

European Union on her way towards e-Health systems efficiency

in the context of health threats
as well as the life of its citizens

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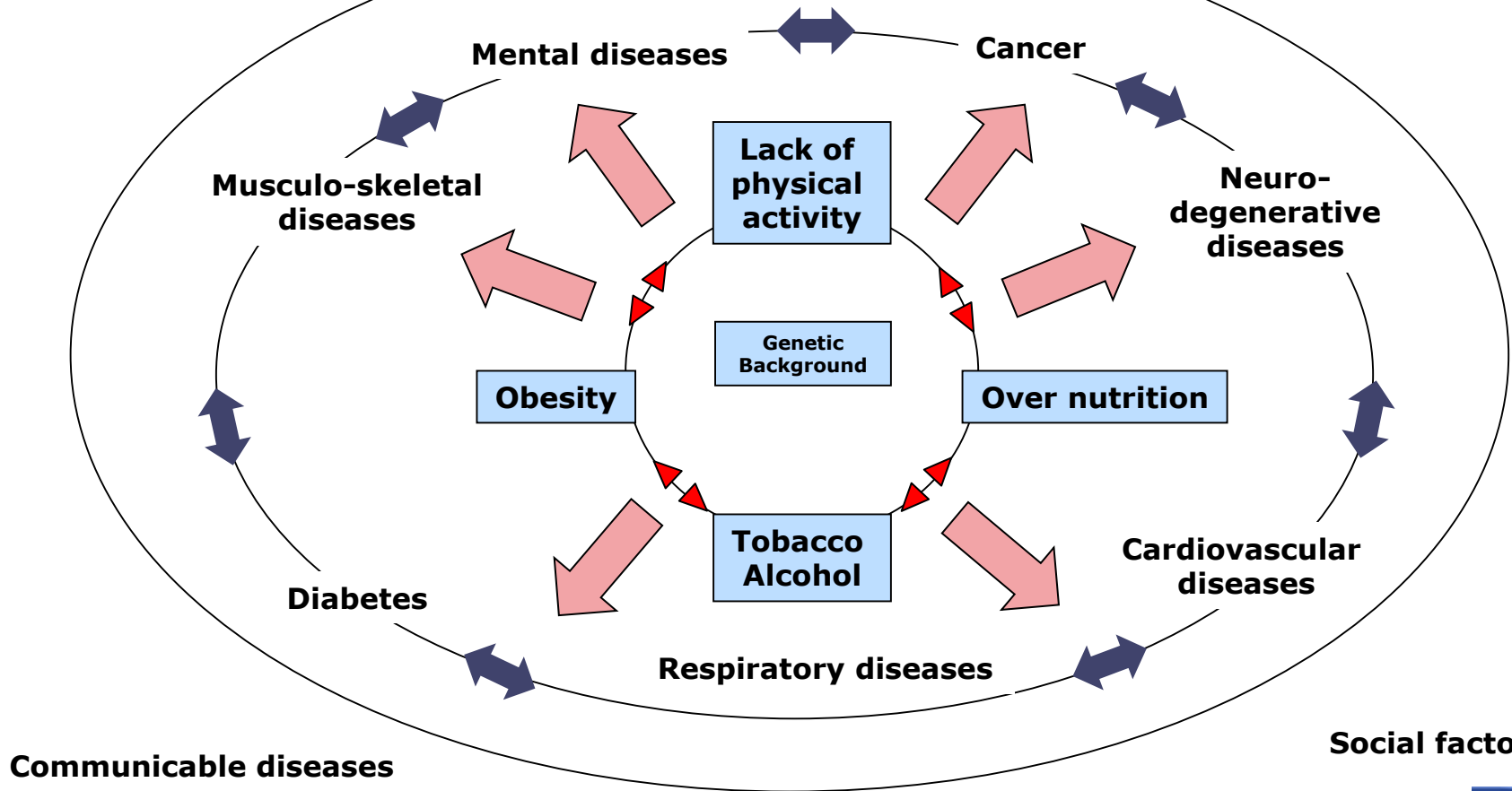
Agenda

- ▶ **The matter of efficiency e-Health systems including paramedics systems – Emergency Medical Services**
- ▶ **e-Health activity as type of cooperation within Virtual Region**
- ▶ **Summary**

Major chronic diseases

Health systems

Environment



Communicable diseases

Social factors

STROKE RISK FACTORS/EMERGENCY

Controllable Risk Factors

High Blood Pressure

High Cholesterol

Diabetes

Tobacco Use

Alcohol Use

Physical Inactivity

Obesity

Heart Disease

Atrial Fibrillation

Non-Controllable Risk Factors

Age

Gender

Race

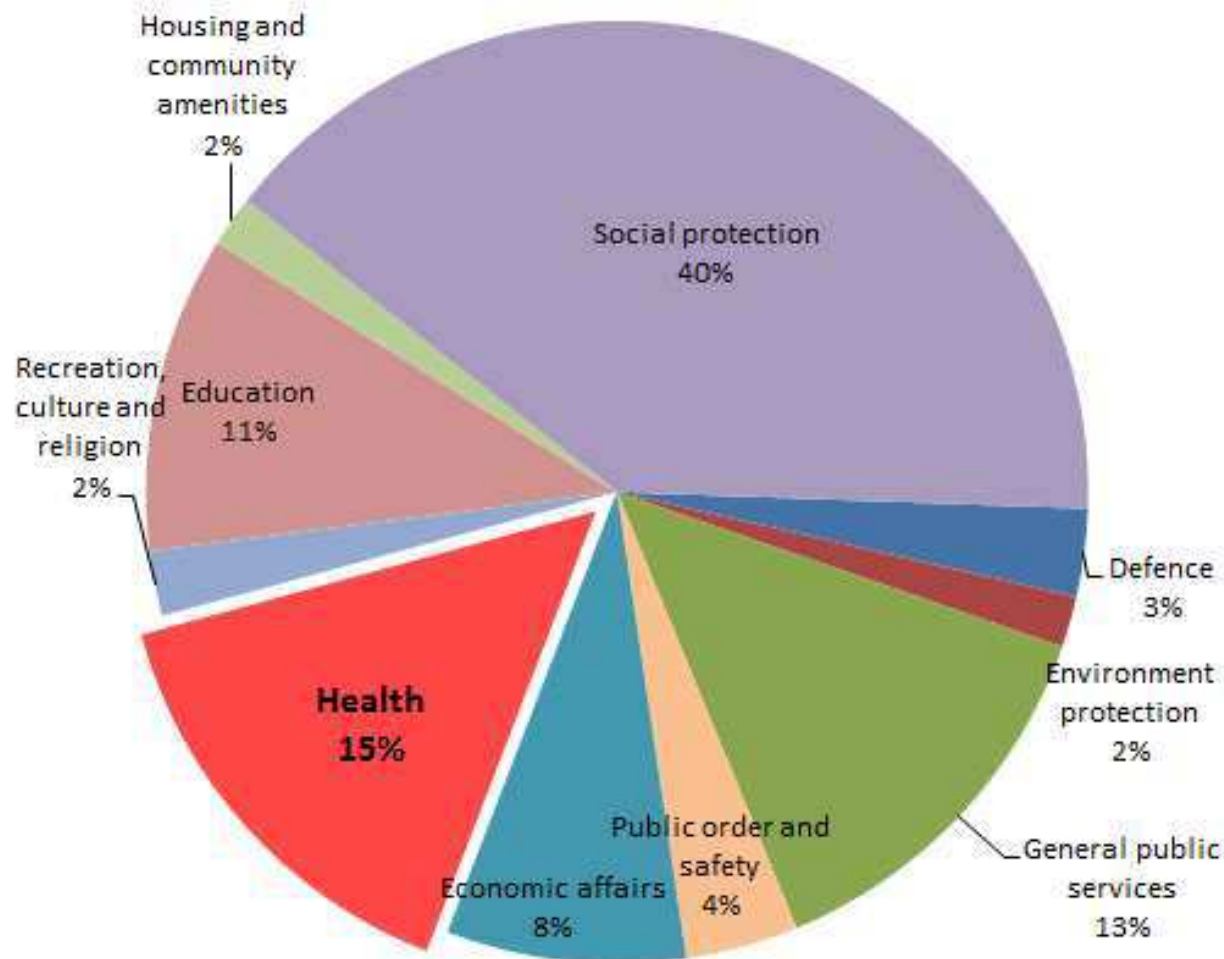
Family History

Previous Stroke



Economic impact

General government expenditure by function - 2011



source: Eurostat, COFOG [gov_a_exp]

Improving health system performance

Towards effective, accessible and resilient health systems (Commission communication 2014):

- ▶ Health system performance assessment,
- ▶ Quality of care, patient safety,
- ▶ Integration of care,
- ▶ Health workforce,
- ▶ Cost effective use of medicines,
- ▶ Implementation of cross border Directive,
- ▶ Health Technology Assessment,
- ▶ Health information e-health.

"(...)Union action, which shall complement national policies, shall be directed towards improving public health, preventing physical and mental illness and diseases, and obviating sources of danger to physical and mental health.(...)" (Art. 168, Treaty on the Functioning of the European Union)

EU ACTION ON DISEASES

PROMOTE

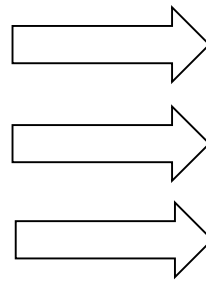
Risk factors and health determinants

PREVENT

Disease specific actions

Health systems cooperation

PROTECT



Exchange of good practices

EU programmes ESIF

Legislation

Virtual Region®

- The concept of Virtual Region (VR) worked out by prof. Andrzej Janicki (EC consultant, EDA consultant)
- Virtual Region is the answer to problems connected with information society idea implementation
- Virtual Community is consist of entities (**agents**) having potential for information data stock as well as possibility for transaction **exchange information**
- Virtual Region Community is built mainly on the basis of **similarity of aims, actions and agent activities**
- **Types of cooperation** within Virtual Region:
 - Virtual alliance and virtual enterprise (economic aspect)
 - Social networking services
 - Education platforms (social aspects)
 - **Virtual social systems** (e-Health platforms , EMS decisions suport systems)



The health promotion challenge

Redefining the boundaries:

- ▶ promotion / prevention,
- ▶ primary / secondary,
- ▶ screening / early diagnosis,
- ▶ chronicity / emergency.

The EU contribution

- ▶ Help Member States develop strategic approaches;
- ▶ Review our instruments, using them to address chronic diseases;
- ▶ Pilot and scale up good practice;
- ▶ Create transparency: improve monitoring and evaluation;
- ▶ Implementing WHO goals, objectives and targets.

How does CHRODIS contribute to reduce the burden of chronic diseases in Europe?

- Collection, validation and dissemination of **good practises** to address chronic conditions.
 - → EIP-AHA → networking, chronic disease community
- Health **promotion and prevention** focus on behavioural risk factors, social determinants and inequalities in health.
 - → streamlining
- Diabetes: a case study on barriers to **prevention, screening and treatment** of diabetes and **improvement of cooperation** among Member States to act on diabetes.
 - → Country analysis, policy advice
- Work on emergency with focus on **multi-disciplinary & integrated care, patient safety and professional training**
- Development of **common guidance and methodologies** for care pathways for multi-morbid patients.
 - → Health outcomes, quality of care

Features of Virtual Region e-Health activities

- ▶ There exist number of elements which unify the Virtual Region Partners: ethnicity, cultural identification or historical connotations or community of interests.
- ▶ **The aim of the establishing Virtual Region e-Health activities** is to increase the well-being and widely understood safety of citizens, especially their development in relation to civilization, cultural and economic growth.
- ▶ **Every citizen** can participate in the Virtual Region e-Health activities as well as government, non-government and market partners.
- ▶ **Virtual Region e-Health activities helps** partners to participate in internal and external „environment” and provides access to all mechanisms of „e-participation” in developing health, economic, social, civilization and cultural processes.
- ▶ **It is of vital importance** to manage the Virtual Region by using the specialized consortium.
- ▶ **Cooperation in Virtual Region is based on compliance with law.** Partners are bound by a civil law contract which determine the form of cooperation.



The procedure of establishing the Virtual Region e-Health activities

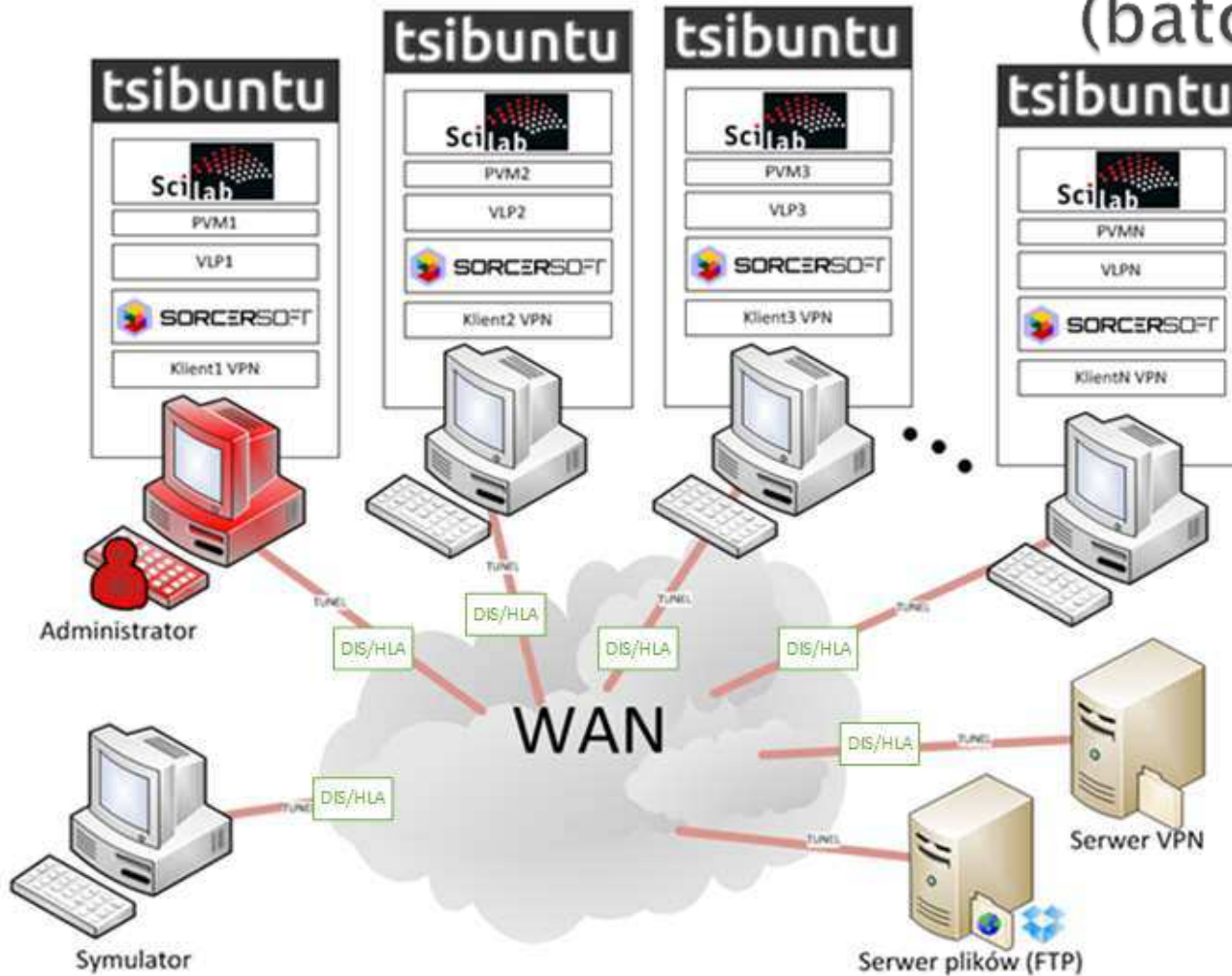


1. Meeting of Partners interested in setting up a Virtual Region e-Health activities.
2. Working meeting, where the principles of Virtual Region e-Health activities will be presented.
3. Setting goals, projects and actions of new Virtual Region e-Health activities projects; discussion on the draft agreement.
4. The Virtual Region e-Health activities Agreement presentation.
5. Signing the Virtual Region e-Health activities Agreement by the partners.
6. Presentation of candidates for the Agreement Council and for the Coordinator of the Agreement and decision about the way of selecting members.
7. Voting for Agreement Council and Coordinator of the Agreement (creation of structures).
8. The accession of the partners to the knowledge base server, so called "cloud".
9. The implementation of Virtual Region e-Health activities actions and projects.



Structure of the platform

(batch mode)



TIAPISZ conference
In Warsaw

Headquarters
LablIGC™
Warsaw

Current
solution

Environmental System for Modeling and
Verification of Regional Solutions (6 level of TRL)

The matter of efficiency e-Health systems including paramedics systems – Emergency Medical Services:

- ▶ An overriding challenge for health policy in 2016 will be sustainability of health systems in the context of increasing costs and demographic developments.
- ▶ The European institutions have engaged in many aspects of health policy, including on:
 - sustainability,
 - innovation,
 - market access
 - and regulation.
- ▶ From legislative point of view a lot has been done at the EU level including a Clinical Trials Directive, legislation on medical devices and attempts to better frame the activities of the European Medicines Agency (EMA). A lot of successes such as the Tobacco Products Directive (prevent future generations from starting to smoke in the first place).
- ▶ Also through the European Semester the EU can try to give guiding recommendations and increase the pressure on member states to make reforms in a smart way.



Summary (policy point of view)

Implementation of the Virtual Region e-Health activities increase the combined defence power of the member countries of EU

Through new technologies we can increase number of intelligent agents in VR e-Health activities and generate new methods of civil defence in context of internal coherence.

Environmental System for Modeling and Verification of Regional Solutions is constructed in accordance with the needs of Polish Ministry of Foreign Affairs, and is recommended for V4.

Spatial and decentralized organization secures knowledge of member countries.

Concept of Virtual Region secures interests of member countries in e-Health activities as common good and power. Stronger relation between members and self-renewal ability provide stronger defence ability.



Summary (social point of view)

Implementation of the Virtual Region e-Health activities increase the combined knowledge power of the member countries of EU.

Through new technologies we can **increase number of intelligent agents** in VR e-Health activities and **generate new ideas** as much as possible.

Spatial and decentralized organization helps in diffusion of information.

Syntesis of regional knowledge gives new ability to solve health problems in member countries.



Summary (technical point of view)

Implementation of the Virtual Region e-Health activities increase the combined processing power of the member countries of EU

Through new technologies use in programming/modeling we can **increase hardware resources** of system environment modelling platform and simulation as well as **to generate calculated power** as much as possible.

Concurrent and decentralized processing without interference into installed systems as well as into computer software **streamlines calculated powers.**

Open sources' tools utilization **secures possibility of participation in development and research** on such important **social system**



Thank you for your attention

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