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**Notes on the future of spas in the world and
Europe**



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Future, Vision, Strategy

frequent confusion of meanings

Two extreme approaches to the future:

- **Prognostic:** made by forecaster
- **Oracle:** made by prophet or prophetess

A vision is the first brief idea of **the desired future target state**; TOP manager or owners decision

A strategy is a **long-term plan of action** aimed at achieving a goal: TOP manager or owners decision

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The essential environment of the future spa industry

Fourth industrial revolution (4.0)

Future of healthcare (Health 4.0)

Subsequent transformations

Leading authors of the global future:

- Samuel Huntington (* 1927 - † 2008), Political scientist - The Clash of civilization. The predominance of Western-type civilization does not have to be permanent.
- Francis Fukuyama End of History and the Last Man of 1992 and after.

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Towards the future of the world

Futurology is without optimism

Symptoms of global problems:

- Environmental changes
- Widespread migration
- Mass destruction weapons in hands of unstable regimes

Western civilization can still maintain its position due to the technological predominance that has so far been characterized by Industry 4.0 for the next fifteen years.

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Western civilization can still be linked in its roots with the ideas of:

- personal freedom
- freedom of travel
- freedom of speech
- gender issues
- climate change mitigation
- healthy or consumer life style
- right to health
- social responsibility
- environmental protection
- etc.

The emerging global powers endorse the above ideas, at least partially. In other words, the global conflict is not expected to arise in the next fifteen years. No assumptions of a significant global economic crisis there are. It does not exclude local, albeit serious, crisis situations.

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Towards the future of healthcare in the world

„Health documents“ of the **World Health Organization (WHO)** are going "around" visions or strategies, but they are focused on important topical human problems such as:

- ◆ hygiene
- ◆ infectious diseases
- ◆ epidemiology

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Towards the future of healthcare in the Europe

The OECD released in January 2017 a study on New Health Technologies: Managing Availability, Value and Sustainability.

The development of technology in the healthcare sector is in line with the characteristics of the aforementioned fourth industrial revolution (industry 4.0 and derived Health 4.0). Health care entities will be able to work on the principle of artificial intelligence (eg. diagnostic medical systems, smart rehabilitation devices, analytical and regulatory ICT, artificial pancreas, etc.).

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The availability and sustainability of new technologies for the next 15 years. Unlimited growth of cost. Equal distribution of fundamental rights and ideas?

Titanic example. Titanic is sinking.

The number of places in lifeboats is limited. Only half of the passengers can be rescued. Who decides whom to save and who will have a bad destiny. Priorities? Or, lifeboats will not be used, in the interest of equal access.



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The future of spas in the world and the EU

Spa treatment

- not mentioned in the WHO conceptual and strategic materials.
- EU is an exception (ESPA mission)

Medical spa

If, anywhere in the world, therapeutic spa care is going to be part of the health service system, then it is not possible to isolate it from progress (but also problems) in health care.

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European Spa Association (ESPA) and evidence-based medicine approach in practice.

Preclinical and clinical research in spa

Possibility of overcome of growing costs of research and development (state and EU support)

Partial possible solution:

capital mergers and acquisitions, ie the creation of large spa businesses.

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New healthcare technologies ➔ medical spas

Balneology technologies used in spas are mostly outdated

Example of innovation:

Innovative use of water microbubbles in medical bath

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Probable changes in the development of medical spas (near future to 15 years):

1 The biggest change can be expected in the implementation of the results of applied research into medical spa.

2 Change of the concept and content of the Natural Healing Source to Natural Remedies (Auf Deutch: Natürliche Heilquelle/Natürlichen Heilmittel)

3 Trend to change the concept and quality on the base of clinical trials of medical devices used in rehabilitation and spa treatment practice.

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4 Trend of natural remedies sources protection and practical care based on online or near-online monitoring.

5 Trend of possible use of thermal springs as a source of geothermal energy (today's developed practice in southern European countries and Austria).

6 Rehabilitation therapy will remain in the 15-year horizon as substantial part of the spa treatment procedures (RPM, Rehabilitation and Physical Medicine)

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7 Trend in the development of the spa prevention as the second pillar of the main spa activity - besides rehabilitation and physical medicine (RPM).

8 Trend towards strengthening the share of certain diseases in the total reimbursement for spa treatment (health insurance companies and self-payers). See ad 9.

9 Treatment of musculoskeletal diseases overcome others. A slight increase of obesity and respiratory diseases, especially for pediatric patients. New situation in the spa treatment of psychiatric diseases in Europe.

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10 Trend towards strengthening the share of above-mentioned medical spa procedures will be developed also taking into account **aging population in the next 15 years.**

11 Trend in the development of clinical research on the interaction of key spa procedures with the drugs used.

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12 Trend in a deepening of cooperation of spa specialists (physician and physiotherapist) within the care of spa facility. A multi-disciplinary coordinated team instead of traditional spa physician.

13 Major changes will occur in the information systems (IS) for the management and therapeutic care of spa entities. Condition: Interoperability of General practitioner IS, Hospital IS, and spa IS and commonly used eHealth record.

14 Trend of personalized approach, in several calls of Horizon 2020 Health, demographic change and wellbeing.

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15 Privacy Trend. General data protection regulation (GDPR) is a last EU (y 2018) legislation. Significant increase of the protection of citizens' personal data.

16 Trend in the development of market aspects of spa services versus medical wellness services, specifics of clients. The borders will be more hazy.

17 The trend of the development of spa health tourism.

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18 Trend of education and training in spa industry. Multidisciplinary issue - from geology to medicine. Carlsbad region of the Czech Republic, intention to establish the Faculty of Balneology.

19 The most frequently used form of bussiness entity in future spa industry: commercial corporation, joint-stock company or limited liability company.

20 The European spas can use special change of ownership. Europe-wide use of the Employee Stock Option Programs (ESOPS).

Conclusion 1

Balneological Research Institute has been focused primarily on Western-type medicine, ie. primarily on evidence-based medicine. Is this a good prospect for spa research in next 15 years? Complementary and Alternative Medicine is advancing in the US. The National Centre for Complementary and Integrative Health (NCCIH) is the Federal Government's leading agency for scientific research on diverse medical and health care systems, practices, and products that are not widely considered conventional medicine (<https://nccih.nih.gov>). The annual budget of NCCIH is around \$ 180 million. **EBM is a fundamental principle, but it must not be dogma.**

Conclusion 2

Brief notes on the future of the spa and the three possible scenarios.

1st scenario is most probable version. Gradual spa development as part of the health services system.

It includes:

- i. Scientific spa research oriented on the effectiveness of healing (EBM), and knowledge of impact "how";
- ii. Alternative, Integrative and Personalized approach including medical wellness, under control of EBM.
- iii. Fun function as part of relaxation and tourism.

Conclusion 2 – contin.

Brief notes on the future of the spa and the three possible scenarios – continue

2nd scenario is very similar, only with a lower intensity depending on the consequences of a possible economic recession.

3rd scenario - catastrophic development in the context of major local or global conflicts. Change of function of spa facilities to treatment and aftercare, accommodation of migrants, etc. Eg: The deterioration of spa in Georgia (2008) or partially in Greece.

Conclusion 3

Global Health 4.0 for 2040 and beyond

Source: America's Future: 2020-2050. Studies on the future of health go furthest in the US. Prognoses by 2040, a Global Artificial Intelligence (AI) space satellite network will be implemented to monitor and assist the delivery of healthcare to people on Earth. The system will be linked to extensive global healthcare data storage. Storing data from a wide range of health IT systems, such as Electronic Health Record Systems (EHR), Personal Medical Device Records (PHR), Healthcare Information Exchange Networks (HIE).

Conclusion 3 – contin.

Global Health 4.0 for 2040 and beyond – contin.

In addition, data will be available from wearable fitness stimulators, as well as from medical devices such as implantable medical devices, clinical imaging systems, genome databases and biorepositories, surgical robots, medical research bases, and more.

European Spas as a part of the health services system will be IN ?

- in the field of rehabilitation and prevention
- in the field of personalized medicine

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THANK YOU!