

Ericsson Nikola Tesla Group General Report

ANNUAL REPORT ON GROUP PERFORMANCE



Photo: Mara Bratoš

Dear readers,

We live in an exciting time of fast development of the Networked Society, in which ICT has a key role in transformation processes. In the Networked Society, industries and individuals have the opportunity to give their full creative contribution. Through networking, due to fast flow of information and knowledge, innovation potentials are increased to a great extent. Ericsson actively encourages and gives its contribution to the realization of the Networked Society vision, through its Networked Society strategy.

PARTNER FOR DIGITAL TRANSFORMATION OF SOCIETY

The technological foundations of the future Networked Society include the fifth generation of mobile networks (5G), connecting anything that benefits from being connected (Internet of things - IoT) and cloud computing as virtual space for sharing ICT resources. Through technological leadership, innovative company culture and social responsibility, our long term goal is to enable further development of the society of equal individuals and preserve the environment.

Ericsson Nikola Tesla Group actively contributes to global technological development and represents a relevant partner in the digital transformation of society through innovative ICT products, solutions and services. We base our sustainable development on collaboration and trust with all stakeholders (customers/partners, employees, society and shareholders). In our processes and activities, we apply the highest global standards of work and business, as well as principles of corporate governance.

The energy and effort invested in creating innovation climate and encouraging innovations in Ericsson Nikola Tesla is reflected through the development of new products and solutions in line with the Network Society Strategy and numerous awards to individuals and teams. At the Ericsson Global Network Design and Optimization forum, the idea SNACK (Social Network Application Coverage Kit) won the award for best innovation. SNACK addresses the problem of optimizing the telecom network settings, bearing in mind the end user experience. The solution for Automated Aerial Radio frequency measurement by using drone for radio access network measurement and optimization was also presented with an award.

BUSINESS SITUATION IN MAJOR MARKETS

In 2015, Ericsson Nikola Tesla Group continued to show stable business results. During the year, we continued to work on a number of strategic projects and initiatives relying on technology leadership, knowledge of our employees and partnerships with the customers. A significant increase in revenue was recorded in Ericsson market, due to new responsibilities within global corporation in our research and development center, global and regional services centers, customer solutions



centers as well as increased volume in managed services. This neutralized the revenue decrease in other markets. We maintained the position as the Croatia's leading ICT exporter and the leading exporter of knowledge. In 2015 we continued hiring and employed a total of 434 experts in Ericsson Nikola Tesla Group. The number of employees working in research and development surpassed 1,000 and at the end of 2015 Ericsson Nikola Tesla Group had a total of 2,789 employees.

In other markets, sales revenue decreased as some projects and contracts had been postponed. The factors that slowed down certain processes are slow economic development and, in some markets, political uncertainty. An additional challenge for our business performance is strong competition and global customers/operators centralized procurement and consolidation.

On the other hand, new business opportunities are created through the convergence of operators and industry, and their transformation through mobility, broadband and cloud. Our markets recognize an increasing importance and the role ICT has on transformation processes in business and society. Our significant advantage is a strong position and customers' trust we enjoy in local and export markets, thus empowering us to be the leading ICT transformation partner to our customers. Summarizing the above mentionend, Ericsson Nikola Tesla Group main operational risks are:

- Impact of negative economic trends and political uncertaintly on the demand and prices of our products and services
- Reduction and a slow-down in capital investments of operators and the delays in strategic investments in public and private sectors
- Dependence on telecommunication market trends (the number of users, the use of new services)
- o Industry consolidation
- Strong competition and the entry of new IT companies in the telecommunications market
- Negative impact of exchange rate fluctuations on business results, given that most of our revenue is in euro and US dollars.

KEY PERFORMANCE INDICATORS

Almost all key performance indicators in 2015 showed a positive trend. Sales revenue increased by 3.8% yearover-year and amounted to MHRK 1,364.3. Operating profit increased by 12.2% year-over-year, while net profit increased by 4.6%. Gross margin is slightly lower year-over-year, as a result of change in business mix and a continuous price pressure. Our continuous focus on cost efficiency brought solid cost savings. A strong



Transforming challenges to business opportunities

cash flow from operating activities, allowed build-up of the total cash balances, including short term financial assets to MHRK 287.1.

In 2015, the annual Employee Engagement Survey (Dialog) confirmed the Company's motivating culture and strong employee engagement. Furthermore, the annual Customer Satisfaction Survey confirmed a high level of satisfaction among our key customers/partners.

OUR STRATEGIC INITIATIVES

In line with our strategy, we worked on various projects and initiatives focused on business development in all markets and profitability improvement through cost efficiency and business excellence.

Through the initiative that focuses on business growth in the domestic and export markets (without the internal Ericsson market), we focused on key deals, strategic areas and competence development.

During the year, we realized several key deals. In mobile network segment, these are business deals/contracts with Vipnet and Kosovo operator IPKO, which allowed us to keep strong vendor position for these operators. In ICT solutions for Industry and Society segment, I would like to highlight contracts regarding the upgrade and expansion of Joint Information System of Land Registry and Cadaster, and maintenance and upgrade of the Republic of Croatia Central Healthcare Information System (CEZIH). For the Ministry of the Interior of the Republic of Croatia for Operational and Communication Center we implemented the solution for assistance in Key performance indicators









emergency situations. In CIS market, new business opportunities emerged in operators' segment and in eHealth segment, with two new customers in Armenia and Kazakhstan.

An initiative focused on business growth in internal Ericsson market resulted in an increase in business volume and new responsibilities. We took over the responsibility and also became the largest development center for the CUDB (Centralized User Data Base) node design. Our experts had an important role in developing one of the most significant Ericsson projects in 2015, HDS 8000 (Hyperscale Datacenter System) and became the Ericsson competence hub for this solution. Radio Development Unit gained the responsibility for LTE development. In Services organizations, new global responsibilities were obtained for RAN, OSS and Cloud as well as global responsibilities for GRAN (GSM radio access network) network design & optimization and BSP (Blade Server Platform) customer support.

As regards the projects co-financed by the European Union, during 2015, we completed one project and worked on implementation of five projects. All projects are in line with our strategy related to development of new products and technologies with the aim of approaching the market needs.

2016 STRATEGIC FOCUS

Our Networked Society strategy remains unchanged. We want to be the leading ICT transformation partner for our customers, recognised as a company that attracts, develops and retains talented employees, leads and drives positive changes in the society and creates value for shareholders. Our aim is to strengthen the position / sales in core business (Radio, Core and Transmission, Telecom Services) and establish leadership in targeted growth areas (IP Networks, Cloud, TV and Media, OSS and BSS, and in Industry and Society segment - health, public safety, transport, state-owned companies).

We continued the partnership with universities and research institutions by implementing joint projects. During the last 15 years, more than 600 students from universities in the country and abroad participated in the Ericsson Nikola Tesla Summer Camp, working on more than 400 innovative projects. In this way, we will continue to find top talents and strengthen our position in the demanding global market.

Considering the business results, in combination with our ongoing strategic initiatives, we are well positioned to create future value for our customers/partners, shareholders, employees and society.

The long-term fundamentals in the industry remain attractive and we are ready for another challenging year with full focus on transformation, performance and value generation.

All other data, which are required to be an integral part of the annual company report, pursuant to Article 250a of the Companies Act, can be found in the enclosed 2015 Annual Report, comprising of the General Report, Social Report and Consolidated Financial Statements as at December 31, 2015.

Lora

Gordana Kovačević President Ericsson Nikola Tesla d.d.

BUSINESS RESPONSIBILITIES AND ACTIVITIES

ERICSSON NIKOLA TESLA D.D.

Ericsson Nikola Tesla is the leading regional provider of ICT solutions that drives business opportunities and profitable sales growth through innovative approach and thought leadership. It creates new value, together with its customers by combining technology leadership, excellence in services, regional presence and e2e abilities.

Company's core business activities are the following:

- o Research and development
- o e2e communication solutions
- o ICT solutions in Industry & Society segment
- Marketing and sales network.

Ericsson Nikola Tesla:

- Creates innovative ICT solutions that improve people's lives and create new value for both business and society
- Encourages the prosperity of its environment by ensuring an access to modern information and communications systems and technologies
- Operates in the area of advanced technologies, and plays an active role in e-projects
- Is among leading exporters in Croatia, and number one when it comes to exporting knowledge
- Provides modern test environment with a range of innovative solutions that enable testing the networks of the most significant global operators, with minimal energy consumption.

ERICSSON NIKOLA TESLA SERVISI D.O.O.

Ericsson Nikola Tesla Servisi core business activity is the provision of services related to network infrastructure build and maintenance.

Company's activities:

- Consultancy services, including designing, geodetic activities, control and resolving property-legal affairs
- o Building and maintaining telecommunication network
- o Controlling and operating the network
- Mounting telecommunication equipment; powersupply and cooling of telecommunication system.

With regard to the portfolio of services and the experience in telecom project management, the company can offer the service on a turnkey basis, which accounts for a high quality of the service, and makes the company more flexible in adjusting to all the user requirements.

LIBRATEL D.O.O.

Libratel core activity is providing telecom services; installation, putting into service and upgrade of telecom equipment (core and access network).

ERICSSON NIKOLA TESLA BH D.O.O.

The company operates on Bosnia and Herzegovina market, and delivers products and services offered by Ericsson Nikola Tesla Group.

By 2019









PRODUCTS AND SERVICES

Ericsson Nikola Tesla Group provides its customers and partners a complete Ericsson portfolio of communications products, solutions and services as well as products, solutions and services of selected providers in the following segments:

 High performance networks (including IP networks)

Operator and industry roles

- Services focused on network evolution and efficient management
- Solutions with leading Operations and Business Support Systems (OSS/BSS) and media distribution
- Strong support to Ericsson vision of the Networked Society by delivering solutions for selected Industry & Society segments and M2M solutions
- Telecom solutions virtualization and transformation of companies' business into a cloud computing solution.

Operator



Ericsson Radio Dot System



Users, Content and Devices

SALES AND MARKETING

Ericsson Nikola Tesla Group sales revenue amounted to MHRK 1,364.3, an increase by 4 percent year-overyear. In total sales revenue, domestic market accounted for 22 percent, services to Ericsson accounted for 60 percent, while other export markets accounted for 18 percent.

DOMESTIC MARKET

In the domestic market, a total of MHRK 293.5 sales revenue was realized, 12 percent decrease year-overyear, as some projects and contracts were prolonged. The market environment is characterized by strong competition, consolidation and centralization of procurement by global customers/operators.

During the year, the collaboration with strategic partner Vipnet on the modernization of radio access and transmission telecommunications networks, as well as on increasing the 3G and 4G networks capacity, continued. The testing of new functionalities in various core and access network areas is ongoing. Those functionalities contribute to the increased quality and new services for end users.

Business collaboration with Hrvatski Telekom (HT) was marked by continuing the implementation of MPLS (Multi-Protocol Label Switching) architecture in core and access IP network. This project was further strengthened and expanded by delivering solutions for data security in IP networks. Business collaboration began with Iskon on modernization of IP core telecommunication network, as well as with Optima Telekom in the area of IP core infrastructure maintenance. The year was also marked by a successful delivery of telecommunication infrastructure build and maintenance services to HT.

We collaborate with Tele2 mobile operator on modernization projects in core and transmission network in order to expand the existing capacity and to introduce new functionalities. Furthermore, we continuously provide support and maintenance services of the entire telecom network. During 2015, the project for increasing core network infrastructure reliability was finished, thus enabling the operator to efficiently introduce new services of the Networked Society.

In the ICT solutions for Industry & Society area, informatization in eHealth continues. A contract was signed regarding maintenance and upgrade of the Central Healthcare Information System of the Republic of Croatia (CEZIH). The implementation of the first national platform for mHealth was completed as well as informatization of processes regarding eMedical Aids and eHome Care/ePhysical Home Therapy. Within the eHospitals project, several medical institutions were interconnected. During Q1 2016, a contract was signed regarding the upgrade and expansion of the Joint Information System of Land Registry and Cadaster (JIS), thus successfully continuing the modernization of the land registry and cadaster system. The solution for assistance in emergency situations for the requirements of Operational and Communication Center (OKC) of the Ministry of the Interior of the Republic of Croatia was implemented. Moreover, the contracts were signed for further maintenance of Hrvatska elektroprivreda (HEP) communication network, as well as maintenance of 112 system for the National Protection and Rescue Directorate.





Sales by market from 2011 till 2015 (in MHRK)

	2011	2012	2013	2014	2015
Domestic market	263	263	341	334	294
Export markets	419	1.093	435	353	249
Services to Ericsson	484	552	569	628	821
Total sales	1,166	1,913	1,345	1,315	1,364

EXPORT MARKETS

In the export markets (except Ericsson market), sales revenue amounted to MHRK 249.4, a decrease by 29 percent year-over-year. Slow economic development and political uncertainty in some markets impacted the level and the dynamics of the operators' investments.

In the markets of Southeast Europe (Bosnia and Herzegovina, Montenegro and Kosovo), sales revenue decreased by 15 percent year-over-year, and amounted to MHRK 176.7.

In Bosnia and Herzegovina market, the collaboration continued with BH Telecom and HT Mostar operators in the area of fixed and mobile networks modernization, with an emphasis on mobile broadband. With BH Telecom, a contract was signed regarding the upgrade of radio access network, as well as the upgrade and expansion of package core network capacity.

In Montenegrin market, with Crnogorski Telekom, the activities of expansion and upgrade of radio access network for all three technologies (2G, 3G, LTE) were performed. Moreover, we successfully demonstrated the LTE Advanced Technology, which enables higher network capacity and enhances user experience with data transfer downlink speed up to 300 Mbps. For the requirements of the Ministry of the Interior of Montenegro, a new solution for 112 emergency calls was implemented.

In Kosovo market, with IPKO operator, we signed a contract on the modernization of radio access and microwave network, with a focus on mobile broadband expansion (LTE technology), thus strengthening our position on this market.

In CIS market, sales revenue amounted to MHRK 72.7, a decrease by 50 percent year-over-year. The activities of fixed and mobile networks modernization with several key customers are ongoing. New business opportunities emerged in the operator and eHealth segment with two new customers in the Republic of Armenia and the Republic of Kazakhstan.





Export markets - highlights



SERVICES TO ERICSSON

In the Ericsson market, sales revenue amounted to MHRK 821.4, an increase by 31 percent year-overyear. Ericsson Nikola Tesla Servisi d.o.o., a daughter company of Ericsson Nikola Tesla d.d., contributed to this market segment with MHRK 181.8.

Ericsson Nikola Tesla Research and Development Center (R&D) continued its successful activities. The application and platform software development for mobile systems within the development units (DU Radio, PDU Mobile Core, PDU User Data Management and PDU Infrastructure & Hardware) went as planned, as well as development and service activities for fixed network installed base. The transfer of competences and responsibilities for several work domains was completed. In this way, we became the biggest development center for CUDB network element (Centralized User Data Base) and competence center for HDS 8000 solution (Hyperscale Datacenter System). The unit for radio access network development was granted the responsibility for development in the area of LTE.

R&D Center was again assessed as high-quality and a reliable research and development center in Ericsson Corporation, which is a proof of excellence and innovativeness over many years and it represent a foundation for future development and new responsibilities. In line with the strategic plans, the development of competencies required for new businesses activities begun.

Service Delivery Center experts were engaged in numerous projects for the following customers: A1 Austria, BASE Belgium, BMW Germany, Deutsche Telekom Germany, Docomo Japan, EE UK,



O2 UK, Orange France, Orange Poland, PostLUX Luxembourg, Polkomtel Poland, P4 Poland, Swisscom Switzerland, Salt Switzerland, TeliaSonera Sweden, T-Mobile USA, Telecom Slovenije Slovenia, Telcel Mexico, Translink Netherlands, Vodafone Czech Republic, Vodafone Ireland, Vodafone Netherlands and Vodafone UK. The activities regarding IPTV project for Vodafone Ireland, LTE optimization for O2 UK and Telcel Mexico, VoLTE project for Deutsche Telekom Germany, PostLUX Luxembourg and Polkomtel Poland, VoWiFi project for P4 Poland and Salt Switzerland, OSS project for PostLUX Luxembourg and Orange Poland, OBS transformation for T-Mobile USA, Cloud project for Orange France and Docomo Japan, as well as MPS (Mobile Positioning System) for Polkomtel Poland should also be highlighted.

The Centre's experts also provided e2e solutions and consulting services for Deutsche Telekom Germany, Mobility Saudi Arabia, MTN South Africa, Orange Botswana, Slovak Telekom Slovakia, Turkcell Turkey, Vodafone Netherlands, T-Mobile Czech Republic, etc.

Intensive work is ongoing on the development and implementation of software tools for mobile networks management and optimization, such as: Smart Laptop, Ericsson Design Optimization Service, Smart Rollout Support, Rehoming Automation Management Tool, Radio Network Proposal Tool and other.

The Global Competence Domain for RAN & OSS experts worked on several Ericsson's strategic projects. We would like to highlight the partnership with OTT companies (Facebook in Thailand and TenCent in Hong Kong) for optimization of end user experience and creating global e2e optimization team. Our experts continued with the development of the M2M DM component as a part of Ericsson Service Enablement Platform, which is intended for IoT solutions. Also, our teams participated in numerous IoT projects across the world, using Service Enablement Platform in the area of automobile industry, traffic management, heathcare and smart cities.

Ericsson Nikola Tesla Servisi d.o.o., service provider in telecommunication infrastructure build and maintenance (managed services), started the transformation process with the aim to align the Company with Ericsson's global models and standards for providing managed services. The state-of-the-art Network Operations Centre in this part of Europe was opened.



SCIENTIFIC AND RESEARCH ACTIVITIES

For over 60 years, Ericsson Nikola Tesla d.d. has had a registered private research institute. In 2015, the Agency for Science and Higher Education carried out a re-accreditation of our Institute and issued a confirmation for its continued activity. In Ericsson Nikola Tesla, scientific and research activities are in line with long-term strategic goals of business development. They are related to the development of new products and research of new processes and technologies, as well as the development of new functionalities for the requirements of the Networked Society.

The driving force of scientific and research activities is the Research and Development Center, with its research and innovation unit and its development activities for the major Ericsson Design Units: Core systems and Radio systems, as well as Industry & Society. The Center collaborates closely with other business units in the Group, R&D centers in the Corporation, and universities in Croatia and abroad.

An important part of research activities is related to the participation in projects funded by the EU. The Company finished a three-year project, named CloudScale with the aim to ensure scalability and flexibility of applied systems on the IT cloud platform. S-CASE project which will enable the researchers of new cloud services to quickly transform their requests into a prototype of cloud service - and eWall project, which aims to develop an electronic wall that will help senior and infirm people to gain greater independence and a better quality of life in their own homes, were in the second year of their implementation. The eWall project is the next step of a previously finished project, universAAL - UNIVERsal Open Platform and Reference Specification for Ambient Assisted Living. Its major objective is to make ideas, elaboration and realization of new, innovative services intended to improve everyday human life in the Ambient Assisted Living (AAL) environment technically feasible and economically achievable.

The Company continued its successful collaboration with the Faculty of Electrical Engineering and Computing, University of Zagreb in the field of research. Within the framework of this collaboration, an important place is dedicated to the M2M communication project, as it is rather promising. The Company also continued its research on network topology emulation/simulation systems in testing domains, and especially on artificially generated traffic load. A part of the obtained results has already been implemented in the virtual network test equipment that is used in the Company and in Ericsson companies across the world. Joint efforts have been put into the analysis of telecommunication operators' data together with the information on users, which can be obtained from social media.

Additional aspects of research activities were focused on further research of technology for fast and efficient writing and implementation of software at minimum costs, named Model Driven Development (MDD). The research team highlighted the issue of analyzing a large amount of data.

We continued our collaboration with educational institutions by jointly organizing the 15th Ericsson Nikola Tesla Summer Camp, in which 62 students and 50 mentors from Croatia and abroad participated. This traditional gathering of students was organized in collaboration with the Faculty of Electrical Engineering and Computing, University of Zagreb (FER); Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split (FESB); Faculty of Engineering, University of Rijeka (RITEH); Faculty of Electrical Engineering, Josip Juraj Strossmayer University in Osijek (ETFOS); Faculty of Electrical Engineering, University of Sarajevo (ETFSA); Faculty of Electrical Engineering, University of Tuzla (ETFTZ); Faculty of Economics and Business, University of Zagreb (EFZG); Faculty of Geodesy, University of Zagreb (GEOF); Faculty of Humanities and Social Sciences, University of Zagreb (FFZG); Faculty of Science, University of Zagreb (PMFZG); Centre for Croatian Studies, University of Zagreb; Faculty of Science, University of Split (PMFST); Business Academy Rijeka (PAR); College for Information Technologies (VsITe); and Zagreb University of Applied Sciences

Summer Camp topics were the following:

- o Studying and solving the selected challenges
- o Working on applications and demos for the customers
- o Internal tools designated for future requirements
- Extended activities related to the proposed solutions and ideas, obtained through the innovation process.

During the year, two EU co-financed projects within Regional Competitiveness operational program 2007-2013 in the framework of RC.2.2.08 call "Capacity Building for Research, Development and Innovation" were active. Both projects with the total worth of almost MHRK 11 lasted for 16 months. During that period, project participants have shown that effective collaboration between scientific and research community and business can produce creative and useful results, the value of which is acknowledged abroad as well. Project beneficiary of the "Integrated hardware-software system for environmental parameters monitoring in microlocations" project (IPPSO) is the Institute for Medical Research and Occupational Health, and beneficiary of the project "Information and communication technology for generic and energyefficient communication solutions with application in e-/m-health" (ICTGEN) is the Faculty of Electrical Engineering and Computing (FER). Ericsson Nikola Tesla was the industry partner in both projects.

DIGITAL TRANSFORMATION – THE BIGGEST MODERN DRIVER OF PROGRESS

The last four decades clearly prove that modern ICT is the most powerful and most efficient driver of change, ever since the Industrial Revolution. The changes have been especially accelerated in the last five years, and in the following period, we expect their exponential growth. ICT convergence has already enabled a powerful transformation of various sectors, opening a way for them to innovate. So far, the change has been most evident in communications and media, however, similar development takes place in the field of education, transport, healthcare, government administration, tourism, etc. As technology development continues to accelerate, many other sectors will experience this change as well; whether by the participants' choice, or due to circumstances. With the help of advanced ICT solutions, i.e. digital transformation and efficient business strategies, the companies, or even entire economy sectors, can turn their risks into new possibilities. However, we should be aware of the fact that there is no single approach to all cases. Digital transformation is a change in behavior, culture and economy; a step towards the Networked Society, to which almost every form of human action should be adjusted to. Therefore, in this time of rapid changes, the lack of action is actually the biggest threat.

It should be highlighted that last fall, at the United Nations Sustainable Development Summit 2015, 17 Sustainable Development Goals were adopted, with the aim to end poverty, protect the planet and ensure prosperity for all by 2030. Many of these goals include technology as a way of achieving these goals. Therefore, it is quite understandable why Ericsson Corporation vision of the Networked Society is based on introducing mobile broadband access globally, as an important link in a comprehensive digital development, but also in ensuring diversity, delivery of financial and education services to the poorest, as well as in many other responses to most prominent humanitarian needs of today.

LTE AND 5G

LTE and 5G are key technologies for introducing mobile broadband access. Ericsson enables the biggest amount of global LTE traffic, is present in all high traffic LTE markets, and is also top ranked according to LTE share in 100 world largest cities. Therefore, it is no surprise that the renowned analytics agency Gartner, in its annual report which estimates the end-to-end LTE network infrastructure providers, including radio access and core networks, as well as











their ability to perform and the comprehensiveness of their offer, declares Ericsson as LTE industry leader for the sixth consecutive time. Ericsson portfolio includes technologies such as LTE-Advanced with FDD (Frequency Division Duplex) and TDD (Time Division Duplex), Network Function Virtualization (NFV), integrated management and modular Ericsson Radio System with integrated transmission. Also, it is important that Ericsson actively cooperates with many partners in ecosystems regarding vertical industries, such as public safety, transport and connected vehicles, data transfer between devices (M2M) and Internet of Things (IoT).

Ericsson has also presented its new initiative for 5G air interface that improves reliability and performance, and offers a genuine response to the demands of Internet of Things and Internet of Skills applications, as well as further expansion of smartphone use. Nowadays, LTE smartphones receive data from one cell at a time, and use numerous different techniques that ensure seamless connection while switching base stations. However, with the smartphone numbers doubling, and an eightfold increase in traffic by the end of 2020, today's mobile technology will not be sufficient to maintain high quality connectivity. This will be especially affected by an increasingly large number of connected things, i.e. IoT, which demands an increase in connections in mobile network. The solution is only a seemingly simple idea that 5G mobile device connects to several 5G cells simultaneously. This enables the device to maintain high quality connection with 5G network when changing cells. It also enables the transmission of several different sets of data signals (Multiple Input Multiple Output, or MIMO, streams) to the mobile device over the same radio frequency channel. This is called distributed MIMO, and it can increase downlink throughput by up to 100%.

Collaboration and Standardization

5G will involve the entire future communication eco-system, from devices to mobile access, IP core and the cloud. Thus, the Corporation is aware that collaboration is more important than ever and therefore Ericsson 5G test networks in Stockholm (Sweden) and Plano (Texas) are open to mobile operators, partners in ecosystem, academia, technological media and analysts, with the aim to share the future mobile communications experience. Ericsson leads EU 5G standardization projects, and will continue to do so, among other, by coordinating METIS-II EU project. This project is dedicated to the development of comprehensive 5G radio system design, as well as creating 5G roadmap, and it also has a key coordinator role, as it gathers the main actors with the aim to improve 5G system architecture. This project gathers a strong international consortium of 23 partners from all

regions with significant 5G R&D initiatives from China, EU, Japan, South Korea and the USA, and it includes majority of the most significant global providers, operators and key reasearches in this area. METIS-II will ensure a platform for joint activities in line with the regulatory and standardization bodies, and is a continuation of successful METIS project, the first integrated 5G project, also initiated and coordinated by the Ericsson Corporation.

By achieving this project's goals, a unique opportunity opens up for global consensus, consolidation of the overall framework of mobile, as well as vertical industries' needs, and sharing results with relevant bodies, fora and standardization groups across the regions.

Ericsson is also the technical coordinator of mmMAGIC project, focused on developing a new radio interface and designing new concepts for mobile radio access technology in frequency specter from 6 to 100 GHz.

However, the most media attention was given to strategic partnership between Ericsson and Cisco, focused on creating the new generation of futureready networks. The partnership includes the best from both companies: routing, data centers, networking, cloud, mobility, management and control, and global service capabilities. Ericsson and Cisco (the leader in IP-networking), will realize leadership in the end-to-end in the network architecture segment for 5G, cloud and IP, and Internet of Things.

In brief, collaboration, and, of course, standardization, are necessary for connecting on a global scale. In several generations of mobile networks, it was precisely the standardization that represented the foundation that enables networks worldwide a smooth joint operation and users worldwide an equal user experience. Selecting 5G as the global standard is a crucial factor for digitalization of various industries, for IoT and broadband access anywhere.

Optical Networks' Infrastructure

As mobile broadband penetration and speeds increase, so must the need for high-speed transport links to radio sites. As a result, fiber infrastructure is becoming more prevalent in the Radio Access Network (RAN). Integrated photon technologies change the future of optical communication industry, promising reduction of costs, energy consumption and decreasing the impact on the environment. 5G transport and networking for the Networked Society is the driver for such optical investment. The aim of this collaboration, in which more than 100 researchers are involved, is to find cost-effective solutions for mobile Fronthaul and Backhaul in the RAN and ultrahigh speed data center interconnectivity. Therefore, Ericsson and Scuola Superiore Sant'Anna in Pisa, a center of excellence in the area of optical networks and technologies, collaborate on introducing advanced integrated photonic components and optical solutions for enabling highspeed connectivity in an increasingly connected world.

In addition, as regards research in this segment, Ericsson collaborates with the universities King's College London and Technische Universität Dresden, as well as with many other partners in ecosystems for vertical industries, such as transport and connected vehicles, machine-to-machine data transfer and the Internet of Things.

The key to digitalization lies in the ways in which various industries use 5G to transform their business. Therefore, various business systems will use the parts of network meeting the specific requirements of every industry. 5G radio access, core networks and managing complex ICT systems will support various use cases of this technology and allow us to use its maximum potential. From broadband connectivity in large public areas, to remote automation of machines in dangerous work environments, such as mines; 5G already has use cases that can help business and are future-ready. Among main 5G technology advantages are its reliability and low power consumption, which will enable business systems to digitalize efficiently and cost-effectively.

ERICSSON INNOVATIONS ACCELERATE IOT ADOPTION

Enhancements to global cellular networks support mass-market adoption of Internet of Things (IoT). For the last 20 years, a global network has been created, on which the Internet of Things is based on, and it ensures coverage, safety and reliability, necessary to connect and provide "intelligence" to things that surround us. Ericsson takes part in all Internet of Things transformation levels, from implementation to business processes, platforms, cloud and connection via radio network.

Although there are already 230 million cellular M2M subscriptions for IoT devices, challenges, such as IoT devices costs, their battery life and mobile network coverage outside populated areas and deep inside buildings, interfere with the full potential for adopting these kinds of services. Therefore Ericsson, in collaboration with partners, has created a new software called IoT Networks Software 16B that offers a range of benefits, particularly related to device cost, extending battery life, new functionalities and better indoor coverage.



Standardization and interoperability are crucial for the complete success of Internet of Things. By collaborating with companies, such as Intel and other IoT ecosystem partners, Ericsson strives to ensure an efficient and synchronized development of devices and networks in this ecosystem. Thus, the Corporation accelerates the Internet of Things development on the existing networks with the aim of ensuring global foundation for a number of applications aimed at users, enterprises, and government institutions: from smart cities to connected farms. In collaboration with our key customers and partners in the ecosystem, such as Intel, we jointly create comprehensive solutions for IoT network and devices that are characterized by reliability, global scalability, as well as standard-based systems and services.

BIG DATA AND SMARTPHONES

Although smartphones are an important part of our everyday lives and offer numerous possibilities, such as entertainment, games or taking photos, we still primarily use them to communicate. More than 30 percent of time spent using smartphones is spent on voice communication, instant messaging, Voice over IP (e.g. Skype), e-mail, and social media.

Nowadays, 40 percent of total global mobile data traffic is realized through Ericsson networks, which is double than Ericsson's closest competitor. According to the latest issue of Ericsson Mobility Report, by 2020, advanced mobile technology will be globally ubiquitous, with 70 percent of global population using smartphones, and 90 percent covered by mobile broadband networks. The use of smartphones will be more than doubled by 2020, and 80 percent of the overall mobile network data traffic will be realized through smartphones. Influenced by video streaming services and an increasing share of various video content on web, video traffic will grow by 55 percent annually by 2020.

Ericsson experts claim that such strong growth in the area of advanced mobile technology and data traffic, on the surge of even greater mobile connectivity and the number of smartphones, will make the current big data revolution comparable to the arrival of floppy disk.

This exponential growth in smartphone market and a creative look at the broader picture brings brand new, until recently truly unimaginable possibilities to once traditional telecom industry. A good example is Frost & Sullivan Award for Enabling Technology Leadership for support in creating a global standard for m-commerce, awarded to Ericsson in 2015. The mentioned part of Ericsson portfolio provides technology, platform, and support to partners in a very complex and fragmented m-commerce market. Therefore, Ericsson m-commerce solutions include the so called Mobile Wallet and corresponding platforms, i.e. charging networks, and an entire range of professional services, from business planning through migration and implementation to commercial operation support. It is important to highlight that Ericsson Nikola Tesla experts actively participate in the development and innovations in m-commerce solution segment, and the mentioned award has additionally confirmed the high potential of market acceptance.



Connected devices (billions)

Not included: passive sensors and RFID tags

SMART CITIES – THE CHALLENGE OF THE FUTURE

Nowadays, there are already more people living in cities than in rural areas, and the United Nations estimate that by mid-21st century almost 70 percent of the world's population will live in cities. The urban life challenges can be seen in three key areas: economy, society and environment sustainability.

In order for today's big and often overpopulated and crowded cities to become smart and sustainable, a complex transformation is required, demanding a holistic approach with long-term planning, new partnerships and a great additional engagement. The experts estimate that the creators of future cities will achieve the greatest success if they base the cities' transformation on joint vision, strategy and targets; informed and well connected governance structure; developed organization capacities; engagement of all relevant stakeholders and establishing long term partnerships.

Establishing strong partnerships with ICT companies, NGOs with a global presence and top professionals, particularly in systems integration segment, can enable cities to accelerate their transformation into smart cities. However, partners must bear in mind numerous factors, including the scalability and the capacity to drive longterm projects, as well as a broad range of skills and expertise required to work across all levels in the value chain of a smart, sustainable city.

Ericsson is deeply involved in numerous projects that demonstrate and measure transformation capacity of new technologies in the context of sustainable development of smaller and larger communities. They range from projects aimed at decreasing crime rate in several cities in South America, where following the introduction of monitoring systems, improved street lighting, and other innovative projects, a decline in crime rate up to 30 percent was recorded, without increasing the number of police officers and relevant services. We would like to highlight innovative projects of managing traffic, parking, and tourism flows in Satandero (Spain), as well as transformation of entire city districts in Qatar and Stockholm. The Stockholm Royal Seaport is a great example of sustainable urban development and partnership between city's authorities, private entrepreneurs and research community with Ericsson, as one of the leading ICT partners and consultants.

Thus, ICT emerges as a way to include citizens in local planning, and requires local authorities to think as if they were service providers. Smart cities that decided to embrace the Networked Society and openness turn towards ICT and data-based approach, which increases their efficiency and supports sustainability. Moreover, smart cities also attract and strengthen creative and innovative business culture. Smart cities



Transformation of Transport

Transport is one of the most important areas of transformation. In Europe alone, traffic jams cost EUR 130 billion annually, and road traffic produces 20 percent of carbon dioxide emission of the entire continent. The number of human lives lost is also substantial: 1.3 million road traffic victims on a global scale and this number is expected to significantly increase, unless something changes.

Mobile technologies enable higher levels of interconnectivity, and the data from vehicle sensor can be combined with the fixed infrastructure data, such as traffic lights and cameras. With the assistance of the solution for large amount of data analysis, public services become more efficient than ever, not only in long-term planning, but in dynamic changes to traffic flows and services provided for citizens, as well. Autonomous and interconnected transport ecosystem could substantially reduce everything that currently burdens this segment and create many benefits for next generations in the context of environment, society and economy.

In addition, passenger data and publishing data on public transport services by the transport providers open possibilities for the growing digital application market connected to travelling. Due to its experts' proficiency in the area of mobility, broadband access and cloud, Ericsson plays a significant role in all the changes mentioned.

Transport is also closely linked to automotive industry transformation, in which connected vehicles and autonomous driving are among key development areas. Only a few years ago, a car not operated by the driver was considered to be science fiction. Nowadays, many of the most important car manufacturers plan, or are already working on, autonomous vehicles, i.e. a simple and a safe way of



taking control over the vehicle. 5G technologies offer new possibilities for private travels and cargo transport, including the creation of autonomous cars ecosystem. In this segment, Ericsson's offer encompasses everything from traffic management centers to enabling full connectivity of every road junction, as well as every vehicle and travel.

Development of Utilities

As a result of an increased demand in renewable energy, due to financial challenges in different parts of the world and/or deregulation and increased competitiveness, utility services are also changing. Smart grids replace traditional electric grids, therefore new types of products and services are in demand. Thus, the Corporation utilities portfolio includes the most various solutions; from Smart Grid Communications or Smart Metering, and utilities mobile solutions that support cheaper devices and services with lower latency, all the way to smart billing and services for transformation of utility services business processes.

Smart Metering is crucial for smart grid solutions. It is estimated that more than 800 million of smart meters will be installed across the world by 2020. The widespread use of smart grid technologies will reduce transport and distribution costs, as well as carbon dioxide emission, and facilitate the transition to renewable energy sources. In Norway, Ericsson delivers and integrates a comprehensive smart metering solution, as well as operation and maintenance support. This regards new 180,000 devices, and currently there are over 42 million of smart meters operating, based on Ericsson platform and support.

In Stockholm, 150 apartments connected to smart grids are under construction. Tenants of these apartments will be able to monitor electricity, water and heating consumption through applications and this implementation is jointly provided by ABB, Ericsson, Electrolux and Fortum.

WHAT ABOUT CROATIA?

The fact is that the level of savings and efficiency management in Croatia has grown over the last few years, especially after extensive investments to increase energy efficiency of buildings, and a transition towards ecologically acceptable energy resources. Furthermore, public transport introduces ecologically more efficient vehicles, leading to relevant improvement in air quality and reduction in vehicle maintenance cost into some cities. The obvious problem is a chronic lack of strategic planning on the city level, and neglecting cause-effect relation, therefore projects are done without much planning, often precisely in the order in which the EU funds are provided. Except financial damage, in such cases an even greater problem is the fact that citizens are losing trust in the city's administration, resulting in a decrease of support to new technologies and solutions, which has already been low in general.

Therefore, Ericsson Nikola Tesla, with a number of partners, intensively works on establishing the Competence Center for Smart Cities (CEKOM) in Rijeka, with the key task to analyze and transform complex, and often, initially very expensive solutions, into forms acceptable to our region. We expect that the example of Rijeka opening to data access, by using Ericsson IoT platform, will confirm the initial concepts and result in new entrepreneurship ideas and interesting world class projects, for the benefit of all the local residents, and residents of other countries as well.

PUBLIC SAFETY

The safety of all citizens often surpasses the jurisdiction of city services, and it is one of the highest ranked goals of every country. Therefore today, more than ever, we are aware of the advantages of connectivity and networking in the segment of public safety. Thus, Ericsson Nikola Tesla delivered to the Ministry of Interior of the Republic of Croatia the operational and communication equipment, based on Coordcom solution for assistance in emergency situations. The solution enables integration of call acceptance and information from other systems, such as the Ministry's video cameras and locations of the patrols in the field. This will enable the police officers in the field an easier coordination of the alerts from the field, and the time necessary for situation analysis and decision on the use of police forces in particular situation will be minimized. Thus, Croatia already has a state-of-the-art system for providing service to citizens, which is open for introducing new advanced solutions, functionalities and services in the future. A similar crisis management system is used in Sweden, Slovakia, Spain, Montenegro, and many other countries.

We would also like to mention that Croatia is ready to welcome the introduction of e-Call system. Pursuant to the European Commission decision, e-Call system will be a mandatory infrastructure for all EU Member States as of 2017. According to estimates, the unique European emergency number – 112, due to its automatic dialing, should save 2,500 lives per year. It should be noted that the Croatian consortium of the Paneuropean project HeERO (Harmonised eCall European Pilot), in which Ericsson Nikola Tesla was a technological partner, received a special award in 2013 for the most successful eCall testing and implementation among all the countries involved in the project.



10 hot consumer trends in 2016



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Consumers share more information than ever and believe it increases their influence on society

E-GOVERNMENT: JIS

Networking potential is especially high in the industry and society segment, and one of the best current Croatian examples is the National Programme of the Republic of Croatia, related to harmonizing the land registry and cadaster. This project encompasses activities that are being performed by the Ministry of Justice and State Geodetic Administration with the aim to modernize and harmonize the real estate registration in the Republic of Croatia. Ericsson Nikola Tesla is also a significant link in this realization. Therefore, the Joint Information System for Land Registry and Cadaster (JIS) already provides a better, faster and a simpler insight in the Land Registry and Cadaster data, and brings significant improvement in the quality level and the time of service provision. After the overall project implementation, it is expected that by the end of this year, all Croatian citizens, for the first time, will be able to see in one place the overall ownership structure of the real estate and its position on site, for which they previously had to use several information resources. Instead of different office practice, a central, process-defined handling is now established, which provides unique treatment practice. By establishing this system, the citizens can obtain their landcadaster excerpts with their status of public document from their own home with just "a single click", regardless of the institution in charge of the real estate, while the citizens who do not own a computer, can obtain the public document at a notary public or a lawyer. This increases the level of public safety, and the delivery of all information between cadaster and land registry departments is no longer performed in paper version, but electronically, thus making significant time and financial savings.

This additionally increases the efficiency of institutions that can now be more prepared to respond to the requests regarding real estate market. This is also proven by statistics, according to which the number of unsolved land registry cases at the beginning of 2016 was reduced by 90 percent compared to the period prior to implementation. This project is also important for Croatia's advancement in the international ranking "Doing business".

NETWORKED LIFESTYLE AND E/M-HEALTH

According to forecasts, Internet of Things will be an especially revolutionary technology for the healthcare system, because it should significantly improve medical care. Imagine if patients were, whenever it is required, networked 24 hours a day and that doctors monitored their condition, even after they had been discharged from hospitals. Prevention of this kind would definitely make the job easier, it would bring additional safety for both doctors and the patients, and complete medical data history would be available with just one click, without complications and unnecessary waste of time standing in lines. However, we should also ask ourselves about the cost of this modern story. At the moment, it is still (too) high, however, if we take into consideration the constant decrease in sensor prices and the services regarding the network itself and communication, it is clear that we can expect more concrete results in the near future. Currently, we are still at the beginning, and the attention is focused on monitoring heart rate or increased sugar levels; however, over time, the list could be expanded, primarily through information that will be collected and enable us to learn a lot from it. Finally, the collected data will help to better understand certain diseases and maybe enable us to recognize some of them early enough so that we can win the battle against them.

And while we think about the future, Ericsson Mobile Health (EMH) system for remote medical monitoring has already been around for years, and has been used worldwide not only to monitor patient's health condition, but also for various prevention programs. Currently, EMH is an important part of the European CareWell project that gathers 8 EU Member States. The project is focused on increasing healtcare availability and improving outpatient medical care processes and patient's life quality, primarily the ones suffering from Chronic Obstructive Pulmonary Disease (COPD), cardiovascular diseases and diabetes, while at the same time reducing costs. At the begining of this year, project ICTGEN, cofinanced by the EU funds, was successfully finished. During this project, our company, as the industrial partner of Faculty of Electrical Engineering and Computing, University of Zagreb, gave an additional contribution to the ICT use research for generic and energy efficient communication solutions, applied in e/m-Health.

In the end, let us just add that global researches show how smartphone owners believe that medical measurements and stress regulation could increase life expectancy by two years, and are also interested in wearable technology. In brief, people are becoming aware of the range of, often cloud based, services that enable them to live longer and be healthier – regardless of whether the technology is mobile and wearable, like the one in m-Health, or static, like the one in e-Health; the benefits of which we have already been using, and their quality ranks us at the very top of Europe.

CSR: TECHNOLOGY FOR GOOD PROGRAMS

In its recent Sustainability and Corporate Responsibility Report, Ericsson summarizes its business performance on a global level in the areas of energy efficiency, preservation of climate and environment, with the aim to enable communication for all, no matter where they are. We are proud that Ericsson is also the first ICT Company that publishes such a report according to the new UN Guiding Principles on Business and Human Rights Reporting Framework. The Corporation portfolio supports Technology for Good programs, which enable the financial inclusion of people worldwide, better education and healthcare, addressing humanitarian needs, etc. Let us point out that during last year, Ericsson further expanded its focus as regards occupational health and safety, as well as activities in its own supply chain, and



it continuously invests significant operative efforts in order to reduce the impact on the environment related to energy consumption. In the Networked Society, where everyone and everything will be connected in real time, and Ericsson's role, as the leading ICT company, will be to drive this transformation, opening up new ways of innovating and collaborating and empowering people, business and society. We want to ensure that connectivity efficiently contributes to environmentally sustainable and equitable economic social development.

THE NETWORKED SOCIETY: ENVIRONMENTAL PROTECTION SUPPORT

Ericsson portfolio and overall business has the goal to also protect the environment, i.e. responsibly use resources. Therefore, Ericsson's new radio platforms improve energy efficiency by 50 percent, while at the same time, the Corporation's goal is to reduce by 30 percent the carbon footprint per employee by 2017, compared to 2010. The previously mentioned Ericsson initiative Technology for Good contributes to the protection of the environment in the Networked Society. One of the interesting examples mentioned is an active Corporation's role in the development of water quality sensors, which use mobile network for secure data transmission. These data are used for efficient monitoring and protection of vital water resources. Additionally, with the help of LTE technology we can also significantly reduce energy consumption, which is extremely important for IoT sensors operation, where request for minimum energy consumption exists.

In a few years, we should have real time access to current information on water quality on the beach we have selected for a family trip, or, for example, about the (non-)pollution of the air we are breathing in. In order to achieve this goal, national regulatory bodies should have access points to data of any kind of environmental threats, whether it comes from industrial plants, energy plants, landfills, traffic pollution or natural disasters, such as fire or floods. However, regardless of the information source, the thing they all have in common is that we need to transfer them; therefore, M2M communication has great potential for improving efficiency of various jobs we do, safety of our lives and sustainability of our world, i.e. the environment.

Ericsson platform that enables various M2M services is designed for, among other, to all kind of data collection, including the ones related to the environment. It also enables their transformation into a unique format, storage and delivery to any other information system or application, and it additionally supports data resource management, for example redirecting cameras, while at the same time it is completely independent of networks and systems it monitors and manages. The basic advantage of such solution is contained in the fact that in this way, all the regulators, data providers and users, transparently exchange information through a single integration point, regardless of data source or its format, and each user or application, depending on access rights, can "subscribe" to a certain kind of data, or receive notifications in case the set value limit is exceeded. How it could look like in practice was already shown by the project of Integrated hardware-software system for environmental parameters monitoring in micro locations (abbreviated to IPPSO), also cofinanced by the EU funds. In this project, Ericsson Nikola Tesla, as a technology partner of IMROH, showed through industry research, the possibility to create a reliable system for remote registration, monitoring and validation of at least five various environmental condition parameters, in a large number of locations.

Therefore, in the future, with various applications, citizens could also be included in data collection, reporting about environmental threats and, for example, send information or warnings to competent bodies. Such high level of transparency, which is the result of ICT and the Networked Society, should in the end build trust and motivate as many members of society as possible to actively participate in the protection and responsible environmental management. For the benefit of all of us and the unique world that surrounds us, and which we should preserve for the future generations, also with the help of ICT.



The ICT enablement effect

EVENTS IN 2015

JANUARY

In Montenegro, Crnogorski Telekom and Ericsson Nikola Tesla demonstrated LTE Advanced technology – a solution with carrier aggregation. On this occasion, downlink throughput of approximately 300 Mbps was achieved.

FEBRUARY

As a technology partner and the supplier of CEZIH platform, Ericsson Nikola Tesla engaged in the Croatian Ministry of Health National Prevention Programs (NPP). The Company's experts will work on a reporting and business intelligence module, as well as a portal for patients.

Company's experts actively participated in the practical part of Trends in Telecommunications, Technology and Media conference.

At the regular press conference, the Group's 2014 business results as well as expectations for the year 2015 were made public.

Key ICT support for the Nordic World Ski Championship, held in Falun (Sweden) was provided by Ericsson Nikola Tesla experts.

MARCH

Our experts contributed to Ericsson's technology solutions BSP Cabinet Viewer web application and Google Glass Shopping project displayed at the Mobile World Congress (MWC), held in Barcelona.

The Ministry of Justice and the State Geodetic Administration and Ericsson Nikola Tesla signed a contract on the upgrade and expansion of the Joint Information System for Land Registry and Cadaster (JIS).

APRIL

Ericsson Nikola Tesla and the Faculty of Electrical Engineering and Computing, University of Zagreb, signed an agreement on collaboration and new joint projects, thereby continuing the Company's tradition of good collaboration with higher education institutions in Croatia and abroad.

With a range of activities in 2015, Croatia joined the group of 140 countries across the world, which mark the International Girls in ICT Day. On the occasion, a group of high-school and college female students from Zagreb visited the Company. The participation of the President of the Company, Gordana Kovačević at the round table dedicated to the topic "Girls and Women in Croatian ICT Sector – Both Sides of the Medal" was well-received.

Gordana Kovačević, President of Ericsson Nikola Tesla, participated in a panel discussion under the title "Entrepreneurial Spirit Based on 3E (Ethics, Ecology, Economy – Values as Strategic Guidelines in Life and Business)" within the "Spirit of Entrepreneurship – Values in Leadership" conference.

MAY

The Company's experts participated in an eHealth seminar in Finland, where they presented Croatian solutions in this field.

Ericsson Nikola Tesla and IPKO signed a framework contract that defines strategic relations in the following period. The Contract relates to the modernization of IPKO radio access and microwave network.

Company's numerous experts participated in the MIPRO convention, the largest scientific and expert convention on ICT, electronics and microelectronics in this part of Europe.

JUNE

Ericsson Nikola Tesla's Annual General Meeting was held, where all the proposed decisions were adopted.

The Company's experts provided to BH Telecom high-quality professional support in the network preparation for Pope Francis' visit to Sarajevo.

Gordana Kovačević, President of the Company, gave an excellent speech at a panel discussion under the title "How to Close Financial Construction in Research, Development and Innovation Projects" which took place within "Two Years in EU – How to Close Financial Construction in Projects Financed by EU Funds" conference.

Operational phase of the three-year European CareWell project, financed by EU funds from the Competitiveness and Innovation Framework Programme, was officially started.





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JULY - AUGUST

Consultancy project on Business Processes and Software Design for the Institute for Disability Certification, Professional Rehabilitation, and Employment of Persons with Disability (IDCPREPD) was successfully finished. The Company gained an important reference regarding consultancy in the field of providing support to persons with disabilities, as well as in the field of modelling business processes. The project was financed by a World Bank Ioan.

SEPTEMBER

The Company and HT Eronet signed a contract related to Evolved Packet Core system, a modern technology solution that ensures greater network capacity and development of new services.

OCTOBER

Innovation Day was held in Zagreb. In the first part of the program, Toni Milun, Mathematics and Physics teacher, gave a motivational lecture under the title "Let's Empower Good Ideas". In the second part, the employees took a tour of 14 sites in the Company, specially prepared for the occasion, where they could learn more about the latest solutions developed by our experts.

Ericsson Nikola Tesla Summer Camp celebrated its 15th anniversary. Since its launch in 2001, more than 600 students participated in Ericsson Nikola Tesla Summer Camp. With the support of over 250 mentors from the faculties and the Company, they realized more than 400 projects. They received numerous recognitions for their work, including four Rector's Awards. Moreover, academia got numerous new Doctors of Science: eleven former students that attended Ericsson Nikola Tesla Summer Camp and nine Company's mentors. Long-term positive effect can be seen in 25 doctoral dissertations and 250 master's theses regarding the activities in the Summer Camp.

The Ministry of the Interior of the Republic of Croatia was supplied with the operational and communication equipment, based on CoordCom solution for assistance in emergency situations. The solution enables integration of calls and information from other systems, which facilitates coordination and management of information from the field.

Ericsson Nikola Tesla delivered a new solution for 112 emergency calls to the Ministry of the Interior of Montenegro, based on the CoordCom application for assistance in emergency situations.

Our experts actively participated in two round tables within the Smart Government conference. They presented the Company's contribution to the successful realization of big horizontal infrastructure information projects, such as eHealth and Joint Information System for Land Registry and Cadastre.

Ericsson Microwave Roadshow on the tour of the countries in the region had one of its stops in Zagreb.

Innovation Day was held in Split. In the first part of the program, Gordana Kovačević, President of the Company, gave a motivational speech, while the second part of the program was held at 14 sites within the Company, like in Zagreb.

NOVEMBER

At the 2nd national ICT Summit "Digital Economy" held in Rijeka, Ericsson Nikola Tesla experts presented concrete examples and experience the Company gained with regard to industry and society transformation.

Ericsson and Cisco established a strategic partnership to create next-generation futureready networks. The partnership will offer the customers the best of both companies: routing, data centers, networking, cloud, mobility, management and control, and global service capabilities. Ericsson and Cisco, a leading IP-networking company, will offer end-to-end leadership across network architectures for 5G, cloud, IP, and the Internet of Things.

DECEMBER

All employees from Zagreb, Split and Sarajevo participated in a meeting in the so-called Small hall of "Dom sportova" sporting arena in Zagreb. In the first part of the program, Gordana Kovačević, President of the Company, sent important messages and outlined the most important Ericsson Nikola Tesla's activities and projects in 2015, as well as the main strategic directions. The second part of the meeting was dedicated to innovativeness and innovations. Our experts presented three most interesting ideas by employee votes from Innovation Days held in Zagreb and Split:

- o Automated aerial RF measurment collection
- o IPTV quiz
- o Completing the Cloud Puzzle solution (HDS 8000).





PERFORMANCE IN 2015

The financial performance in 2015 meritoriously reflected our ongoing efforts to enlarge revenue, decrease costs, strengthen the balance sheet and manage risks. We have focused on ensuring a clear, positive trend from the previous year when it comes to profitability, cost control, working capital efficiency, operating cash flows and return on capital employed.

Operating profit increased by 12.2 percent year-over-year to MHRK 91.4, while net profit increased by 4.6 percent to MHRK 91.3. Our continuous focus on cost efficiency and cost savings has resulted in an increased operating profit in spite of a 1.3 percent lower gross profit year-overyear, as a result of change in business mix. Sales and administrative costs decreased by 9.1 percent year-overyear.

Continuous focus on working capital efficiency and change in business mix have led to a decrease in the account receivables by 9 percent and inventory by 31.5 percent respectively year-over-year. Improved supply chain management and project delivery efficiency have released working capital tied up in inventories. Furthermore, concentrated effort to excel in cash collection and strict monitoring of overdue account receivables has reduced working capital significantly over the past three years. Working capital efficiency in comparison to revenue, expressed in working capital days, shows a very low and continuously declining 32 days in 2015

The working capital reduction has generated a 38 percent year-over-year increase in cash flow from operating activities to MHRK 243.1, resulting in a build-up of the total cash balances, including short-term financial assets to MHRK 287.1 by the end of the year. When comparing cash flow from operating activities to net income reconciled to cash, the cash conversion rate is at a very high 157 percent.

The reduction of the working capital and leaner balance sheet has resulted in a significant increase of the return on capital employed (ROCE). Over the past 2 years, despite falling gross margin, the ROCE has increased to 26 percent in 2015.

Economic and geopolitical uncertainties continued to surface, causing markets, companies, investors and customers to respond to volatility with cautiousness. Regardless, our sales revenue increased by 3.8 percent year-over-year. A solid 31 percent year-over-year increased sales to internal Ericsson markets has neutralized the revenue decrease in other markets. The domestic market shows a 12 percent decrease year-over-year. Despite the fact that during 2015 Croatia finally came out of its sixyear-long recession, the depth and length of the recession left the economy severely affected. In the course of 2015, the situation started to improve and real GDP growth surpassed expectations. Croatia is currently expected to grow above its historical average over the next two years, with higher GDP growth projections for 2016 by the IMF (that is now projected at 2 percent), boosting simultaneously our confidence for a positive trend in the domestic market.

The external export markets have suffered a 29 percent decrease year-over-year due to financial and currency turmoil in CIS markets and political deadlocks hampering export business in neighboring countries. But on a positive note, Bosnia and Herzegovina institutions have launched implementation of a jointly agreed Reform Agenda and have also re-energized progress towards EU accession, providing a natural anchor for some optimism for a better future.

Over a three-year horizon, our top line has remained stable. However, underneath the stable top line, large changes of the business mix have taken place with increasing share of sales to the internal Ericsson markets. Since 2010 the internal sale to Ericsson markets has increased from 36 percent to 60 percent. The sales mix changes have led to structural changes in our financial performance with pressure on gross margin, but in return higher capital efficiency and lower business risks.

Our financial focus areas - 1) profitable growth, 2) cost efficiency, 3) strong cash flow and 4) risk management clearly support our current business fundamentals and financial strategy to ensure stability, predictability and efficiencies in costs & capital use.

To achieve stability and predictability, we have tightened risk management directives and policies to secure that the broadest possible spectrum of risks are addressed. Risks that we cover are not only traditional business, financial and operational risks, but also those risks with broader implications in regard to

compliance and reputation. Through partnering with commercial banks and governmental institutions such as Croatian Bank for Reconstruction and Development (HBOR), we have created innovative risk-sharing and risk-mitigating solutions that generate profitable growth in our external markets at low financial risk.

With these results, we are well positioned to continue building our stable and profitable business into 2016 and beyond.

Patrik Wahlgren Finance Director Ericsson Nikola Tesla d.d.

2015 FINANCIAL HIGHLIGHTS

in MHRK, except earning per share amounts	2015	2014	2013
Profitability:			
Sales revenue	1,364	1,315	1,345
Gross margin	13.0%	13.7%	16.4%
Operating profit	91	81	127
Operating margin	7%	6%	9%
Profit for the year	91	87	144
Earning per share (EPS) in HRK	69	66	109
Financial position and cash flow:			
Total assets	724	700	1,048
Cash, cash equivalents and financial assets	287	231	521
Capital employed	329	350	676
Equity	308	335	671
Operating cash flow	243	176	141
Ratios:			
Return on equity (ROE)	28.3%	17.3%	20.2%
Return on capital employed (ROCE)	26.8%	17.0%	20.1%
Return on sales (ROS)	6.7%	6.6%	10.7%
Equity ratio	42.5%	48.0%	64.0%
Capital turnover	4.0	2,6	1.9
Current ratio	1.4	1.5	2.4
P/E ratio	15.2	19.7	13.5

Balance sheet structure (in MHRK)





Sales revenue by Ericsson Nikola Tesla cornerstones (in MHRK and percentage)



Profit for the year (in MHRK), sales revenue (in MHRK), operating margin and ROCE





INFORMATION FOR SHAREHOLDERS

Ericsson Nikola Tesla d.d. shares, under the stock exchange symbol ERNT-R-A, are traded in the Regular Market of the Zagreb Stock Exchange.

SHARE TRADING AND PRICE MOVEMENT

ERNT-R-A share is the eighth most liquid share on the Zagreb Stock Exchange, accounting for 3.3 percent in the Zagreb Stock Exchange equity share turnover. In 2015 the total ERNT-R-A share turnover amounted to MHRK 79.4 (2014: MHRK 174.2).

At the end of 2015, ERNT-R-A market capitalization amounted to MHRK 1,391.6 (2014: MHRK 1,729.8).

As regards the free float market capitalization, Ericsson Nikola Tesla is the tenth company on the Zagreb Stock Exchange, with MHRK 705.1, representing 2.3 percent of the total free float market capitalization. ERNT-R-A weighting in CROBEX index is set at 5.96 percent.

At the end of 2015, for the sixth consecutive year, ERNT-R-A share was granted membership in the CEERIUS Sustainability Index (CEE Responsible Investment Universe) of the Vienna Stock Exchange, which includes the shares of leading companies in the field of economic efficiency and social and ecological awareness, which are listed in the markets of Central, East and South East Europe.

Share Price and Turnover	2011	2012	2013	2014	2015
Highest (HRK)	1,650	1,386	1,584	1,659	1,390
Lowest (HRK)	1,000	870	1,234	1,250	930
Last - end of year (HRK)	1,080	1,385	1,470	1,299	1,045
Turnover (in MHRK)	174.9	118.4	121.5	174.2	79.4
Trade volume	128,935	100,337	82,575	116,379	68,888
Dividend per share (HRK)					
- regular	20	20	20	20	20*
- extraordinary	150	150	300	70	80*

* Proposal for dividend amount sent to Ericsson Nikola Tesla Annual General Meeting



Average ERNT-R-A share price movement 2011 - 2015 (in HRK)

General Report ANNUAL REPORT 2015



ERNT-R-A share price movement as compared to Zagreb Stock Exchange share indices in 2015

ERNT-R-A share trading volume and average share price movement in 2015 (in HRK)





SHARE CAPITAL

As at December 31, 2015, the share capital of the joint stock company Ericsson Nikola Tesla amounted to HRK 133,165,000 divided into 1,331,650 ordinary registered series A shares. Each share carries one vote at the Annual General Meeting. The total number of treasury shares at the end of 2015 was 3,382, which accounts for 0.25 percent of the share capital. The shares were owned by 6,945 shareholders.

ANNUAL GENERAL MEETING

The Annual General Meeting of the joint stock company Ericsson Nikola Tesla was held on June 2, 2015. The amount of HRK 90,879,700 of share capital was represented, which accounts for 68.39 percent of the total Company share capital.

Besides the Company management and representatives of shareholders, the Meeting was attended by the members of Ericsson Nikola Tesla Supervisory Board: Roland Nordgren, the Chairman of the Supervisory Board, and members: Carita Jönsson, Ignac Lovrek, Dubravko Radošević and Zvonimir Jelić. The major shareholder, LM Ericsson, was represented by Tomas Malm. In the presence of a notary public, the Meeting was presided by Snježana Bahtijari, the Chairperson of the Annual General Meeting, appointed by the Supervisory Board.

At the Annual General Meeting, it was decided that the Company shareholders shall be paid a regular dividend

amounting to HRK 20 per share, and an extraordinary dividend amounting to HRK 70 per share, i.e. a total of HRK 90 per share from retained earnings realized from 2005 to 2013, other reserves (except reserves allocated for treasury shares) and part of net earnings realized in the financial year 2014. The dividend payment was effected on June 19, 2015 to Ericsson Nikola Tesla shareholders who had the Company shares registered on their securities account in the Central Depository & Clearing Company on June 9, 2015.

A decision was passed that the Company's net income for the financial year 2014, amounting to HRK 82,749,937.54, is allocated for dividend payment in the amount lacking after the use of unallocated retained earnings, and that the rest is allocated into retained earnings.

Discharge from liability was given to Gordana Kovačević, Company's Managing Director, as well as to the Chairman and the members of the Supervisory Board in relation to the exercise of their duties in the year 2014. The member of the Supervisory Board, Ignac Lovrek, was re-appointed for a four year term. Vidar Mohammar, Vice President & Corporate Officer Finance, was elected as a new member of the Supervisory Board, succeeding Carita Annette Jönsson, the member of the Supervisory Board.

Furthermore, it was decided that

PricewaterhouseCoopers d.o.o. is reappointed as the Auditor for the Company's business performance in 2015.

Ericsson Nikola Tesla major shareholders as at December 31, 2015

Shareholders	Number of shares	Percentage of share capital
Telefonaktiebolaget LM Ericsson	653,473	49.07%
Hypo-Alpe-Adria-Bank d.d. / Raiffeisen mandatory pension fund, B category	123,514	9.28%
Societe Generale-Splitska banka d.d. / Erste Plavi mandatory pension fund, B category	41,117	3.09%
Hypo-Alpe-Adria-Bank d.d. / PBZ Croatia osiguranje mandatory pension fund, B category	27,521	2.07%
PBZ d.d. / The Bank of New York as custodian	21,951	1.65%
Zagrebačka banka d.d./ custodian account for Unicredit Bank Austria AG	14,770	1.11%
Zagrebačka banka d.d./ State Street and Trust company, Boston	12,350	0.93%
PBZ d.d. / custodian client account	8,469	0.64%
Hypo-Alpe-Adria-Bank d.d. / Raiffeisen voluntary pension fund	7,934	0.60%
PBZ d.d. / State Street client account	7,436	0.56%
Other shareholders	413,115	31.00%