

Thermae 4.0. Impact of the Emerging Digital Technologies in Balneology

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Recent developments in Information Technology are having a major impact in all sectors, changing people lifestyle, professional activities and business strategies.

It is therefore important to analyze this scenario, identifying potential developments, emerging opportunities and possible risks. Hence the objective of this study: to provide the balneology operators useful information to define short and medium-term strategies.

Analyzing the information available on the Web, very few advanced IT applications appear in the Balneology sector. But if we consider separately its three components, Tourism, Wellness and Health, we can see that many of the most advanced technologies are present in applications already in operation or under development.

Virtual reality and robotics are at the base of innovative rehabilitation systems. The IoT (Internet of Things) is present in a wide range of wearables, under-skins and internal devices, to monitor the vital parameters and detect risk situations (infections, tumors, ...).

But the most revolutionary applications are those based on AI + BigData and AI + NPL, which generally reduce costs and improve the quality of services. AI + NPL systems allow to realize highly effective Customer Care applications, giving information and indications both for the organizational and for the medical aspects. AI + BigData systems allow to improve the Tourism marketing strategies, while their Medical applications give exceptional results in image analysis (identification of pathologies or body anomalies) and statistical data processing (effects of environmental factors, evaluation of therapies, ...).

In conclusion the Balneology sector should adopt as soon as possible IT based applications to reduce the costs, improve the services and to expand its offers with new added value proposals.