



**ANNUAL WORK PROGRAMME  
OF THE CROATIAN POST AND ELECTRONIC  
COMMUNICATIONS AGENCY  
FOR 2012**

**Zagreb, June 2011**

**CONTENTS**

<b>1 INTRODUCTION</b>	<b>3</b>
<b>2 REGULATION OF THE ELECTRONIC COMMUNICATIONS MARKET</b>	<b>5</b>
<b>2.1 MARKET ANALYSIS PROCEDURES</b>	<b>5</b>
<b>2.2 MANAGEMENT OF LIMITED RESOURCES</b>	<b>8</b>
<b>2.2.1. RADIO FREQUENCY SPECTRUM MANAGEMENT</b>	<b>8</b>
<b>2.2.2. MANAGEMENT OF ADDRESSING AND NUMBERING SPACE</b>	<b>13</b>
<b>2.3 SERVICES AND NETWORKS</b>	<b>15</b>
<b>2.3.1. SERVICES</b>	<b>15</b>
<b>2.3.2. NETWORKS</b>	<b>17</b>
<b>2.4 INSPECTION SUPERVISION</b>	<b>22</b>
<b>3. REGULATION OF THE POSTAL SERVICES MARKET</b>	<b>24</b>
<b>4. CONSUMER PROTECTION</b>	<b>28</b>
<b>5. INCREASE OF HAKOM'S CAPACITY</b>	<b>32</b>
<b>5.1. DEVELOPMENT OF COMPETENCES</b>	<b>32</b>
<b>5.2. LOOKING TO THE FUTURE</b>	<b>34</b>
<b>5.3. COOPERATION</b>	<b>36</b>
<b>5.4. e-AGENCY</b>	<b>41</b>
<b>5.5. RESOURCES, HUMAN RESOURCES AND CONTROL</b>	<b>41</b>
<b>6. LIST OF ABBREVIATIONS</b>	<b>44</b>

## 1. INTRODUCTION

The primary responsibility of the Croatian Post and Electronic Communications Agency (hereinafter: HAKOM) regulates the electronic communications and postal services markets in the Republic of Croatia (hereinafter: RoC). Moreover, HAKOM manages, governs and controls the use of the radio-frequency (hereinafter: RF) spectrum and of the addressing and numbering space as naturally limited resources of interest for the RoC. In order to be able to perform its function of a full and independent regulation of the electronic communications and postal services markets, HAKOM must meet special preconditions related to staff, expertise and financial resources.

### **It is HAKOM's mission to ensure the following:**

- competition, stable growth and room for innovations on the electronic communications and postal services markets;
- protection of user interests and possibility to choose from among various communications and postal services at affordable prices;
- sustainable competitive conditions for operators and service providers under fair conditions for return on investments;
- support to economic growth, public services and quality of life in the RoC by using modern technologies.

HAKOM's activities in 2012 will primarily be aimed at achieving the established goals of regulation of postal services and the electronic communications market with special emphasis placed on maintenance and promotion of effective and sustainable competition, encouraging of competition as a precondition for increased investments in the above-mentioned markets, ensuring of adequate quality of postal and communications services at an affordable price and a high level of consumer protection.

### **HAKOM will encourage, in particular:**

- competition in the offer of communications services;
- constant growth and rapid implementation of modern communications technology;
- stable, interoperable and reliable communications infrastructure;
- affordable offer of communications services to Croatian consumers;
- efficient use of the spectrum;
- rapid growth of broadband products and services;
- increased reliability of communications in crisis situations;
- further development of the Croatian economy.

**The Council of HAKOM adopts HAKOM's Annual Work Programme based on prior approval by the Government of the Republic of Croatia. HAKOM's Work Programme for 2012 (hereinafter: the Programme) results from HAKOM's obligations pursuant to the Electronic Communications Act (hereinafter: ECA) and the Postal Services Act (hereinafter: PSA), subordinate legislation and HAKOM's Strategic and Operational Plan.**

HAKOM's annual programme is divided into four chapters.

**Chapter 2** contains the plan of activities on the electronic communications market, which include fixed network services, mobile network services, broadband Internet access, network and infrastructure access services, television services and future services. Furthermore, the chapter contains an activity plan for the management of limited resources: RF spectrum and the addressing and numbering space.

**Chapter 3** contains a plan of activities on the postal services market which comprises both universal and other postal services. It offers a comparison with the European Union (hereinafter: the EU) and regulatory measures for further development of the postal services market.

**Chapter 4** contains a plan for consumer protection on the market of electronic communications and postal services. Special attention is dedicated to the protection of children and to access of persons with special needs to these services.

**Chapter 5** describes the continuation of HAKOM's activities aimed at building its own capacity for market regulation and market development by means of IT introduction into its processes and services, by increasing regulatory competences, by increasing productivity and efficiency and by facilitating access to HAKOM's regulatory activities.

Each chapter gives a short description of the scope of activities, comparison with tendencies and best practice in the world, and in the EU, in particular, and an overview of activities that HAKOM will focus on in the upcoming year. Furthermore, strategic and regular activities are listed with strategic activities including activities aimed at shaping the market of postal services and electronic communications or promoting HAKOM's own capacity, while regular activities include activities reflecting the current situation on the markets in question and HAKOM's capacities.

## 2. REGULATION OF THE ELECTRONIC COMMUNICATIONS MARKET

### 2.1. MARKET ANALYSIS PROCEDURES

HAKOM carries out market analysis procedure which consists of the identification of markets susceptible to ex ante regulation, the definition of the relevant market and the assessment of effectiveness of competition. If it is assessed that there is no effective competition in the relevant market, HAKOM identifies one or more operators with significant market power and imposes regulatory obligations on the operators in question. HAKOM also supervises the implementation of regulatory obligations by operators with significant market power.

The market analysis procedure and/or the carrying out of the three criteria test<sup>1</sup> comprise the following:

- Preparation of a questionnaire for market analysis;
- Sending the questionnaire to operators;
- Analysis of data from the received questionnaires;
- Definition of the relevant market on the basis of the analysis of received data;
- Conducting the three criteria test in case of markets which are not part of the European Commission (hereinafter: EC) Recommendation on the relevant markets.
- Evaluation of effectiveness of competition on the relevant market;
- Identification of SMP operators on the relevant market;
- Imposition of regulatory obligations on SMP operator/s or the withdrawal of all regulatory obligations imposed on SMP operators.

HAKOM completed the market analysis procedure on the majority of relevant markets which have been regulated pursuant to the ECA thus completing the alignment process with the European regulatory framework. More precisely, the market analysis procedure has been completed on eight relevant markets (market of access to public communications network at a fixed location for private and business users, markets of publicly available telephone services in local and/or long-distant traffic and international traffic for private and business users, the market of terminating and trunk segments of leased lines and the retail market of leased lines).

HAKOM will, in 2012, finish the market analysis procedure on the remaining two relevant markets which are currently regulated pursuant to the Telecommunications Act thus completing the market analysis procedure on all relevant markets in accordance with the ECA, that is, with the existing European regulatory framework.

By initiating the public procurement procedure for consultancy services for the implementation of the project "*Cost models of operators with significant market power*", HAKOM launched the above-mentioned project to ensure better verification of financial data provided by operators. The European practice promotes cost-orientation of prices as opposed to pricing based on benchmarking. Therefore, in 2012, regulated prices of services will be cost-oriented.

The preparation of new questionnaires for the gathering of all the necessary market information ensured quicker and better quality completion of strategic and regular activities envisaged for 2012. In 2012, information will be gathered on the basis of new questionnaires more adjusted to the market.

#### **Europe and the Republic of Croatia**

The Commission Recommendation (2007/879/EC) on relevant markets susceptible to ex ante regulation contains 7 relevant markets susceptible to ex ante regulation where the three

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<sup>1</sup> The three criteria test is used to establish whether the defined relevant market is susceptible to ex ante regulation. A market will be susceptible to ex ante regulation if all three criteria listed under Article 53, paragraph 2 of the ECA have been cumulatively met.

criteria test does not have to be carried out. National regulatory authorities may also regulate markets which are not a constituent part of the relevant Recommendation on relevant markets by proving that all criteria from the three criteria test have been cumulatively met on those markets. In the EU they mostly regulate those markets which are a part of this Recommendation, while the need for regulation of other markets depends on specific national circumstances.

HAKOM has been carrying out the market analysis procedure in full compliance with European guidelines and recommendations. However, the decision on SMP operators and the associated regulatory decisions are adopted on the basis of specific national conditions.

### **Focus and activities of HAKOM**

In 2012, HAKOM shall, in particular, focus on:

- monitoring the implementation of regulatory obligations by SMP operators, with a particular emphasis on markets the analyses of which were completed in 2011;
- the analysis of the access market for operators of value added services (2 relevant markets);
- starting market analysis procedure on relevant markets completed in 2009 (5 relevant markets);
- carrying out of the cost models project with a view to calculating prices of all regulated wholesale services and prices for the provision of universal service;
- preparation of models for applying the price squeeze test<sup>2</sup>;
- implementing the regulatory obligation of accounting separation which prevents cross-subsidising between services;
- improvement of the manner of work with operators;
- cooperation with state administration bodies (in particular with the Ministry of the Sea, Transport and Infrastructure (hereinafter: MSTI), the Central Office for E-Croatia, the Croatian Competition Agency (hereinafter: CCA)).

HAKOM's main activities in relation to market analysis in 2012:

<b>Strategic activities</b>				
No.	Activity	Result	Completion	Fin. plan
1	Supervision of the implementation of regulatory obligations by SMP operators	Evaluation of implementation of obligations Expert supervision where necessary	I-IV quarter	
2	Project - development of cost models for regulated services of SMP operators	Project implemented Calculation of prices of regulated wholesale services and prices for the provision of universal service	I-IV quarter	
3	The analysis of relevant markets of network access for providers of value added services	Analysis completed	I-II quarter	
4	Preparation of models for applying the price squeeze test	Price squeeze test prepared	III-IV quarter	
5	Risk sharing model for investments into optical access	Public consultation about proposals	I-II quarter	

<sup>2</sup> serves as an additional mechanism for the appropriate regulation of retail prices while taking into account wholesale prices determined on the basis of cost-models

	infrastructure	Model completed and published		
6	Second round of analyses of relevant markets completed in 2009	Questionnaires created where necessary, questionnaires sent to operators, questionnaires delivered, market analysis initiated	III-IV quarter	

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1	Cooperation with operators	Improvement of the manner of work with operators	100	
2	Cooperation with state administration bodies	Expert opinions	100	
3	Reporting on the situation on the electronic communications on a quarterly and annual basis	Data on market situation published on HAKOM's website <a href="http://www.hakom.hr">www.hakom.hr</a>	100	
4	Amendments to reference offers	New reference offers	100	
5	Implementing the regulatory obligation of accounting separation	Prevention of cross-subsidising of electronic communications services on the relevant markets	100	

## **2.2. MANAGEMENT OF LIMITED RESOURCES**

The RF spectrum and the addressing and numbering space represent naturally limited resources of exceptional interest for the RoC. HAKOM has focused a significant part of its activities on efficient management of these resources.

### **2.2.1. RADIO FREQUENCY SPECTRUM MANAGEMENT**

In relation to RF spectrum management, HAKOM is in charge of the following key processes:

- preparing a Frequency Allocation Table and Radio Frequency Allocation Plans;
- international coordination of the RF spectrum in accordance with appropriate procedures, and the conclusion of implementing agreements (on bilateral or multilateral level) concerning the use of the RF spectrum;
- planning and preparation of technical parameters for the issuing of licences for the use of the RF spectrum which may be issued on the basis of an application, a public tender or a public auction;
- granting of licences for use of the RF spectrum;
- issuing of certificates of conformity for notified base stations of public communications networks (GSM, UMTS, DTV) which comply with the provisions of the Ordinance on the limitations of strengths of electromagnetic fields for R&TT equipment;
- regular control and measurements in the RF spectrum on the entire territory of the Republic of Croatia;
- measuring, testing and establishing interferences in the RF spectrum on the entire territory of the RoC and their removal.

#### **Europe and the Republic of Croatia**

Pursuant to the European Commission Recommendation on the analogue to digital switchover by 2012, digitalisation of terrestrial television in the majority of EU countries will be completed in 2012, while the remaining small number of European countries should complete digitalisation by 2015. Since early 2011, the Republic of Croatia has been broadcasting terrestrial television exclusively in digital technology (DVB-T) thus being, in addition to Austria and Slovenia, among the leading countries in the South Eastern region.

The development of a new standard for digital terrestrial television (DVB-T2) has ensured a more efficient use of the RF spectrum, that is, increased transfer capacity enabling the transfer of more SDTV and HDTV channels and the introduction of 3D video contents and multichannel audio. Some countries, which have only started introducing digital television, are planning to introduce DVB-T2 standard as the basic standard, while countries which have already introduced digital television, like Croatia, see this standard as a logical continuation of the development of digital television and more efficient use of the RF spectrum. Depending on market interests, in 2012, HAKOM is planning to ensure conditions for the public tender for the granting of new licences for use of the RF spectrum for the provision of electronic communication service of digital networks management.

Considering the different extent of digitalisation in the countries in the region, regulatory agencies for electronic communications and the media in Slovenia, Austria, Hungary, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, Albania, Macedonia and Italy initiated in the early 2011 a regional and cross-border cooperation project "South-East European Digital Television" (SEE Digi.TV) as part of a transnational cooperation programme for South Eastern Europe with the main project objectives being the following:

1. Speeding up the process of switching off analogue television and ensuring further development of digital television,



2. Alignment of legislation and technical framework with the EU digitalisation process,
3. Avoiding the fragmentation of market, politics and technology,
4. Preparing a regional strategy for efficient use of the RF spectrum and introducing new services and managing the digital dividend.

Therefore, in 2013, HAKOM is planning to concentrate a part of its domestic and international activities on implementing this project and on achieving project objectives.

As a result of the definition of the profile of receivers by Eureka 147 group (DMB/T- DAB/T- DAB+), activities of European countries concerning the introduction of digital radio have intensified, primarily in the VHF III band. Furthermore, there is an increasing number of international activities (ITU, CEPT, EBU, industry and others) focused on the planning of digitalisation of the VHF II frequency band used for broadcasting of the so-called FM radio and the medium- and short-wave frequency band. Therefore, the majority of HAKOM's activities in the last two years were concentrated on planning digital radio networks in the VHF III frequency band in the territory of the RoC and on harmonising DAB radio stations at the international level. These activities will continue in 2012 largely depending on the switching off of analogue television in the neighbouring countries in the VHF III frequency band.

Regardless of radio digitalisation activities, significant number of activities will still be focused on planning and optimisation of FM radio networks (VHF II band) in order to ensure better coverage with existing broadcasters and provide frequencies for new concessions.

The application of digital technology ensures a more efficient use of the RF spectrum thus releasing a part of the spectrum used by analogue television, the so-called "digital dividend". However, considering different plans and dynamics of analogue to digital switchover in the remaining countries of the region (Bosnia and Herzegovina, Montenegro, Serbia, Hungary and Italy), the use of the digital dividend is still limited. Bearing this in mind, in 2012, HAKOM is planning to continue with intensified activities aimed at providing the RF spectrum and its coordination at the international level to enable, as soon as possible, the use of the released part of the spectrum for further development of broadcasting and communication services on the entire territory of the RoC.

In accordance with market interests and the assignment of the digital dividend in the neighbouring countries, it will be used for mobile services in the RoC as well. Laws and subordinate legislation in the Republic of Croatia have already been adjusted to the allocation of the RF spectrum on a technology and service neutral basis. In accordance with the RF Spectrum Allocation Table, the digital dividend will be assigned on the basis of a public auction. The public auction will be carried out in a transparent manner in order to allow access to that part of the spectrum to all interested market participants. Furthermore, taking into account experiences at the EU level, it will be necessary to select appropriate parameters for the auction (auction format, starting price, obligation to cover certain geographical areas, restrictions).

The planning of this part of the spectrum should take into account plans of the neighbouring countries, where time periods for the switchover to digital TV broadcasting largely influence spectrum assignment in the RoC. Since spectrum use for other purposes in geographically neighbouring areas would cause interference in the territory of the RoC, operators might be imposed restrictions for the provision of services in certain areas (depending on interference level, reduction of capacity and/or coverage area).

In some European countries, the 2.6 GHz band has already been assigned. According to the RF Spectrum Allocation Table in the RoC, this band is reserved for IMT mobile technologies and it is assigned on the basis of a public auction. Since operators of mobile communications networks have already been testing new technologies in this frequency band, the assignment of this part of the spectrum may be expected in 2012. It is expected that the 2.6 GHz band will be assigned in the public auction for digital dividend. The assignment process will take into account positive experiences from European countries.

The World Radiocommunications Conference WRC12 will take place in Geneva in January and February of 2012. The Conference will discuss future use of the RF spectrum. HAKOM will prepare for participation in the conference in order to make sure that future use of the spectrum is in compliance with the current and planned situation on the Croatian market. After the conference, its results will be incorporated into the RF Spectrum Allocation Table and other subordinate legislation, where necessary.

The development of new networks intended for public safety and disaster relief will be monitored. Since, due to their nature, these systems may be used efficiently only if harmonised on a wider geographical territory, the development of technology and regulations in the EU must be followed in order to implement them appropriately in the Republic of Croatia. Furthermore, the development of cognitive radio will be followed, both in the technological and in the regulatory sense. For the purpose of greater harmonisation of spectrum use, and since this is a fast-growing market, the development of use of short-range devices will be monitored and their operation will be allowed, considering their current use in the RoC, in those frequency bands where this is justified and possible. Special attention will be paid in the process to intelligent remote readings.

Therefore, subordinate legislation will also be aligned, in particular the Radio Frequency Spectrum Allocation Table and the corresponding allocation plans.

The use of the RF spectrum always requires users to abide by strict rules, depending on the frequency band. Every country which efficiently manages its spectrum has established a measurement system for controlling this limited resource.

HAKOM, as a body entrusted with this task in the RoC, has been following good practice of developed EU countries and continuously maintaining, developing and supplementing its measurement system. Continuous development of the system ensures the carrying out of measurements regardless of frequent introduction of new technologies in radio communications.

One of the most important tasks in spectrum control is protection from domestic or international abuse. In addition to efficient solution of problems resulting from the operation of uncoordinated radiocommunications services in the Republic of Croatia, HAKOM will, in 2012, pay special attention to foreign uncoordinated radio frequencies, which have been interfering with undisturbed operation of Croatian radio stations. A special problem that must be mentioned here is Italian use of uncoordinated radio frequencies for radio and television. In 2012, HAKOM will continue to closely monitor foreign use of radio frequencies, particularly by the Republic of Italy, and it will act as part of its authority in cooperation with the MSTI and the Ministry of Foreign Affairs and European Integration.

### **Focus and activities of HAKOM**

Bearing in mind the key processes, the situation in the EU and the Republic of Croatia, in 2012, HAKOM will focus on the following:

- implementing positive European and international practice in the management and regulation of use of the radio frequency spectrum and alignment with the new EU regulatory framework when it is adopted;
- participating at the World Radiocommunications Conference (WRC12) and incorporating its results into existing legislation;
- international coordination of the RF spectrum and the conclusion of implementing agreements (on a bilateral or multilateral level) concerning the use of the RF spectrum;
- preparation for allocation of the radio frequency spectrum of the digital dividend (790-862 MHz) and 2.6 GHz and observation of activities related to the introduction of other services in the 790-862 MHz frequency band and their influence on broadcasting networks;
- planning of radio frequencies and preparation of technical parameters for the issuing of licences for use of the RF spectrum;
- following the international activities related to networks for public safety and disaster relief, cognitive radio and short-range devices;
- protecting citizens from non-ionising electromagnetic radiation with particular emphasis on protection in areas of increased sensitivity (residential areas, schools, kindergartens, hospitals etc.);
- development and evolution of digital television through technical possibilities, introduction of new standards (DVB-T2), ensuring the radio frequency spectrum and granting of licences for new digital terrestrial television networks in the RoC;
- monitoring activities of building of digital television networks in accordance with the issued licences for use of the RF spectrum;
- provision of RF spectrum for the introduction of digital radio, and invitation of public tenders for the granting of licences for use of the RF spectrum;
- organisation of the forum on digital radio;
- monitoring of international activities related to introduction of digital radio;
- maintaining and continuously modernising the existing control and measurement system;
- carrying out of measurements in the RF spectrum (regular control of the spectrum and measurements for the purpose of frequency planning);
- control of use of radio stations operating pursuant to granted licences;
- control of use of RF spectrum by the Republic of Italy.

HAKOM's main activities in relation to RF management in 2012:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Carrying out of activities in accordance with the project plan of the regional SEE project Digi TV for 2012 concerning the switchover and further development of digital television	<ul style="list-style-type: none"> <li>- report on implementation of regional guidelines on legislation progress</li> <li>- report on guidelines for use of the digital dividend</li> <li>- regional specification of receivers and testing specification</li> <li>- report on potential for the introduction of new services</li> </ul>	I-IV quarter	
2.	Cooperation with neighbouring	Preconditions for introduction	I-IV	

	administrations for the purpose of quick release of the spectrum in VHF III and UHF (790-860MHz)	and undisturbed operation of new communications networks and services in the territory of the RoC fulfilled	quarter	
3.	Organisation of the forum on digital radio	Preparation of guidelines and introduction of digital radio in the RoC	I-IV quarter	
4.	Enable electronic submission of applications for all types of licences for use of the RF spectrum	Process of the granting of individual licences for use of the RF spectrum for all types of licences improved	I-IV quarter	
5.	Public auction for the allocation of the RF spectrum for the digital dividend (790-862 MHz) and 2.6 GHz	<ul style="list-style-type: none"> <li>▪ Agreements with neighbouring countries concluded</li> <li>▪ Auction documentation prepared</li> <li>▪</li> </ul>	I-IV quarter	
6.	Participation at the World Radiocommunications Conference (WRC12)	Incorporation of results in subordinate legislation	I-IV quarter	
7.	Mobile control and measurement stations	Mobile control and measurement station used	I-IV quarter	
8.	Additional measurement station in Zagreb	Measurement station used	I-IV quarter	

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Amendments of the existing and adoption of new RF Spectrum Allocation Plans	<ul style="list-style-type: none"> <li>- preparation of regional guidelines for the improvement of legislation</li> <li>- report on guidelines for use of the digital dividend</li> <li>- regional specification</li> </ul>	I-IV quarter	
2.	Following the building of digital television networks	Verified fulfilment of conditions for the realisation of networks in accordance with granted licences	I-IV quarter	
3.	Monitoring of the introduction of other services in the 790-862 MHz (digital dividend) frequency band and their impact on broadcasting networks	Undisturbed operation of broadcasting and other services in UHF band V ensured.	I-IV quarter	
4.	International coordination of broadcasting frequencies	Ensure conditions for the putting into operation of new broadcasting networks, with a special emphasis on digital broadcasting	I-IV quarter	
5.	Following of international activities related to the introduction of digital radio in the VHF bands I and II and MF/HF band	Concept about the digitalisation of the VHF band I and II and MF/HF band prepared.	I-IV quarter	
6.	Issuing of individual licences for use of the RF spectrum on the	Licences granted on the basis of applications which were in	100	

	basis of the submitted application	compliance with the prescribed conditions.		
7.	Preparation of technical parameters for the invitation of tenders for radio and television broadcasters	Technical parameters for the requested concessions delivered.	I-IV quarter	
8.	Planning and optimisation of broadcasting networks	Continuous ensuring of efficient use of the RF spectrum	I-IV quarter	
9.	Fees for use of the RF spectrum	Fees calculated and annual invoices for use of the RF spectrum according to valid licences prepared	100	
10.	Amendments to the RF Spectrum Allocation Table	Amendments to the RF Spectrum Allocation Table in accordance with the expressed interest and market and technology development	I-IV quarter	
11.	Following of international activities related to the introduction of a system for public safety and disaster relief, cognitive radio and short-range devices;	Amendments to subordinate legislation, where necessary, and allocation of RF spectrum to relevant services	I-IV quarter	
12.	Maintenance of the control and measurement system	System functional for measurement	I-IV quarter	
13.	Regular spectrum control	Measurements carried out in accordance with the measurement plan for 2012	100	
14.	Measurements of electromagnetic fields	Measurement carried out in areas of special sensitivity	100	
15.	Additional measurements	Measurements upon special requests carried out	100	
16.	Measurement campaigns	Measurement campaigns carried out: <ul style="list-style-type: none"> <li>▪ measurement of signals from neighbouring countries</li> <li>▪ use of radio stations for which individual licences are issued</li> </ul>	100	

## 2.2.2. MANAGEMENT OF ADDRESSING AND NUMBERING SPACE

HAKOM manages the addressing and numbering space in electronic communications by adopting decisions on the primary allocation of addresses and numbers and the corresponding accounts, and by adopting the Addressing and Numbering Plan. It is also responsible for the implementation of number portability by managing the central administrative base of ported numbers (CADPN) and by preparing new functionalities.

### Europe and the Republic of Croatia

The increase in the number of operators in the EU results in the increased demand for resources in the addressing and numbering space. There is also a perceptible trend of new technology use, and the appearance of new services (NGN, fixed-mobile convergence, IPTV), which complicates technical and regulatory requirements for the provision of services.

A similar trend may also be noticed in the Republic of Croatia which requires continuous training of HAKOM's employees to keep up to date with international trends in the introduction of new technologies on the electronic communications market and with the application of new IT aids for the management of the addressing and numbering space.

Furthermore, an increasing number of market participants results in continuous upgrading of the CADPN which takes into account the demands of market participants and simplifies number portability procedure in the administrative sense.

### Focus and activities of HAKOM

In 2012, HAKOM will focus, in particular, on the following:

- the allocation of addresses and numbers to operators in a transparent, objective, balanced and unbiased manner by means of a web application existing within the framework of the e-Agency programme,
- the upgrading and modernisation of CADPN,
- the introduction of the numbering plan for SMS,
- the control of appropriate routing of calls to emergency services,
- making possible adequate calling of emergency service numbers to users with special needs.

HAKOM's strategic and regular activities in relation to addressing and numbering space management in 2012:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Allocation of addresses and numbers	Workshop with operators took place Process has been improved	I-IV quarter	N
2.	Drafting of the numbering and addressing plan	Single allocation and control of active SMS codes.	I-IV quarter	N

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Upgrading of databases (CADPN, DAN, database of operators)	Clearer, simpler and more accessible databases	100	
2.	Phone complaints	Quicker resolution of emergency cases	100	N
3.	Ensuring numbering and addressing resources	Decisions on primary assignment of addresses and numbers	100	N
4.	Billing for fees for addresses and numbers	Bills for fees	100	N

## **2.3. SERVICES AND NETWORKS**

In accordance with the architecture of next generation networks (NGN), regulation has been divided into networks and services.

### **2.3.1. SERVICES**

HAKOM is responsible for following the development of next generation networks (NGN), with a special emphasis on openness, neutrality and access technologies and services.

Open access is a key element both for the development of market liberalisation and for technological development of networks. With a view to better defining regulatory frameworks necessary for the development of open access, HAKOM pays special attention to business models adjusted to a vertical, layered architecture in order to minimise possible discrimination in the provision of retail services.

HAKOM supervises conditions for the provision of electronic communications services and quality of electronic communications services.

HAKOM identifies operators of universal services, defines their rights and obligations and follows the development and level of retail prices of universal services and quality of universal services. Upon request by operators of universal services, HAKOM decides whether costs incurred by the obligation to provide universal services represent an unfair burden on universal service operators, it calculates net costs for the provision of universal services and finally, where necessary, adopts a decision establishing a system for remuneration of net costs to universal services operators.

HAKOM is also in charge of issuing certificates, invoices for fees for the provision of electronic communications services and other documents in accordance with the Electronic Communications Act and regulations adopted pursuant to this Act.

HAKOM supervises the advertising of value added services, and, where necessary, carries out tests to verify whether services are provided in accordance with the Ordinance and whether the use of such services causes unwanted electronic communications for the users.

### **Europe and the Republic of Croatia**

The development of next generation networks is a precondition for economic development of any country. The development of broadband access services encourages the development of next generation networks and increases the value and overall competitiveness of a country and its regions. By regulating the access NGN network (NGA), the EU is trying to promote effective investments of SMP and other operators into infrastructure by protecting former investments. This implies monitoring and streamlining the development of and investments into next generation networks, in particular into optical access networks and, in addition to economic analyses, the observing and resolution of problems of implementation and migration towards NGN networks.

The growing number of Internet users results in the need for the protection of databases and user information. Network security measures are necessary for the purpose of data protection during Internet transfer, in particular when the majority of companies, governments and academic communities use Internet as a means for the exchange of data. The security of networks and information also includes the protection of infrastructure, electronic signature, electronic commerce, and preparedness for emergency response. HAKOM's competences also include the introduction of elements of "Network and information security", such as supervision, lawful gathering of data, awareness raising and user protection.

Through its membership in the Body of European Regulators (IRG/BEREC), HAKOM actively participates in the work of the above-mentioned groups, follows European Commission recommendations on the above-mentioned topics and, where necessary, introduces amendments to relevant legislation. HAKOM pays special attention to the monitoring of the Working Group for Next Generation Networks (NGN) and for Network and Information Security. HAKOM has also been participating in the work of BEREC's team for network neutrality as one of the authors of the document on "Network Neutrality and Quality of Service".

Internet has grown exponentially in the recent years: the number of users and types of technologies used for access to the network of all networks. The integration of classic data networks based on the IP protocol with other user communications networks and interfaces creates new needs and requirements for IP network protocol which cannot be met by the existing IPv4 version. Therefore, the new version of IP protocol, IPv6 protocol is the next step in the development of Internet and its adjustment to new user needs, the development of new applications and integration of communications networks and it, thus, enables long-term development of the Internet and services. IPv6 protocol is envisaged as one of the basic communications protocols both in classic IP data networks and in next generation mobile networks.

For the purpose of raising the awareness of companies and citizens in the RoC, a new IPv6 working group will be established and it will be composed of HAKOM, CARNet, and e-Croatia, and its principal task will be the drafting of documents on technical procedures and manners of migration towards IPv6 networks.

### **Focus and activities of HAKOM**

In 2012, HAKOM will focus, in particular, on the following:

- preserving open and neutral characteristics of the Internet, that is, on issues of network neutrality in accordance with the new EU regulatory framework;
- the application of best EU practice in relation to quality of service;
- upgrading network security, i.e. protection of data during transfer over the Internet and protection of infrastructure by introducing electronic signature, electronic commerce, and preparedness for emergency response
- monitoring the introduction of elements of "Network and information security", such as supervision, lawful gathering of data, awareness raising and user protection;
- participation in the work of a working group of the European Body of Regulators (IRG/BEREC) for Next Generation Networks (NGN) and for Network and Information Security;
- supervising the fulfilment of obligations undertaken by universal service operators;
- monitoring of the provision of value added services (special tariff services) in order to ensure additional protection of users of these services;
- testing of value added services in order to determine whether such services are provided in accordance with regulations,
- monitoring of the provision of services by mobile and fixed operators,
- testing of the quality of services, assessment, testing and verification of the measurement and billing systems,
- the carrying out of measurement/testing of lines that are or might be used for the provision of broadband services,
- increase of efficiency of issuing of confirmations of prior notification.



HAKOM's main activities:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	e-Call	Necessary changes in ordinances under HAKOM's competence established	I-IV quarter	N
2.	Supervising the quality of broadband access service	Procurement of an application for measuring speed of broadband Internet access Software certification Service promotion	I-II quarter	
3.	Testing of the quality of services, assessment, testing and verification of the measurement and billing systems	2 measurements carried out with all operators with market share over 2%	I-IV	N

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Receiving of user complaints	Quicker resolution of emergency cases	130	N
2.	Supervision over the provision of services by mobile and fixed networks	Ensuring better protection of users of these services	120	N
3.	Monitoring network and information security	Gathered and analysed data Conclusions on websites Impact on general terms and conditions	100	N
4.	Supervision over processing of applications and notifications of the beginning of provision of electronic communications services	Issuing of certificates and updating of operator's lists through the e-operator system	100	N
5.	Verification of use of the existing access network for provision of broadband services	Periodic measurements carried out upon user requests	100	
6.	Control of work of operators of universal services	Analysis of quality of universal services	100	N
7.	Quality complaints and resolution of disputes between operators	Better cooperation with operators for the purpose of quicker resolution of disputes	120	N

### **2.3.2. NETWORKS**

HAKOM is responsible for monitoring and supervision of next generation networks (NGN) and for monitoring the gradual elimination of circuit switching.

Monitoring and supervision of network development includes monitoring the development of equipment, different technologies of materials and tools used for building and maintaining infrastructure, and technology and process for planning, designing and protecting electronic communications infrastructure and networks, in particular in relation to physical planning and construction conditions.

HAKOM supervises the application of standardisation, interoperability and integration of new network elements and interconnection between networks. This includes signalling and protocol issues, as well as billing and tariffs models in networks, which may influence new elements of market domination.

Construction conditions refer to physical planning of electronic communications infrastructure, special conditions for the construction of electronic communications infrastructure and of business or residential buildings, safety zones of electronic communications infrastructure and associated facilities and protection zones of radio corridors, the issuing of certificates of compliance of main projects and technical inspection of constructed facilities as part of the procedure for the issuing of certificates of occupancy for facilities.

During procedures for issuing of construction conditions, HAKOM is in charge of the following:

- participation in the drafting of strategies, studies and implementation of physical plans at all levels in the part referring to electronic communications infrastructure;
- issuing of requirements and opinions and participating in previous and public consultations in the procedure for the drafting and adoption of physical planning documents;
- issuing special conditions in procedures for the granting of location permits, opinions and approvals of designs for interventions in space within the zone of electronic communications infrastructure and associated facilities and protection zone and the radio corridor of certain radio stations;
- issuing opinions in the process of drafting and adopting physical planning documents;
- participating in the issuing of location permits by taking part at conferences;
- issuing of the certificate of compliance of the main project with designs in the procedure for the issuing of approvals for main projects and building permits;
- participating in the work of commissions for technical inspection of completed facilities of electronic communications infrastructure as part of the procedure for the issuing of certificates of occupancy for facilities in cases where it participated in procedures for the issuance of documents approving construction;
- issuing of certificates of quality of joint antennae systems.

In the area of construction and access to electronic communications infrastructure, which is an important factor for electronic communications market liberalisation and development, HAKOM pays special attention to new optical networks and associated technologies. HAKOM's main role in this area is to effectively use the existing electronic communications infrastructure and associated facilities, to adopt legislative documents and regulate the existing situation, the right of way, to prevent and sanction trespassing, mediation in disputes between operators and inspection of use of the existing access network for the provision of broadband services.

In procedures related to sharing of electronic communications infrastructure and associated facilities, HAKOM carries out the following key activities:

- analyses requests for collocation and sharing of electronic communications infrastructure and the establishment of the existence of technical possibilities for sharing;
- mediates in and analyses the prepared technical solutions and establishes facts in the process of sharing of the existing electronic communications infrastructure in disputes,

- determines technical requirements for collocation and unbundling of the local loop;
- drafts proposals for laws, acts, instructions and forms necessary for sharing of electronic communications infrastructure.

### **Europe and the Republic of Croatia**

The EU is trying to speed up investments and building of electronic communications infrastructure as a precondition for the development of the electronic communications market, particularly for the development of broadband access and broadband services market which have been recognised in the world as principal moving forces of overall economic growth, employment and competitiveness and as an important factor for more efficient health care, education, science, tourism, transport etc. Any obstacles resulting in decrease in investments and building of electronic communications infrastructure are being eliminated and conditions are being created for equal entry of new investors to the area of construction of new broadband networks, in particular those based on the optical technology. In the process, special attention is paid to the protection of the environment and of space. Main trends noticed in the EU and in the Republic of Croatia, in relation to the majority of operators, are reduced investments into and decreased construction of electronic communications infrastructure, the need for better protection of the environment and space, and rapid development of the infrastructure market.

With a view to promoting effective development of electronic communications infrastructure, HAKOM will undertake activities aimed at creating preconditions for quick and undisturbed development of mobile networks of all operators and for the building of quality cable ducts through physical planning which promotes the planning and building of electronic communications infrastructure together with other utilities infrastructure. It will continue to contribute to efforts to create quality physical plans in counties and at lower levels that will better appreciate the contribution made by electronic communications to the overall economic and social development of the observed areas. Seminars will be organised with authorised organisations for the preparation of physical plans informing them about the importance of including electronic communications infrastructure in physical plans. This will create preconditions for the improvement of economic, social and other starting points for sustainable development. Presentations will be held in units of local and regional self-government on the topic of integrated infrastructure.

Broadband penetration still remains unsatisfactory. HAKOM will continue promoting new technologies and encouraging the development of infrastructure for broadband access, in particular in targeted geographical areas. In this manner, broadband Internet access will become more available thus contributing to a more diverse offer of broadband services by all operators. The promotion of technology of optical access networks and allowing investments into optical access infrastructure to other subjects, in the first place units of local and regional self-government, significantly increases the availability of broadband access.

HAKOM will continue gathering information about paths and infrastructure capacities and it will start creating a solution that will enable a single point of contact for the relevant information on the electronic communications infrastructure in geo-information system, which will contribute to more efficient resolution of applications for sharing of the existing electronic communications infrastructure, to the resolution of the existing situation in infrastructure use, to preparation of physical plans and to the issuing of construction conditions to different investors.

### Focus and activities of HAKOM

In 2012, HAKOM will focus, in particular, on the following:

- participating in the adoption or amendments to physical planning documents;
- satisfying the requirements for the protection of human health and space and for the preservation of the environment;
- efforts to achieve joint physical planning in the part relating to electronic communications;
- stimulating investments into electronic communications infrastructure on the common basis;
- encouraging effective investments into infrastructure by issuing special conditions for construction/approvals for projects;
- ensuring that all building owners may freely chose an operator, and that all operators have access to a building under equal and non-discriminating conditions;
- establishing special conditions for interventions in space in the zone of electronic communications equipment and associated facilities;
- securing protection zones and radio corridors;
- encouraging the construction of integrated infrastructure.
- supporting effective use of the existing electronic communications infrastructure as a limited resource;
- initiating a programme of horizontal state aid for the development of broadband Internet access (fixed and mobile communications) in areas lacking sufficient interest for target groups of users,
- prompt issuing of right of way certificates and carrying out of procedures related to the right of way;
- defining technical, occupancy and other conditions for certain types of electronic communications networks and electronic communications infrastructure and associated facilities, and the alignment of subordinate legislation;
- promoting and encouraging broadband Internet access, in particular by means of open optical access networks;
- monitoring the development of access technologies and models encouraging open use;
- international cooperation with relevant organisations and institutions in the electronic communication sector;
- gathering of information about paths and infrastructure capacities in the geo-information system, and the creation of a single database of electronic communications infrastructure.

HAKOM's main activities:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Creation of a GIS solution (application) about access to the relevant information of the electronic communications infrastructure	Solution's requirements defined, procurement procedure conducted, and implementation of the solution of total electronic communications infrastructure initiated	31/12/2012	N

2.	Implementation of guidelines for the preparation of physical plans for electronic communications infrastructure	Preparation of guidelines and organisation of trainings and workshops with authorised organisations for physical planning and county offices for physical planning	31/12/2012	N
3.	Programme of horizontal support to less inhabited areas	Programme defined, planned, aligned and initiated.	31/12/2012	N
4.	Promoting of investments into broadband access development	Organisation of workshops and presentations to local self-government representatives about ordinances concerning the building of infrastructure, through building of shared infrastructure, which permits broadband access, and about possibilities for investment into broadband access infrastructure through construction of integrated infrastructure.	31/12/2012	N
5.	Network neutrality	Continuation of monitoring the situation on the Croatian market, participation in the international activities and, where necessary, adoption of measures and/or recommendations	31/12/2012	N

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Previous and public consultation about the drafting and adoption of physical planning documents	Active participation in consultations.	110	N
2.	Issuing opinions in the process of drafting and adopting physical planning documents	Assessment and opinion formed and delivered.	110	N
3.	Special conditions in the procedure for the issuance of location permits, opinions and approvals for design	Conditions for licences and opinions on projects granted.	95	N
4.	Conferences on the issuing of location permits	Active participation in conferences.	80	N
5.	Special conditions concerning spatial interventions in safety zones	Special requirements within the ECI issued.	110	N
6.	Certificates of compliance of the main project with designs in procedures for the issuing of approvals for main projects and building permits;	Certificates issued on time.	100	N
7.	Technical inspections of constructed facilities	Active participation in the work of conferences for technical inspections.	50	N

8.	Certificates of quality of joint antennae systems.	All cases processed within time limits.		N
9.	Efficient use of limited free space in electronic communications infrastructure	Implementation of provisions of the Ordinance on the manner and conditions of access to and sharing of electronic communications infrastructure intensified.	100	N
10.	Right-of-way certificates and regulation of the existing situation (legalisation)	Granting of certificates intensified.	100	N
11.	Dispute resolution between operators	Agreement reached, Council decision adopted or order issued by expert supervisor	100	N

## 2.4. INSPECTION SUPERVISION

Amendments to the legislative framework entrusted HAKOM, as a regulatory authority for post and electronic communications market, with inspection in electronic communications. In 2012, HAKOM will be the only authority in the RoC competent to supervise the behaviour of market participants and to remove the noticed violations or deficiencies as well as to correct unacceptable behaviour.

### Europe and the Republic of Croatia

The alignment of national legislation to European directives and regulatory frameworks is aimed at providing significant supervision competences to regulatory authorities as the most competent factors vested with public authority on post or electronic communications markets. The RoC, as a country soon to become full member of the EU, is not lagging behind in the development of an efficient supervision system on the mentioned markets. Inspection supervision serves as a guarantee for a regulated market and fulfilment of prescribed obligations of all participants.

HAKOM will therefore prevent violations of regulatory obligations by means of regular and timely inspections, as well as unauthorised and uncoordinated spectrum use, it will protect users and supervise R&TT equipment sold in the territory of the Republic of Croatia.

Particularly challenging is the establishment of mechanisms for efficient supervision of the market of R&TT equipment. So far, this was done by issuing authorisations for import and placing on the market of R&TT equipment. This kind of market control must be abandoned in the process of accession to the EU, and countries are left only with supervision. In 2012, HAKOM will establish and develop an effective mechanism which excludes the issuing of authorisations but at the same time protects both market and users.

### Focus and activities of HAKOM

In 2012, in the area of inspection supervision, HAKOM will focus, in particular, on the following:

- implementation of regulatory obligations on all operators which have been imposed such obligations,
- protection of users from the point of view of the provision of services and tariff systems;

- addressing and numbering
- protection of users from interference;
- unauthorised use of the RF spectrum;
- limiting effects of electromagnetic fields;
- protection of the market in relation to R&TT equipment;
- infrastructure operators' obligations;
- lawfulness of service provision;
- issuing of misdemeanour motions or orders in cases of violations of regulations.

HAKOM's main activities in relation to inspection supervision:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Mechanism for efficient control of R&TT equipment	Mechanism established and running. At least 7 inspection supervisions carried out in large shopping centres in the entire territory of the RoC.	I-IV quarter	

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Supervision of regulatory obligations	Prompt reactions to all indications of non-compliance with, or abuse of, regulatory obligations	100	N
2.	Supervision for the purpose of user protection	Prompt reactions in all cases of abuse endangering users	100	N
3.	Removal of interferences to radiocommunications systems	All domestic interferences eliminated in the shortest possible time. Relevant authorities in countries from which interference is originating informed about foreign interferences	100	N
4.	Uncoordinated use of the RF spectrum	Lack of coordination eliminated	100	N
5.	Unauthorised use of the RF spectrum;	Operation of unauthorised radio systems or radio stations prohibited	100	
6.	Supervision over obligations of infrastructure operators	Prompt reactions to all indications of infrastructure operators' non-compliance with obligations	100	N
7.	R&TT equipment	Supervision carried out in cases of suspicion of non-compliant R&TT equipment on the market	110	N

### 3. REGULATION OF THE POSTAL SERVICES MARKET

HAKOM's activities in 2012 will be focused on the completion of gradual liberalisation of the postal market in the RoC, but also on sustainable provision of universal postal services and effective user protection. The objective of these activities is to create equivalent conditions for all service providers on the market of universal and other postal services so that users, that is, all citizens of the RoC, would have the possibility to choose postal services and providers in accordance with their wishes and needs.

HAKOM's regulatory activities on this market comprise:

- proposing, carrying out public consultation and adopting subordinate legislation pursuant to the PSA, as well as providing expert opinions and explanations of current regulations under its competence;
- issuing of licences for the provision of universal postal services and adopting decisions on amendments, withdrawal and expiry of the issued licences;
- receiving applications from providers for the provision of other postal services, their terms and conditions and tariffs, as well as the assessment of their compliance with the PSA;
- dispute resolution in cases of denial of requests to access public operator's postal network;
- separation of business activities of the public operator;
- verification of compliance of terms and conditions of universal service providers with the PSA and possibilities for amendments or withdrawal of terms and conditions of providers of universal postal services;
- approval of prices of reserved postal services and monitoring of the application of prices of universal and other postal services, and the undertaking of appropriate measures;
- gathering, analysis and publication of data, information and documents about the situation on and development on the postal services market in the RoC in order to ensure equal and effective competition;
- supervision over the application of the PSA, ratified international acts and other implementation acts, as well as the submission of misdemeanour motions;
- active protection of users of postal services and resolution of disputes between users and providers of postal services;
- participation in the work of national, European and international postal organisations and bodies;
- other tasks laid down in the PSA.

HAKOM carries out its regulation of the postal services market in the two basic ways:

- Proactive – initiatives for further development of the postal services market;
- Corrective – reaction to noticed situations and development trends on the postal services market.

As part of the proactive component, HAKOM collects and publishes data, notifications and documents related to the situation on and development of the postal services market. It is planning to strengthen and confirm its role as a regulator of the postal services market by means of frequent contacts and cooperation with all actors of the public postal system and by providing equal support to all providers of postal services. This is aimed at liberalisation of the postal market and development of postal services. HAKOM will focus, in particular, on sustainable provision of postal services, especially on their quality, affordability and



availability thus offering to all users equal rights and possibility to use those basic postal services the continuous provision of which is guaranteed by the RoC on its entire territory.

The corrective component of HAKOM's activities consists in two basic activities. The first one is the undertaking of adequate measures to streamline the development of the postal services market in accordance with the PSA, the Ordinance on the provision of universal postal services, the Strategy for the Development of the Postal Services Market in the RoC and other published guidelines of the Government of the RoC. The other component of corrective activities refers to supervision in all cases of possible abuse of legislation, and it will be conducted by HAKOM on a regular or extraordinary basis, on the basis of knowledge and/or submitted complaints.

### **Europe and the Republic of Croatia**

The concept and scope of universal postal services has been laid down in Postal Directives 97/67/EC, 2002/93/EC and 2008/6/EC. With the adoption and entry into force of the last directive, the process of gradual opening of the common European market of postal services has reached its final stage. In early 2011, the total of 16 countries have fully liberalised the postal market, which represents 95% of total postal traffic. 11 Member States, which contribute with the remaining 5% of traffic, have prolonged full liberalisation of the common European postal market until 2013.

Since Croatia asked from the EC for postponement of the application of Directive 2008/6/EC in 2009, that is, for postponement of full liberalisation of the postal services market, by 31 December 2012, the postponement has been incorporated into transitional provisions of the PSA upon EC's request. As a result of envisaged gradual liberalisation by the end of 2012, the market of postal services in the RoC, as well as the public operator Hrvatska pošta d.d. (hereinafter: HP) will be able to prepare for all challenges brought about by full liberalisation and opening of the postal services market. This will be made possible by the adoption of the new PSA and new subordinate legislation, some of which will be under HAKOM's competence. HAKOM must make sure that liberalisation and opening of the postal services market further contribute to availability and satisfactory level of quality of universal postal services, which at the same time guarantees the appropriate level of standard of living and work of all Croatian citizens, and the undisturbed functioning of the economy in general.

The legislator, HAKOM, and the public operator, HP, will be faced by significant challenges in the period preceding full market liberalisation and HAKOM will continue in 2012 to strengthen its capacity for its role and tasks on a fully liberalised market. Furthermore, HAKOM will continue to strengthen its cooperation with all actors in the national, European and international postal system in order to be able to fulfil its role, objective and tasks on the fully liberalised European postal market. It will actively participate in the work of the European Regulators Group for Post (ERGP) and in working groups for accounting separation, price formation, public network access and other issues between countries with a view to building competences for postal market regulation and harmonisation of the common European postal system. In the course of the year, HAKOM will dedicate special attention and activities to expert assistance in the preparation of a new legislative framework, where necessary, and it will, in particular, focus on the drafting of subordinate legislation in its sector in order to prepare all actors for complete opening of the postal market.

### **Focus and activities of HAKOM**

The key issues that HAKOM will focus on in the upcoming period are the following:

- sustainable development of universal postal service;

- accounting separation and allocation of costs of the public operator;
- calculation and financing of the net cost of universal postal service;
- analysis and undertaking of regulatory measures aimed at using access to the public operator's postal network;
- quality of universal postal services;
- availability of universal postal services in the entire territory of the RoC;
- collecting and analysing data on the situation on the postal services market,
- lawfulness of the provision of postal services;
- rights and obligations of postal service users, responsibility of providers of postal services and protection of users of postal services.

HAKOM's main activities on the postal services market in 2012:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	IPA 2009 Twinning light project "Support to HAKOM in the area of accounting separation of postal services"	Final meeting at the end of implementation of project activities, final report	I quarter	
2.	Project of accounting separation and cost allocation of HP	Adoption of the decision on the manner of separating HP's business activities and monitoring of implementation of the above-mentioned decision	II quarter	

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Exercise of regulatory authority in the postal services sector	Licences for the provision of postal services issued, decision adopted on amendments, withdrawal and expiry of licences, applications for the provision of other postal services received; decisions on network access adopted	100	
2.	Activities concerning the ensuring and control of compliance of the public operator, HP, with the obligation to provide all universal services in the entire territory of the RoC in compliance with the PSA and regulations adopted pursuant to the PSA (terms and conditions, prices of reserved services, five-day delivery, postal offices - closure, working hours and the similar).	Terms and conditions for universal postal services aligned. The price of reserved postal services approved;	100	

3.	Protection of rights of users of postal services	Disputes between users and providers of postal services resolved	100	
4.	Collecting and analysing data on the situation on the postal services market.	Data on the postal services market published on a quarterly and annual basis	100	
5.	Supervision over the quality of universal postal services.	Audit of the report on the quality of provision of postal services carried out.	100	
6.	Provision of expert opinions and explanations concerning the implementation of PSA and regulations adopted pursuant to PSA	Expert opinion and explanation prepared and delivered.	100	
7.	Adoption of regulations and amendments to implementing legislation for PSA, while taking into account former HAKOM's experiences.	Subordinate legislation adopted as well as amendments to subordinate legislation.	100	
8.	Supervision of work of postal service providers	Prompt reactions to all indications of non-compliance with, or abuse of regulatory, obligations	110	
9.	Cooperation with providers of postal services	Improved manner of work with providers of postal services	100	
10.	Better information of users about services and their rights and obligations in the use of services	Leaflet (brochure) with advice for users of postal services published.	120	

## 4. CONSUMER PROTECTION

HAKOM's basic regulatory principles and objectives include the promotion of interests and protection of rights of users of public communications and postal services.

The promotion of users' interests is carried out by:

- ensuring access to universal public communications and postal services for all users of services in the entire territory of the Republic of Croatia;
- promoting clear information about prices and conditions of use for services;
- informing and educating consumers about their rights and obligations;
- dealing with the needs of special social groups (disabled persons, children, etc.)
- processing, controlling and harmonising general acts of operators adopted by operators in accordance with the law and ordinances;
- resolution of complaints and disputes between users and operators,
- participating in various activities of other state institutions and associations dealing with user protection;
- international cooperation with the relevant organisations and institutions on consumer protection, and participation in the work of their expert bodies and work groups;
- publishing data and informing competent state authorities.

Within HAKOM there is also the *Consumer Protection Commission*<sup>3</sup>, an advisory body on the basis of whose proposal and opinion HAKOM resolves disputes between operators or providers of postal services, on one hand, and users of services, on the other.

Consumer protection includes:

### *Prevention in consumer protection*

- informing and educating users about their rights and obligations;
- publishing appropriate information and instructions for users of public communication and postal services on HAKOM's website, in newspapers, or in some other appropriate manner;
- processing, control and amendments, supplementation or deletion of individual provisions of general terms and conditions which are adopted by operators of public communications services and universal service providers in accordance with the law and the ordinances;
- researching, analysing and controlling services provided on the market, proposing measures for the prevention of user protection and performing supervision on the basis of a complaint or ex officio;
- participating in professional gatherings and public consultations on user protection.

### *Resolution of complaints and disputes*

The protection of consumer rights is ensured by conducting simple and accessible procedures for the resolution of complaints and disputes between users and operators of public communications and postal service as an out-of-court procedure, which is free of charge for users. The following procedures are carried out for this purpose:

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<sup>3</sup> The Commission consists of 7 members out of which 5 are HAKOM's employees, and 2 are representatives of the Union of Consumer Protection Associations.

- receiving, filing and processing cases received in the form of requests for the resolution of disputes between subscribers and operators of public communication and postal services, and between users and providers of postal services, and preparing them for the adoption of a decision by the Commission for the Protection of Consumer Rights;
- processing of cases after the opinion given by the Commission for the Protection of Consumer Rights on the basis of which HAKOM resolves disputes and may adopt binding decisions for operators of public communications services and postal service providers;
- education and assistance to users in dispute resolution proceedings;
- providing users with information on the status of their requests over the phone or on HAKOM's website, updated on a daily basis;
- keeping a database of consumer complaints;
- cooperating with operators of public communications services and providers of postal services on the resolution of complaints and claims of users.

### **Europe and the Republic of Croatia**

A new regulatory framework was established in 2009 and 2010 which envisaged more significant amendments concerning the exercise of rights of users to services and special protection of users. EU Member States were supposed to align with all novelties by May 2011. Croatian legislation was aligned accordingly by adopting amendments to ECA and PSA. European regulations establish an obligation to provide universal services in order to encourage the development of market and services and to ensure equal use of all services by all citizens regardless of their location. Particular emphasis was placed on the need for personal data protection and the resolution of requests by users with special needs, that is, of special social groups.

European activities will include issues related to regulatory basis for the application of the principle of Net Neutrality with a special emphasis on the role of national regulatory authorities in user protection. Special project tasks will serve to define problems that users have with the following:

- number portability procedure (unjustified holding of users, taking over of users on the basis of misrepresentation);
- transparency in the provision of services in relation to tariffs (prices) and quality of services (e.g. speed in case of Internet services);
- promotional activities, in particular in case of special tariff services;
- establishing of a basis for the resolution of requests by users with special needs.

HAKOM has been actively participating and will continue to participate in all of their activities. The new legal framework for dispute resolution entitles HAKOM to adopt decisions which are binding for operators and which allow only the instigation of an administrative dispute. Decisions on dispute resolution are adopted by HAKOM's Director, which satisfies the principle of cost effectiveness of procedures (considering small value of disputes) compared to disputes between operators the resolution of which is under the competence of HAKOM's Council.

Bearing in mind the manner of dealing with disputes between consumers and operators in the EU, we may conclude that HAKOM has taken upon itself a big responsibility and obligation when it took over the resolution of these out-of-court proceedings. However, at this moment of market development and of the overall society development, this contributes to legal security of all participants.

As opposed to the previous period when HAKOM was obliged to control only SMP operators for the purpose of granting the prescribed approvals, new regulations, with a view to promoting the interests of users, established the obligation to control bylaws and tariff systems of all operators and service providers, before their publication. In order to establish the needs of consumers and to raise the level of their protection, surveys are carried out for users of postal and public communications services and the results of such surveys and of market analyses are used to determine the necessary activities.

### **Focus and activities of HAKOM**

In 2012, HAKOM will focus on strengthening the position of users and the promotion of their interests through:

- alignment and adoption of the prescribed subordinate legislation under HAKOM's competence and all operators' by-laws for the purpose of alignment with the new pieces of legislation;
- analysing services on the market both in relation to their provision and in relation to tariff systems, that is, by controlling operators' general terms and conditions and tariff systems of operators and service providers;
- introducing and aligning procedures and processes for protection of users of postal services, which have proven to be efficient for users of public communications services.
- introducing additional preventive activities and procedures bearing in mind, in particular, the education of consumers in all operationally and financially feasible forms;
- organisation of appropriate workshops with operators for the purpose of discussing the current topics and finding solutions.

HAKOM's main activities in consumer protection in 2012:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Alignment of subordinate legislation with the new legislative framework and the corresponding alignment of operators' bylaws	<ul style="list-style-type: none"> <li>▪ Relations between service providers and users of services have been improved.</li> </ul>	IV quarter	N
2.	Improvement of procedures for resolution of disputes and user complaints	<ul style="list-style-type: none"> <li>▪ A simpler and more economic dispute resolution procedure ensured.</li> <li>▪ High level of user protection achieved.</li> </ul>	IV quarter	N
3.	Preventive activities aimed at user protection	<ul style="list-style-type: none"> <li>▪ Better information of users.</li> <li>▪ More responsibility of operators/service providers in the protection of their users.</li> </ul>	IV quarter	N, 4253,

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Resolution of complaints and disputes between users and operators,	<ul style="list-style-type: none"> <li>▪ High level of user protection achieved.</li> </ul>	L00	N
2.	Alignment of general terms and conditions and tariff systems of operators and service providers	<ul style="list-style-type: none"> <li>▪ General terms and conditions and tariff systems have been aligned.</li> <li>▪ Users are able to use services adjusted to their needs and lawfulness of the provision of services has been ensured</li> </ul>	150	N
3.	The analysis of the provision of services, tariff systems and user complains according to individual operators	<ul style="list-style-type: none"> <li>▪ Proposals for improvement of HAKOM's interaction with operators/service providers</li> <li>▪ High level of user protection achieved.</li> </ul>	110	N
4.	Information and education of users via different media	<ul style="list-style-type: none"> <li>▪ Participation in radio programmes dealing with consumer-related topics</li> <li>▪ Inclusion into TV shows.</li> </ul>	110	N
5.	Maintenance and improvement of HAKOM's website for users.	Better information of users about services and their rights and obligations in the use of services	110	N
6.	Better information of users about services and their rights and obligations in the use of services	<ul style="list-style-type: none"> <li>▪ Preparation and publishing on the website of a brochure with advice for users.</li> <li>▪ Inserts in daily newspapers.</li> </ul>	100	N, 4253
7.	Defining needs and satisfaction of users	Survey carried out and results published	100	N, 4257
8.	Upgrading of application "Complaints system"	Users are able to check the status of their case on the web.	110	N, 4258
9.	Cooperation with national and international bodies and institutions dealing with user protection	<ul style="list-style-type: none"> <li>▪ Exchange of knowledge and experiences.</li> <li>▪ Application to improvements in user protection.</li> </ul>	100	N, 4211

## **5. INCREASE OF HAKOM'S CAPACITY**

HAKOM has been continuously trying to adjust its regulatory capacity to market needs and to increase the efficiency and transparency of its work by means of better organisation, definition and IT introduction into work processes, by creating a strong and integrated information system oriented towards e-government, by establishing active international cooperation and especially by enhancing the knowledge and skills of its employees.

HAKOM has adopted, and at the beginning of this year, updated a Strategic and Operational Development Plan 2008-2012 which is being implemented through two improvement programmes:

- convergence – oriented towards competition and market regulation aimed at improving competition and increasing investments and innovations in the electronic communications market,
- modernisation – oriented towards the development of its own ability to regulate and develop electronic communications markets with the priority strategic goal being the development of HAKOM's regulatory competence.

Special attention in these programmes is dedicated to the raising of own capacity and efficiency through the development of regulatory competences, the "Looking to the Future" project and the e-Agency project. In the upcoming year, HAKOM is planning to prepare a new Strategic and Operational Plan for the following mid-term period.

### **5.1. DEVELOPMENT OF COMPETENCES**

The first wave of regulatory reforms started in the world in the final decade of the past century and it brought a series of advantages and accelerated the development of the sector. Independent regulators appeared, market and competition opened, the privatisation of incumbents started, non-discriminating interconnection was introduced, local loops were unbundled, entry barriers were lowered, licensing according to services was introduced, as well as new business models. Although it started in the first decade of this century, RoC relatively quickly adopted and implemented the elements of the first regulatory wave.

#### **The World and the Republic of Croatia**

The crisis that spread throughout the world in the past few years not only slowed down market development but it also brought to the surface certain regulatory problems and challenges thus initiating the second wave of regulatory reforms. Since market is not sufficient for efficient regulation and since the upcoming networks will not eliminate but, on the contrary, increase the number of points where an operator's dominance may occur, it is necessary to further strengthen the regulator's position and to introduce intelligent, efficient and fair regulation. Equal conditions and rules for all must be introduced, including the existing and new market players. Everybody must have equal opportunities to compete on the market. In order to satisfy the requirements of next generation networks, former regulators of the telecommunications market must be transformed into regulators of the market of convergent services. A convergent regulatory framework must be created. The new framework must ensure technological and network neutrality. It must provide the digital dividend and serve as a basis for flexible and efficient management of the spectrum which is becoming an increasingly important resource. Instead of being focused on specificities, they must focus on the general and unified, and instead of taking an administrative approach, they must become intelligent, proactive and flexible market participants. In the context of the



strategy for country's development, they must particularly focus on the development of a broadband eco-system, that is, on the investment and innovation-oriented value chain. An optimal and open access to investments is of key importance for further sector development. For this reason, operators need to find the way of how to stimulate building by starting from competition as a basis for investments. Regulators must pay much more attention to regulation of services and contents. Services and contents, and not the network itself, are the purpose of existence of the new network. How to protect users, how to ensure safety, privacy and identification, when and how to introduce broadband as a universal service? There are numerous questions that need to be answered by a new wave of regulatory reforms.

HAKOM must adjust to the new tendencies and new challenges in a systematic and organised manner. The only logical solution to challenges of market convergence is the convergence of HAKOM as regulator.

### **Focus and activities of HAKOM**

In relation to the development of its own competences, next year HAKOM will focus on the following:

- preparing a Strategic and Operational Plan for the upcoming short-term period;
- intensifying the work on a multidisciplinary research project "Looking to the future";
- continuation of training by means of an interdisciplinary specialist course on market regulation,
- continuation of foreign language learning by its employees, especially English;
- development of a curriculum for life-long learning;
- proactive participation in domestic and international conferences aimed at gaining new knowledge.

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Strategic and Operational Plan 2012-2016	Plan prepared and adopted.	IV	
2.	"Looking to the Future" project	Second stage completed. Research published.	I-IV	

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Course on regulation	Modified in accordance with new challenges	100	
2.	Conferences	Thematic workshops organised Formalisation of gained knowledge	100	

## 5.2. LOOKING TO THE FUTURE

At the end of 2010, HAKOM signed a contract with the Faculty of Electrical Engineering and Computing in Zagreb to launch a multidisciplinary research project "Looking to the Future". In addition to HAKOM and the Faculty of Electrical Engineering and Computing in Zagreb, the project involves the Faculty of Business and Economics in Zagreb, the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split and the Faculty of Electrical Engineering in Osijek, as well as representatives of the industry, namely, Ericsson Nikola Tesla and Nokia Siemens Networks. HAKOM invited all other relevant and interested stakeholders on the electronic communications market to participate in the project (operators, producers and other market participants) thus trying to create the Croatian forum for electronic communications. The project should prepare participants on the electronic communications market, including HAKOM, for challenges faced by this market in the near future.

The "Looking to the Future Project" will focus on topics concerning market regulation in the upcoming years. The project consists of general and specific topics out of which general topics are covered in all three years of research. Every year new topics are added for the project to focus on. Mixed couples or teams consisting of HAKOM's representatives and the academic community are composed for every topic. This research project represents a continuation of successful cooperation between the University of Zagreb and HAKOM after the launching of a multidisciplinary course on regulation of the electronic communications market.

### *Europe and the Republic of Croatia*

The launching of the multidisciplinary research project "Looking to the Future" placed HAKOM among leading countries of the region, and it is among the first in Europe to gather industry, science and legislation in one project of wider social importance.

### *Focus and activities of HAKOM*

Topics for all three years of project duration have been agreed upon. The project consists of general and specific topics. General topics expand over all three years. Research in these areas is repeated if new issues or challenges arise. Every year new topics are added for the project to focus on. The three year project comprises four general topics which are elaborated upon during the first year, updated in the following two years and several specific topics that will be elaborated upon in the first, second or third year. The project defines two research scopes. The first one, 1- 3 years, is focused on market and regulation, and the second one, 5-10 years, with the emphasis on technology and investments.

General topics which cover all three project years are the following:

- a) **Development of electronic communications in the period up to 2020.** Moving forces for technological, business and market development. Positioning of network operators, service providers and producers of IT and communications equipment International and European trends. Peculiarities of the Croatian electronic communications market. Annual updates.
- b) **Next Generation Network.** Architecture and technology of access and core networks. Internet, migration towards IP networks, IMS (IP Multimedia Subsystem) Relation between network operators and service providers in NGN. Development of NGN in the world and in Europe, migration strategies, plans of Croatian network operators. Annual updates.

- c) **Theoretic postulates of NGN regulation.** The analysis of regulatory aspects of introduction and development of next generation networks (competition, social needs, limited resources, net neutrality), problems in the initial stage and the transitional period. Value chain of contents, services and networks, market participants and their relations, sustainable competition. International and European developments, features of the Croatian electronic communications market. Proposal of regulatory activities, knowledge, tools and skills necessary for electronic communications market regulation. Annual updates.
- d) **Infrastructure building.** Policy for building elements of communications infrastructure as part of international, national, regional and local infrastructure projects, in particular in the energy and transport sectors. Influence of the electronic communications sectors on overall social and economic development. Situation in the world, Europe and the RoC. Annual updates.

All of HAKOM's activities related to the Looking to the Future project are regarded as strategic activities.

*In 2012, HAKOM will focus, in particular, on the following:*

- IP-based interconnection. Principles of interconnection with NGN networks and between NGN networks.
- Digital dividend. RF spectrum allocation and assignment plan. Public auction model.
- Network interoperability
- Value chain of contents, services and networks.
- Influence of the electronic communications sectors on overall social and economic development.
- Value added services.
- Fixed-mobile convergence - development of services and influence on the market.
- Quality of service from one end to another of NGN networks.
- Principles of management and billing for services in NGN.
- Protection of users in IP network (privacy and security in NGN)

<b>Strategic activities</b>				
No.	Activity	Result	Completion	Fin. plan
1.	Migration towards IPv6	Preparation of a manual for easier migration.	I-IV	
2.	NGN- migration strategy, network operator plans	Clear image of migration towards NGN of all Croatian operators	I-IV	
3.	IP-based interconnection.	Define models for IP interconnection and establish market influence	I-IV	
4.	Value added services	Prepare a detailed classification of value added services by means of laws and subordinate legislation	I-IV	
5.	Public auction models	Preparation for public auction	I-IV	
6.	Network neutrality	Recommendation on introduction	I-IV	

### 5.3. COOPERATION

Year after year, as Croatia approaches EU accession, HAKOM is keeping up with the application of the best practice in market regulation in accordance with the development and situation on the Croatian market. This is reinforced through international cooperation, which will become one of HAKOM's key activities on the path towards the European electronic communications market and postal services market after Croatia's membership of the EU, and in harmonised application of regulation.

HAKOM will continue to participate actively and to exchange its experience in the field of the regulation of electronic communications and postal services and will strive to implement the best practice in accordance with the development and the conditions on the Croatian market. Intense cooperation with actors on the market of electronic communications and postal services will continue by resolving their requests, by organising public consultation on decisions which are important for market development, joint meetings, working groups and seminars. In 2012, HAKOM will continue regular cooperation with state bodies and ministries on joint activities.

#### Europe and the Republic of Croatia

The EU and the world are faced by new market regulation challenges such as next generation networks, their building, interoperability and neutrality. Furthermore, new possibilities and manners of allocation of RF spectrum appear thus contributing to the development of new services and to availability of broadband access. This process has been developing within the framework of international authorities, working groups, different associations, forums, as well as through bilateral and multilateral cooperation between countries. The World Radiocommunications Conference will take place in 2012 and it will have a significant influence on future development of technology and market. Furthermore, the EU Member States are currently applying the existing regulatory framework and preparing for the implementation of the new regulatory framework after its adoption.

HAKOM has been participating in the activities of these authorities on a regular basis in order to monitor market development, to secure the interests of the Republic of Croatia, to exchange information and experiences, to acquire new knowledge, to recognise regulatory, technological and market challenges on time, and to observe and apply best practices.

#### Focus and activities of HAKOM

In the field of international cooperation in the next year HAKOM will focus on:

- preparing for and participating in the WRC-2012;
- experiences in the regulation of Next Generation Networks;
- experiences in the allocation of the RF spectrum by means of public auction;
- possibilities for use of the digital dividend,
- efficient management and harmonisation of RF spectrum use;
- adjusting the postal system to the one existing in the EU;
- using funds from the pre-accession funds.
- more active participation in the work of international working groups.

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Participation in ITU's World Radiocommunications Conference	<ul style="list-style-type: none"><li>▪ Amendments to radio regulations</li><li>▪ Amendments to allocation table</li></ul>	I-IV quarter	

2.	Use of EU pre-accession funds (IPA programme)		I-IV quarter	N, 4211, 4213, 4257
3.	Organising bilateral and multilateral meetings and workshops with regulators from neighbouring countries	<ul style="list-style-type: none"> <li>▪ Exchange of experiences with market regulation</li> <li>▪ Coordination of use of radio frequencies</li> </ul>	I-IV quarter	N, 4211, 4213, 4257

<b>Regular activities</b>				
No.	Activity	Result	%12/11	Fin. plan
1.	Participating in the work of: COCOM BEREC IRG RSPG RSC	Knowledge and experience gathered and more active participation in the work on: <ul style="list-style-type: none"> <li>▪ EC market regulation</li> <li>▪ gradual consolidation and alignment of the EU market</li> <li>▪ new EU regulatory framework</li> <li>▪ development of new technologies</li> <li>▪ new generation network (NGN/NGA) etc.</li> </ul>	100	N, 4211, 4213
2.	Participation in work: ITU ECC	Gathered knowledge and experience about: <ul style="list-style-type: none"> <li>▪ efficient management and coordination of RF spectrum use;</li> <li>▪ efficient protection against harmful interference and their removal</li> <li>▪ participation in the preparation and adoption of decisions, recommendations and reports on the European and international level</li> </ul>	100	N, 4211, 4213
3.	Participation in work: CERP UPU	Gathered knowledge and experience about: <ul style="list-style-type: none"> <li>▪ development of internal market and services</li> <li>▪ adjustment of the RoC postal system to the EU system.</li> </ul>	100	N, 4211, 4213
4.	Organise and participate in: meetings of international working groups,	<ul style="list-style-type: none"> <li>▪ Exchange of experiences in the regulation of the market of electronic communications and post</li> <li>▪ Coordination of use of radio frequencies and prevention of harmful interference</li> </ul>	100	N, 4211, 4213
5.	Participation with state bodies and ministries:	<ul style="list-style-type: none"> <li>▪ Regular cooperation with state bodies and ministries</li> </ul>	100	

	<ul style="list-style-type: none"> <li>▪ Ministry of the Sea, Transport and Infrastructure,</li> <li>▪ Ministry of Foreign Affairs and European Integration,</li> <li>▪ Ministry of Defence,</li> <li>▪ Ministry of Culture,</li> <li>▪ Central Office for E-Croatia,</li> <li>▪ Electronic Media Agency,</li> <li>▪ Croatian Competition Agency,</li> </ul>	on joint activities.		
6.	Participation at expert gatherings, workshops, symposia and scientific gatherings from the areas of HAKOM's competence	<ul style="list-style-type: none"> <li>▪ Participation in round tables and workshops</li> <li>▪ Publication of expert and academic papers</li> <li>▪ Cooperation with academic institutions on joint projects</li> </ul>	100	

#### 5.4. e-Agency

Electronic government and the associated strategies for the transformation of public administration are intended for citizens as users with the long-term goal being to include them into definition and shaping of the necessary public services. Access to services would not be able only through portals controlled by public administration but the user would choose the access channel in accordance with its needs and level of trust, and depending on the services used and the location from which they are accessed.

E-Agency is a comprehensive program for introducing changes into HAKOM's operations by means of application of information and communication technology which is orienting all business operations towards users. E-Agency also includes continuous adjustment of the procedural and technological framework of HAKOM's activities with a view to achieving more efficiency, optimum use of funds and more quality provision of available services. E-Agency's mission is to offer one access point with attractive services for users. Users do not need to know how the regulator is organised to get the information they need or to obtain the requested licences or authorisations. Integration of information systems in this case leads to fast exchange and consistency of data through various departments without multiple submission of data to HAKOM.

It is a concept for operation of the regulator based on transparency, collaboration and participation of all interested parties on the market of postal services and electronic communications. IT introduction into processes and services and the increase in productivity open possibilities for creation of innovative solutions to widen and facilitate access to HAKOM's regulatory services. Modernisation by means of information and communication technology ensures timely and quality information to all interested parties on the market of post and electronic communications.

The E-Agency programme is an integrated information system based on the concept of e-Government aimed at introducing Internet access through the communication channel agency-citizens and agency-economy.

e-Agency is developed on the basis of the following principles:

- integrated information system;
- flexible and future proof system;
- use of standardised protocols;

- open and modulated system;
- customer oriented.

E-Agency's architecture consists of three layers: IT infrastructure, backend systems and frontend systems.

Backend systems need continuous improvements in relation to user and legislative needs and changes and upgrades are performed on the Resource Management System, Document Management System and Human Resources Management System. The process management system is based on a repository of business processes and it is implemented through modules for management of work activities.

Fronted systems are gathered around a modern, strong portal including numerous electronic, web-based applications such as e-Consultations (public consultation), e-Complaints, e-Portability, e-Licences, e-Market, e-Advice, e-Procurement, e-Employments and the similar.

The above-mentioned e-applications represent a core element of integrated information system since HAKOM is trying to satisfy the needs of interested parties in the market of post and electronic communications, to ensure a high quality of services, easy access and quick delivery of information.

All e-applications have been realised on the basis of the principle of single sign-on which made them immediately activated on the basis of user account parameters. HAKOM's website is based on a strong search engine providing an overview of results according to relevant pages and documents containing the relevant words. Basic functional features of a website intended for persons with special needs have been implemented.

### **Europe and the Republic of Croatia**

Society is turning towards institutions from which innovative solutions are expected that will lead to more rapid development of the economy, more efficient communication and increase of confidence of users and satisfaction with their work. Access to public services in developed countries is based on the concept of e-governments. E-government can be defined as a process of applying information and communication technology to the exchange of information between government authorities, on one side, and citizens and businesses on the other, which is very advanced in developed countries. The usual communication channels are the following: Government - citizens, government - buyers, government - businesses, government - government and government - employees.

The introduction of affordable services and transparent procedures coincides with technology which ensures instant interaction with end users. Initiatives and programmes that are initiated must bring new values and improve efficiency in accordance with needs and quick changes in today's society.

The E-Croatia programme consists of comprehensive activities aimed at speeding up the development of information society in the RoC. The aim of the programme is to provide to citizens and businesses in the Republic of Croatia a high level of information services and a possibility of wide application and exchange of all kinds of information in such a manner as to enable their active participation in global development. By implementing the e-Agency, HAKOM supports the integration of the RoC into a single European market of electronic communications, contributes to overall modernisation of public administration and to greater competitiveness of Croatian society.

### **Focus and activities of HAKOM**

In the year 2012, the e-Agencies programme will focus on:

- further automation of business processes that will speed up the carrying out of tasks and improve the monitoring of key indicators;
- implementation of open interfaces of business systems in order to ensure their integration and automation of processes used by users,
- reducing time that users spend interacting with the regulator by introducing applications that allow the resolution of a request on a single occasion, without multiple submission of data,
- development of services by using an Internet portal that will lead users in an intuitive manner by suggesting choices and activities in accordance with its user profile,
- safe exchange of data and documents while ensuring a high level of safety of information systems,
- implementation of web-based and user-oriented applications.

HAKOM's major activities in the e-Agency programme in the year 2012:

<b>Strategic activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>Completion</b>	<b>Fin. plan</b>
1.	Implementation of GIS-oriented services	Services on the Internet portal offering to users different geopositioned information	IV quarter	IV
2.	Implementation of an e-application: e-Calculator	Application for gathering data from operators and giving users an overview and calculation of a modelled cost for three types of services	III quarter	IV
3.	Implementation of ERP module, public procurement	Application for planning and monitoring the user of funds through public procurement procedures	II quarter	IV
4.	E-Licences for radio amateurs, aircraft and microwave links	Internet-oriented and automated system for the issuing of licences Application - payment - documentation.	III quarter	IV
5.	Implementation of the e-application: Allocation table	Application enabling the display of a chosen part of the Allocation table has been launched	I quarter	IV
6.	E-Auctions application	Application for the procedure for the selection of the best tenderer for use of the RF spectrum	I quarter	IV

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Introduction of the VoIP platform	VoIP platform implemented with additional functionalities of a call system and safety supervision	II quarter	IV



2.	Maintenance of information systems	Reliable operation of information systems with minimal problems and controlled reaction and repair time	IV quarter	N, 4252,
3.	Modernisation of IT systems' architecture	Efficient and modular platforms with acceptable maintenance costs	IV quarter	IV
4.	Updating of contents of the Internet portal	Attractive portal, interesting to users	IV quarter	N, 4252,
5.	Information system security	Information system security increased.	IV quarter	N, 4257, 4258
6.	Optimisation of business processes	Analysis and proposals for optimisation and automation of processes	III quarter	
7.	Document management	All documents are scanned. Digital signature	III quarter	IV
8.	Introduction of ISO 27001	Standard implemented on a selected part of the IS system	IV quarter	4257

The realisation of e-Agency requires additional human and material resources. HAKOM does not have the necessary human resources to execute the entire programme by itself. It is therefore focused on the definition of architecture and specification of an individual application or system, preparation of documentation, and training of end users. The applications and systems themselves are bought ready-to-use by HAKOM or some national companies are engaged in their development.

### **5.5. RESOURCES, HUMAN RESOURCES AND MONITORING**

HAKOM's work and activities are closely related to an appropriate number and educational structure of employees and demand for life-long learning of employees: HAKOM must continuously monitor and adjust to the growing market, technological and regulatory (economic and legal) changes in the electronic communications and postal services sectors.

HAKOM will try to ensure the necessary human resources for the carrying out of the necessary tasks, primarily by increasing efficiency by means of improving processes and by continuous training of its employees.

In relation to professional training of employees, HAKOM will, in particular, focus on the following:

- modelling and redefining business processes;
- market analysis;
- development of broadband networks and services;
- implementation of cost models project;
- regulation of the postal services market;
- E-Agency project.

Since there are activities in relation to which the improvement of business processes and employees' competences is not sufficient for the carrying out of legally prescribed activities and quality achievement of the set objectives, HAKOM is planning to employ four new employees out of which two would be working in the electronic communications sector, and the other two in the postal services sector.

In addition to the above-mentioned ways of increasing its own capacity and abilities, HAKOM will continue using EU pre-accession funds in 2012 in order to ensure further alignment and improvement of national legislation and practice with the *acquis*.

HAKOM expects to continue in 2012 with the implementation of a project as part of the IPA 2009 Twinning Light project entitled "**Support to HAKOM in the area of accounting separation of postal services.**" The purpose of the project is to promote administrative and regulatory capacities of HAKOM in the area of accounting separation.

The objective of this project is to promote and maintain the functioning of the liberalized postal market in the RoC in line with postal directives of the EU and to assure the law enforcement and adequate market regulation for the protection of postal services users.

By adopting and applying European practice in market regulation, HAKOM has contributed to RoC's EU accession efforts and the efforts to join the common European market of electronic communications and postal services, and to a harmonised application of the European legislation.

HAKOM has started preparing for the use of EU funds and for that purpose it has already started preparing project studies and project fiches for the financing of broadband development in rural areas.

Funds necessary for performing HAKOM's proscribed tasks, that is the activities mentioned in the above chapters, will be defined by the Financial Plan.

<b>Regular activities</b>				
<b>No.</b>	<b>Activity</b>	<b>Result</b>	<b>%12/11</b>	<b>Fin. plan</b>
1.	Improvement of processes	Modelling and optimisation of HAKOM's business processes.	100	
2.	Acquiring a higher level of education	Continuation from 2011 New attendees (5 employees)	100	
3.	IPA 2009 - accounting separation of postal services	Financial and accounting training (5 employees)	100	
4.	Training for cost models	Financial and accounting training (15 employees)	100	
5.	Training in Win 7 and MC Office 2010	Improvement of office management by using modern tools (50 employees)	120	
6.	Foreign language learning	Continuation from 2011 New participants (5 employees)	105	
7.	Other seminars, workshops and similar	Improvement of professional skills	110	

### **Monitoring of activities**

The monitoring of HAKOM's fulfilment of tasks (activities) is carried out by managers or assistant directors responsible for their implementation. The results of monitoring are regularly reported at HAKOM's meetings chaired by the Executive Director.

For major projects and programmes a group (project team) has been established consisting of HAKOM's employees. The above-mentioned group meets at least once a month and monitors the objectives, resources and dynamics of project execution and helps with risk management.

The progress in the implementation of projects and programmes is presented to HAKOM's Council when necessary and at least twice a year.

## **6. LIST OF ABBREVIATIONS**

CCA - Croatian Competition Agency,

DAN - Database of addresses and numbers

BEREC - Body of European Regulators for Electronic Communications

CADPN - Central Administrative Database of Ported Numbers

CARNET- Croatian Academic and Research Network

CEPT - European Conference of Postal and Telecommunications Administrations

CERP - European Committee for Postal Regulation

COCOM - Communications Committee

DAB - Digital Audio Broadcasting

DAB+ - Digital Audio Broadcasting – an upgraded version of DAB system

DAB/T- Terrestrial Digital Audio Broadcasting

DMB/T - Digital Multimedia Broadcasting Terrestrial

DTD – Distribution telecommunications ducts

DTV – Digital television

DVB-T - Digital Video Broadcasting – Terrestrial

DVB-T2- Next generation of digital terrestrial television systems DVB-T

EBU - European Broadcasting Union

COCOM - Communications Committee

EC – European Commission

ECI – Electronic communications infrastructures

ERGP - European Regulators Group for Postal Services

EU - European Union

FM - Frequency Modulation

GSM - Global System for Mobile Communications

HAKOM – Croatian Post and Electronic Communications Agency

HDTV - High Definition Television

HP - Croatian Post

IMS - Internet Protocol Multimedial Subsystem– IP multimedial subsystem

IMT - International Mobile Telecommunications

IP - Internet Protocol - Network protocol for data transfer which is used for source and destination computers for data communication over computer network

IPA - Instrument for Pre-Accession Assistance in the process of accession to the EU - one of the EU pre-accession cooperation and assistance

IPTV - Internet Protocol Television

IPv4 - Internet Protocol - Network protocol for data transfer which is used for source and destination computers for data communication over computer network version 4

IPv6 - Internet Protocol - Network protocol for data transfer which is used for source and destination computers for data communication over computer network version 6

IRG - Independent Regulators Group

ISO - International Standards Organization

IT - Information Technology

ITU - International Telecommunication Union

MF/HF - Medium/High Frequency

MSTI- Ministry of the Sea, Transport and Infrastructure

NGN - New Generation Network

Programme- HAKOM's Work Programme

RF - Radiofrequency

RoC – Republic of Croatia

R&TT – Radio and telecommunications terminal equipment

RSC - Radio Spectrum Committee

RSPG - Radio Spectrum Policy Group

SDTV- Standard Definition Television

SEE Digi.TV - South-East European Digital Television - Project of regional cross-border cooperation about digital switchover and further development of digital television

SMS - Short Message Service

VHF - Very High Frequency) – electromagnetic waves in the radiofrequency band from 300 MHz to 3GHz

UMTS - Universal Mobile Telecommunications System (3rd generation mobile network)

UPU - Universal Postal Union

VHF - Very High Frequency) – electromagnetic waves in the radiofrequency band from 30 MHz to 300MHz

VoIP - Voice over Internet Protocol

WRC- World Radiocommunication Conference

ECA – Electronic Communications Act

PSA – Postal Services Act