. My heartfelt thanks, dear Mr. Rotert, for your commendable work in the pursuit of freedom and for your support."

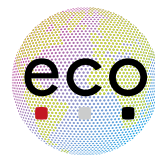
Another highlight of the evening was the performance of an Angela Merkel double, who cast an eye over his achievements and managed to elicit smiles and laughter from the guests, in spite of the occasion's element of wistfulness. In the end, all were of one mind – as CEO Harald A. Summa expressed it,

everyone is glad that Prof. Michael Rotert will "continue to support the association with his calm and composure in future as Honorary President, and will continue to help steer our work and the Internet in the right direction."

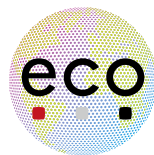


11.2 Further eco Events

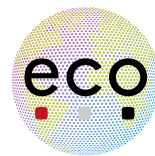
eco Events 2017			
Date	Event / Organizer	Topic	Location
10.01.2017	Workshop NGCert	Dynamic Certification – a workshop for auditors and cloud service providers	Cologne
17.01.2017	CG Security	Secure and stable company networks	Stuttgart
19.01.2017	CG Leaders Meeting	Annual coordination process	Cologne
19.01.2017	New Year's Reception, Cologne	Explore hybrid worlds!	Cologne
24.01.2017	New Year's Reception, Berlin	Perspectives of the Gigabit Society	Berlin
26.01.2017	The eco 5 Star Data Center Plus	Efficient DC infrastructure	Essen
27.01.2017	nwr.uniTS – IT'S Breakfast	Software defined perimeters	Bochum
02.02.2017	Information event, eco	Introduction of the eco Data Protection Officer	Cologne
07.02.2017	CG Security	Secure and stable company networks	Munich
09.02.2017	The eco 5 Star Data Center Plus	What does a datacenter cost?	Frankfurt
09.02.2017	CG Blockchain	1st working meeting	Frankfurt
17.02.2017	eco Roundtable "Dialog about Tomorrow"	Product security in times of interconnection	Berlin
17.02.2017	CG Datacenter	Munich breakfast meet-up	Munich
21.02.2017	Conversations with Policy-makers	National and European Digital Agenda in BMWi (Federal Ministry for Economic Affairs and Energy)	Berlin
21.02.2017	CG Security	Secure and stable company networks	Bochum
24.02.2017	nwr.uniTS – IT'S Breakfast	Patch me if you can	Bochum
28.02.2017	eco Brussels Breakfast in the European Parliament	ePrivacy	Brussels, Belgium
28.02.2017	Panel Discussion	Ancillary copyright	Brussels, Belgium
02–03.03.2017	StarAudit Training	Fundamentals of cloud quality security, tendering and bid comparison	Cologne
07.03.2017	Policy Breakfast	eco Complaints Office	Berlin
14.03.2017	KPI4DCE Advisory Committee	Key performance indicators for assessing the resource efficiency of datacenters	Berlin



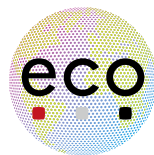
eco Events 2017			
Date	Event / Organizer	Topic	Location
23.03.2017	CGs E-Commerce, New Work and Datacenter Expert Group	What does an ecological view of the Internet industry look like?	Frankfurt
24.03.2017	EuroCloud Breakfast	When the prosecutor rings twice	Munich
28.03.2017	polITalk Special Event Wahl/Digital 2017	Digital Industry & Digital Work	Berlin
28.03.2017	CG Names & Numbers @WHD 2017	Retain the Tension with Data Retention	Rust
28.03.2017	CG Names & Numbers @WHD 2017	Critical Infrastructures at Risk – Are you doing enough?	Rust
29.03.2017	CG Names & Numbers @WHD 2017	Transatlantic Business at Stake – will Europe draw its Trumps?	Rust
31.03.2017	nrr.uniTS – IT'S Breakfast	IT Security Act in theory and practice	Bochum
04.04.2017	EN 50600-3: Management and Professional Datacenter Operation	Update on new datacenter norms	Frankfurt
05.04.2017	Workshop	The 4th Industrial Revolution	Dusseldorf
25.04.2017	CG Internet of Things	Guided tour of Hanover Trade Fair	Hanover
28.04.2017	nrr.uniTS – IT'S Breakfast	Secure Domains or – which stone do you want to build on?	Bochum
10.05.2017	CG E-Mail	BIMI, RFC 8058 and list bombing	Cologne
10–12.05.2017	CSA Summit	Back to the Future	Cologne
12.05.2017	Schoko & Sushi	DDoS Attacks	Berlin
16.05.2017	polITalk Special Event Wahl/Digital 2017	Justice & Injustice on the Internet	Berlin
17.05.2017	The eco 5 Star Datacenter plus	Opportunities and challenges for SMEs	Munich
18–19.05.2017	DC Strategy Talk	DC and cloud operations	Vienna, Austria
26.05.2017	nrr.uniTS – IT'S Breakfast	Identities on the Internet	Bochum
30.05.2017	Policy Breakfast	ePrivacy Regulation	Berlin
01.06.2017	CG Internet of Things: IoT Business Trends	Connecting the world – but securely	Dusseldorf
07.06.2017	Brussels Breakfast	ePrivacy Regulation: Electronic communication	Brussels, Belgium
07.06.2017	Press Breakfast	Award of the first STEM-friendly "Digital Schools" in Germany	Berlin
13.06.2017	EN 50600-4: Indicators for the professional DC Operation	Update on new datacenter norms	Frankfurt
20.06.2017	polITalk Special Event Wahl/Digital 2017	Trust & Security on the Internet	Berlin
23.06.2017	CG Infrastructure Security	DDoS Mitigation – The race goes on	Frankfurt
26.06.2017	Expert Lunch	Youth media protection	Cologne
26.06.2017	4th RESEARCH DAY IT SECURITY NRW	The people factor	Hagen



eco Events 2017			
Date	Event / Organizer	Topic	Location
27.06.2017	Change IT - Digital Work Day	New Work	Cologne
27.06.2017	Conversations with Policy-makers	Key technologies – Research for innovations in the BMBF (Federal Ministry for Education & Research)	Berlin
28.06.2017	CG Security/EuroCloud	We're in the cloud – but secure?!	Cologne
04.07.2017	CG Names & Numbers: 1st Domain stammtisch.nrw	Meeting of the Stammtisch (regular informal meet-up)	Cologne
30.06.2017	nrw.uniTS – IT'S Breakfast	Information security for SMEs	Bochum
20.07.2017	Technology Drivers in Bavaria	Guests of noris network AG	Aschheim
28.07.2017	nrw.uniTS – IT'S Breakfast	Blockchain in healthcare	Bochum
24.08.2017	CG Leaders Meeting	Meeting of the Competence Group Leaders	Berlin
24.08.2017	eco Summer Party	Networking BBQ	Berlin
25.08.2017	nrw.uniTS – IT'S Breakfast	Blockchain – potential and uses	Bochum
30.08.2017	nrw.uniTS	Workshop – CIMA (Cyber Security Industry Market Analysis)	Bochum
04.09.2017	WIRED Future Breakfast & Impulse	New Work, Blockchain, Smart	Cologne
05.09.2017	Network Policy Forum	Digital Agenda 2017 – 2021 – Network Policy Vision and Necessities	Berlin
05.09.2017	IGF-D Preparation Meeting	Internet Governance Forum Germany	Berlin
05.09.2017	nrw.uniTS	nrw.uniTS meets Trades	Aachen
19.09.2017	EU Framework for Research and Innovation	Information event on participation in European and National funding programs	Cologne
21.09.2017	CG E-Mail	DKIM best practices, list bombing, GDPR and homographic unicode characters	Frankfurt
21.09.2017	Digital Week	How does a city become smart?	Kiel
27.09.2017	DCSA 4.0	Working group meeting	Frankfurt
28–29.09.2017	Internet Security Days	Online security: Secure. Digital. Connected	Brühl
29.09.2017	nrw.uniTS – IT'S Breakfast	New, secure communication in companies' communication channels	Bochum
04.10.2017	The eco 5 Star Datacenter plus	Security & the environment	Munich
05.10.2017	Safety & Security – two sides of one coin	DC Strategy Talk in Vienna on physical, technical and logistical IT security	Vienna, Austria
16–21.10.2017	Internet Impulses Cologne	THINK & CHANGE	Cologne

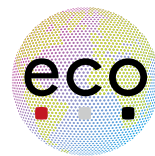


eco Events 2017			
Date	Event / Organizer	Topic	Location
18.10.2017	Internet Impulses Cologne	Start-ups - The pathology of failure	Cologne
18.10.2017	Internet Impulses Cologne	43rd media breakfast – powered by PROdigitalTV & eco	Cologne
18.10.2017	Internet Impulses Cologne	Smart cities – what's happening in the Rhineland?	Cologne
19.10.2017	Internet Impulses Cologne/EuroCloud	Analog was Yesterday – Hello Cloud!	Cologne
23.10.2017	CG Online Marketing	Predictive Targeting – know what customers want	Cologne
25.10.2017	The eco 5 Star Datacenter plus	Optimization & energy	Frankfurt
26.10.2017	EN 50600-3: Management and Professional DC Operation	Workshop and exchange on new datacenter norms	Frankfurt
27.10.2017	nrw.uniTS – IT'S Breakfast	Information security – overview and practice	Bochum
06.11.2017	CG Online Marketing: Users among themselves – Implementing Email-Marketing in Companies IV	The informal exchange of experiences amongst professional users	Frankfurt
07.11.2017	The eco 5 Star Datacenter plus	Security – Environment – Optimization – Automation	Hanover
07.11.2017	PR Communication Circle	Political PR efficiently networked	Berlin
14.11.2017	CG Names & Numbers	ICANN High Level Briefing	Berlin
16.11.2017	Provider Workshop – Anti-Abuse	Challenges for ISPs and webhosters in handling abuse	Frankfurt
16.11.2017	Expert Lunch on Youth Media Protection	Youth media protection	Cologne
16.11.2017	10th SoMedia Abend	Clubs and social media – "Wenn der Bock in die Bütt geht"	Cologne
17.11.2017	eco Schoko & Sushi	5G	Berlin
23.11.2017	CG Internet of Things: IoT Future Trends 2017	How do AI and smart assistants support us?	Cologne
24.11.2017	Annual General Meeting of EuroCloud	Annual General Meeting	Berlin
24.11.2017	Annual General Meeting of eco – Association of the Internet Industry	Annual General Meeting	Berlin
24.11.2017	nrw.uniTS – IT'S Breakfast	Ulysses or how to emerge mentally intact from a certification project	Bochum
28.11.2017	CG Names & Numbers: 2nd Domain stammtisch.nrw	Meeting of the Stammtisch (regular informal meet-up)	Bonn
11.12.2017	CG Names & Numbers Public Consultation	GDPR Domain Industry Playbook	Brussels, Belgium
12.12.2017	Blockchain PreMasters	Fields of application for blockchain applications	Cologne
12.12.2017	CG Law & Regulations	Current legal political topics and legislative initiatives at European and national levels	Berlin



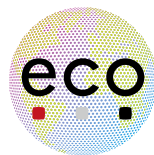
11.3 Events in Cooperation with eco

Events in Cooperation with eco			
Date	Event	Organizer	City
24–25.01.2017	Germany Connect	Capacity Conferences	Frankfurt am Main
26.01.2017	New Year Demo Day	Digital Innovation Hub Düsseldorf/Rheinland GmbH	Düsseldorf
26.01.2017	cologne IT summit_ 2017	cologne IT summit 2017	Cologne
07.02.2017	Safer Internet Day 2017 – Data Protection – Cyber Mobbing – Media Competence in Schools	Polizeipräsidium Köln	Cologne
13–17.02.2017	RSA	RSA, a Dell Technologies company	San Francisco, USA
16–17.02.2017	CG Names & Numbers @ Domain Pulse	nic.at GmbH	Vienna, Austria
11–16.03.2017	CG Names & Numbers @ ICANN58 (CCWG Accountability, ISPCP, UASG, German Evening)	ICANN	Copenhagen, Denmark
13.03.2017	Games without Borders – Gamification as a Marketing Instrument	networker NRW	Dortmund
14–15.03.2017	8th BME-eLÖSUNGSTAGE	Bundesverband Materialwirtschaft, Einkauf und Logistik e. V. (BME)	Düsseldorf
16.03.2017	TAKE AWARE	KNOWN_SENSE & MYBREEV GMBH	Neuss
20.03.2017	CG Blockchain @ CeBIT – eco Future Talk	Deutsche Messe AG	Hanover
21.03.2017	3rd Forum 3D Printing and Law	DWF Germany Rechtsanwaltsgesellschaft mbH	Cologne
27.03.2017	CG Names & Numbers @ WHD.global (Universal Acceptance night.TALK)	WHD.global	Rust
27–31.03.2017	WHD (eco Stand)	WHD.global	Rust
28.03.2017	Workshops: ePages Academy	ePages academy	Munich
29.03.2017	The IT Trends Security	networker NRW	Bochum
29.03.2017	Workshops: ePages Academy	ePages academy	Frankfurt am Main
30.03.2017	Native Ads Camp	Seeding Alliance GmbH	Cologne
25–26.04.2017	future thinking	dc-ce	Darmstadt
26.04.2017	e-Marketingday Rheinland	Industrie- und Handelskammer zu Köln	Cologne
27.04.2017	CG Blockchain @ WZ-N Night of the Networks: MO' MONEY	WZ-N	Munich



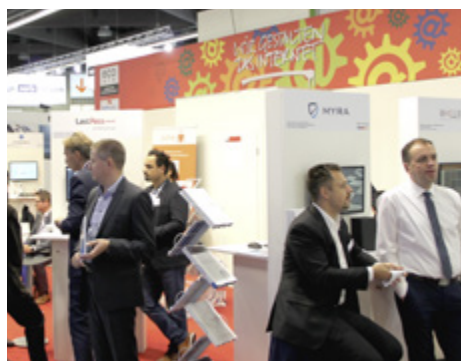
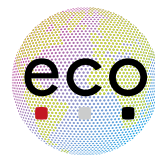
Events in Cooperation with eco

Date	Event	Organizer	City
04.05.2017	Media Revolution in Sport - A Challenge for the Law?	köln forum medienrecht e. V.	Cologne
04.05.2017	Online Security Truck Hamburg	PlusServer GmbH	Hamburg
04–05.05.2017	Ruhrsec	Hackmanit GmbH	Bochum
05.05.2017	Facebook Ads Camp	Social Marketing Nerds	Cologne
05.05.2017	Online Security Truck Berlin	PlusServer GmbH	Berlin
09.05.2017	Online Security Truck Munich	PlusServer GmbH	Munich
10.05.2017	CG E-Commerce @ Start-up Week	EGSZ Gerow Kuhlmann Schmitz Zeiss PartmbB	Dusseldorf
10–12.05.2017	DiALOG	The Quality Group GmbH	Hamburg
10–12.05.2017	CUBE Tech Fair	CUBE GMBH	Berlin
14–16.05.2017	CG Names & Numbers @ IX Domaining Europe	Domaining Europe – European Domaining Conference	Berlin
18.05.2017	CG Blockchain @ Evening Symposium: Applications and Potentials of Blockchain Technology	Fraunhofer IUK-Technologie & Gesellschaft für Informatik	Berlin
29–31.05.2017	CG Names & Numbers @ CENTR Jamboree	CENTR	Frankfurt am Main
30.05.–01.06.2017	ANGA COM	ANGA Services GmbH	Cologne
08.06.2017	RIOT Tech Festival	Jolly Roger UG (haftungsbeschränkt)	Berlin
08–09.06.2017	CG Names & Numbers @ HEXONET Reseller Days	HEXONET	Homburg/Saar
12.06.2017	Digital Summit	Bundesministerium für Wirtschaft und Energie	Mannheim
12–13.06.2017	Global Digital Leaders	Management Circle AG	Berlin
13.06.2017	CG Names & Numbers @ VDAV Industry Meet-up	[vdav] – Verband Deutscher Auskunfts- und Verzeichnismedien e. V.	Berlin
13–14.06.2017	Dusseldorf 2020 – Creating a Smart City	Digital Innovation Hub Düsseldorf/Rheinland GmbH	Dusseldorf
16.06.2017	CG Blockchain @ DISTRIBUTE Blockchain Conference	Blockchain Competence Center	Hamburg
20.06.2017	Cyber Attacks Workshop: Detecting and Fending off AETs	FORCEPOINT	Munich
20.06.2017	eTail Europe	Worldwide Business Research	London, Great Britain
23.06.2017	TECH DAYS MUNICH	Zentrum Digitalisierung.Bayern	Munich
26–29.06.2017	CG Names & Numbers @ ICANN59 (GDPR, CCWG Accountability, ISPCP, German Evening)	ICANN	Johannesburg, South Africa
28.06.2017	Cord Cutting – Internet only, instead of attractive packets?	Telecommunications Executive Circle	Frankfurt am Main



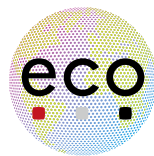
Events in Cooperation with eco

Date	Event	Organizer	City
27-28.06.2017	CG E-Commerce @ 3rd E-Invoicing Summit	Vereon AG	Wiesbaden
29-30.06.2017	Container Seminar	Loovent UG	Munich
08.08.2017	Digital Real Estate: Will everything become smart in the housing industry, buildings and homes?...	GIMI Research & deutsche medienakademie	Dusseldorf
16-17.08.2017	INTERACTIVE FESTIVAL 2017	Interactive Cologne GmbH	Cologne
24-25.08.2017	CG Names & Numbers @ 17th Meeting of the ICANN Studienkreis	ICANN Studienkreis	Stockholm, Sweden
05-06.09.2017	iCU'17 – Frankfurt	iCU Events International GmbH	Frankfurt am Main
07-08.09.2017	System House Congress Opportunities	IDG Business Media GmbH	Dusseldorf
11.09.2017	CG Blockchain @ 27th ComIn Talk "Blockchain in the Energy Industry"	networker NRW e. V.	Essen
13.09.2017	SEO Day: Shop Owner- Mastermind - "Amazon Price-War"	SEO Day UG	Cologne
13-14.09.2017	CSA @ dmexco 2017	Koelnmesse GmbH	Cologne
14.09.2017	BLUFF CITY – the Social Engineering Conference	mybreev GmbH	Berlin
14.09.2017	Kentix Trend Sniffer Day	Kentix GmbH	Langweiler
20.09.2017	Strategic Overview of the Telecommunications Market	Telecommunications Executive Circle	Frankfurt am Main
20.09.2017	OpenStack Fundamentals Workshop (Cologne)	ScaleUp Technologies	Cologne
21.09.2017	RIPE IoT Roundtable Meeting	RIPE NCC	Leeds, Great Britain
21.09.2017	BLOCKCHAIN NIGHT IN CAMP 24/7 (Digital Week Kiel)	ADDIX Internet Services GmbH	Kiel
21-22.09.2017	SMB Retail Event Commerce Summit	ePages	Hamburg
26.09.2017	OpenStack Fundamentals Workshop	ScaleUp Technologies	Frankfurt am Main
26-27.09.2017	CG Names & Numbers @ 54th CENTR Legal & Regulatory Workshop	CENTR vzw/asbl	Stockholm, Sweden
28.09.2017	5th German Datacenter Day	DC-Datacenter-Group GmbH	Frankfurt am Main
02-03.10.2017	CG Names & Numbers @ Brands & Domains - the dot-Brand Conference	DIETMAR STEFITZ	The Hague, Holland
02.10.2017	CSA @ M3AAWG	Messaging, Malware and Mobile Anti-Abuse Working Group (M3AAWG)	Toronto
03-04.10.2017	iCU'17	iCU Events International GmbH	Amsterdam, Holland



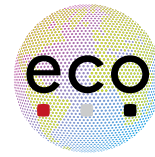
Events in Cooperation with eco

Date	Event	Organizer	City
04.10.2017	CG Names & Numbers @ CENTR General Assembly	CENTR	Brussels, Belgium
05.10.2017	IT Security Pitch Bochum	Worldfactory, HGI, eCapital und eurobits	Bochum
10–12.10.2017	it-sa – eco community stand	Messe Nürnberg	Nuremberg
12.10.2017	DIGITAL MARKETING 4HEROES Conference & Masterclass	SM:le Communication GmbH & Co. KG	Berlin
12.10.2017	eco Names & Numbers on SEO Day "Siebtlingsgeburt"	SEO Day UG (haftungsbeschränkt)	Cologne
12.10.2017	OX Summit - How to deal with hate speech, Daily Stormer & Co.	Open-Xchange	Brussels, Belgium
14–18.10.2017	MERGE!	MERGE!	Orlando, USA
16–21.10.2017	Cologne Digital	Stadt Köln	Cologne
17.10.2017	Heise Cloud Conference	heise Events	Cologne
17.10.2017	Government to Business: What digital administration services does the economy need in North Rhine-Westphalia?]init[AG für digitale Kommunikation	Cologne
19.10.2017	Container Workshop for Beginners	Loovent UG	Stuttgart
19–20.10.2017	CG E-Commerce @ EuroFactura	ferd management & consulting GmbH	Cologne
20.10.2017	VISION.LOGISTIK.3: Blockchain – Revolution in the Supply Chain?	TH Köln	Cologne
24.10.2017	Datacenter Day	Vogel IT-Medien GmbH	Würzburg
30.10.2017	Datacloud Nordic	BroadGroup	Copenhagen, Denmark
28.10.–03.11.2017	CG Names & Numbers @ ICANN60 (GDPR, CCWG Accountability, ISPCP, UASG, German Evening, N&N Steering Committee)	ICANN	Abu Dhabi, United Arab Emirates
01.11.2017	CG E-Commerce @ Ment-you! Conference	Wirtschaftsjunioren Leipzig e. V.	Leipzig
07.11.2017	Congress People & Technology	untrouble GmbH	Dortmund
07–08.11.2017	DCD Zettastructure	Datacenter Dynamics	London, Great Britain
08–09.11.2017	DISRUPTION – the Digital Transformation of the Industry	Frankfurter Allgemeine Forum	Frankfurt am Main
09.11.2017	CG E-Commerce @ PHP.RUHR – E-Commerce Lounge	CNS E-Business	Dortmund
09.11.2017	LWL Portal Master Class	LWL Portal	Berlin



Events in Cooperation with eco			
Date	Event	Organizer	City
09-10.11.2017	SMART ENERGY – Expert Conference	Ruhr Master School of Applied Engineering · Alcatel-Lucent Stiftung · FH Dortmund	Dortmund
14-15.11.2017	CG Blockchain @ Innovations Forum Blockchain Congress	Innovationsforum Blockchain c/o consider it GmbH	Hamburg
20-21.11.2017	CG Names & Numbers @ NORDIC DOMAIN DAYS	Internet Foundation Sweden (IIS)	Stockholm, Sweden
23.11.2017	Hands-on Container Workshop – Munich	Loovent UG	Munich
28-29.11.2017	Community Stand at the CLOUD EXPO EUROPE & DATA CENTRE WORLD 2017	Closer Still Media	Frankfurt am Main
04.12.2017	25h Vienna – Vienna is IT	Wirtschaftsagentur Wien	Vienna, Austria
05.12.2017	IT Security Day NRW	IHK NRW – Die Industrie- und Handelskammer in Nordrhein-Westfalen e. V.	Essen
06.12.2017	Artificial Intelligence in the Telecommunications Market	Böcker Ziemer	Frankfurt am Main
07.12.2017	Coding Club – Let's talk about Coding	Microsoft YouthSpark: Code affair	Berlin
14.12.2017	Christmas Joy	WZ-N smart business networking	Munich



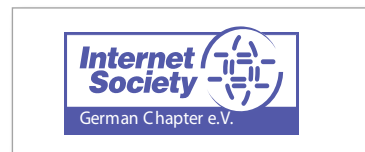


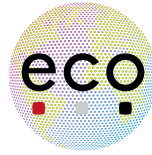
12. Memberships and Cooperation

12.1 Membership in Pivotal Committees

As an association, one of eco's most important tasks is the representation of its members' interests in politics and in both national and international committees. Along with the main office in Cologne, eco has its own Capital Office in Berlin and representation in Brussels, so that it can be in situ at all relevant political decision-making processes.

eco represents the interests of its members in these committees and initiatives, among others:





12.2 Young Digital Economy Advisory Board

The Young Digital Economy Advisory Board (YDE) provides first-hand advice to the German Federal Minister for Economic Affairs and Energy on current questions concerning young digital companies and start-ups in Germany. The board is an important link between the industry and politics, as it enables direct and practice-based dialog to take place. Since the YDE was first launched in 2013, eco CEO Harald A. Summa and DE-CIX Chief Technology Evangelist Arnold Nipper have both been core members.

Starting in January 2017, the YDE advised the then new Federal Minister for Economic Affairs and Energy, Brigitte Zypries. At the end of her term, she expressed in a letter her heartfelt thanks to the Advisory Board for its involvement and its work, declaring: "In the past legislative term, the Advisory Board on the Young Digital Economy established itself as an important instrument for dialog between politics and the German start-up scene. It made a significant contribution towards making Germany more founder-friendly.

"I would particularly like to mention its strong support during the establishment of a new stock exchange segment for start-ups. The important topic of the future, digital education, was also made accessible to the wider public by the Advisory Board via their co-initiation of the 'Calliope' project and the 'Gründerstunde' ['Founder Hour']. Our joint engagement in recruiting girls and young women for the foundation of a digital start-up was also a matter particularly close to my heart."

On 6 September 2017, the YDE presented its recommendation paper for the German federal election and the next legislative term. At the center of their #MEILENSTEINE [#milestones] were the requests of the Advisory Board members regarding topics and measures for the "Big Picture" and, with this, improvements to the general framework conditions for young start-ups in the digital industry. In her letter of thanks, Brigitte Zypries stressed that: "With the development of the #MEILENSTEINE for a young, digital Germany, you have already laid the foundation for collaborative work with the next federal government."

For more on the Meilensteine (in German), see: go.eco.de/bjdw_meilensteine

Further information on the YDE Advisory Board is available at: go.eco.de/bjdw_en

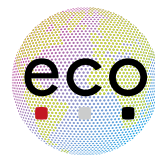
12.3 Cooperation Partners

eco works intensively with other renowned cooperation partners. These include, among others:

- Afnic
- Bundesverband IT-Mittelstand e.V. (BITMi)
- CENTR
- CMS Garden e.V.
- Digital Hub FrankfurtRheinMain e.V.
- Digitale Stadt München e.V.
- game – Verband der deutschen Games-Branche e.V.
- Hamburg@work e.V.
- i2Coalition – Internet Infrastructure Coalition
- IfKom – Ingenieure für Kommunikation e.V.
- LSEC – Leaders In Security
- media:net berlinbrandenburg e.V.
- mib – Mittelstand in Bayern
- networker NRW e.V.
- Signal Spam
- TeleTrusT – Bundesverband IT-Sicherheit e.V.

Further information on the partner network is available at:

www.eco.de/eco-partner



13. eco Staff 2017



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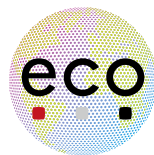
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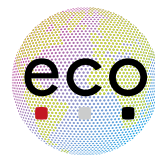
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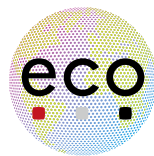
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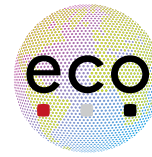
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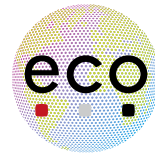
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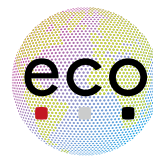


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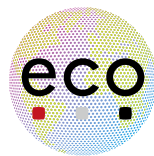


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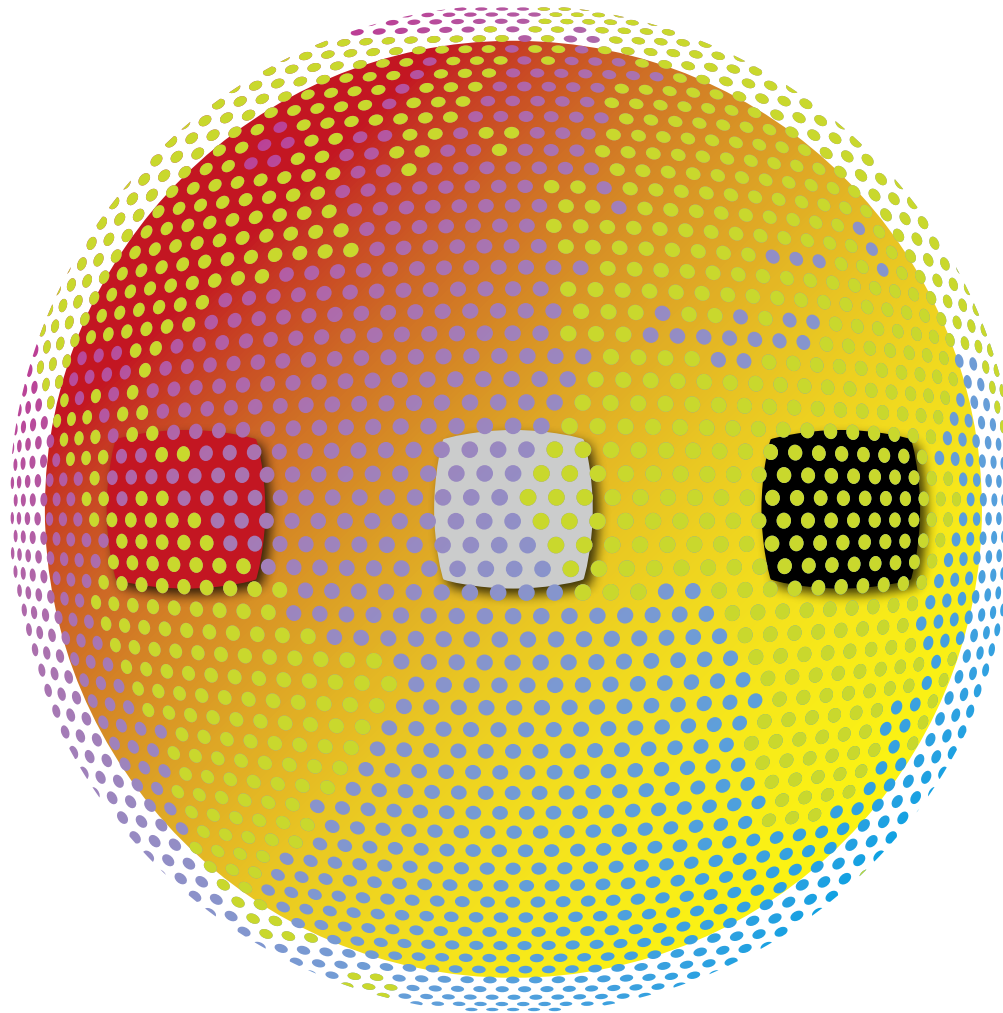
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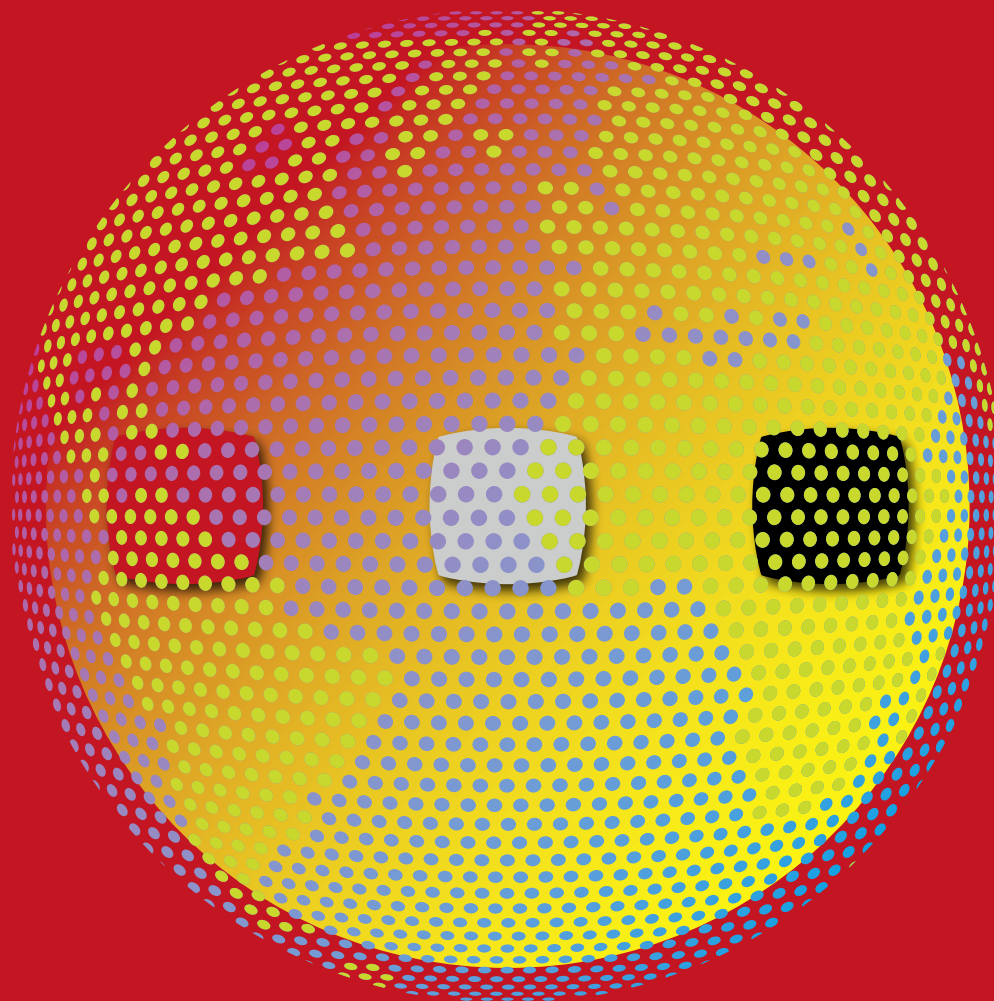
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