P political

- **Healthcare Policies**: Prioritizing of healthcare infrastructure by national government (e.g. Austria's Health Reform 2028 invests in digitalization of healthcare facilities)
- **Regulations on Energy Consumption:** e.g. European Green Deal) → monitoring of energy consumption necessary
- **Covid-19 Pandemic**: increased governmental focus on hospital prepared-ness → increased funding for healthcare facilites incl. air quality management
- **Rooms classifications:** e.g. operating rooms classified as class 1a or 1b acc. to DIN 1946-4 require extremely low levels of germs
- **Medical environments:** HVAC systems e.g. testing and inspection required according to ÖNORM H6020

E economic

- **Demographic Changes:** Aging Population leads to higher demand for healthcare service → increase need for resources and hospital capacity.
- **Privatization Trend**: Growing trend of privatization possibly leads to changes in hospital operations and management (focus on profitability, efficiency)
- **Federal Responsibilities**: Decentralized healthcare system (federal states are responsible for managing healthcare services) → regional differences
- **Influence of Social Insurance:** Austrian social insurance system is primary payer for healthcare services → governmental influence over hospital operations, funding and scope of services provided.

S social

- **Demographic change (Silver Society):** aging population increases demand for healthcare services → demographic shift puts pressure on hospitals to enhance efficiency and patient care
- **Changing Patient Preferences - Holistic Care:** increasingly value of holistic care, which includes high-quality medical treatment + personalized and comfortable environment.
- **Focus on Patient Well-being:** Social expectations for high-quality healthcare are rising → patients expect a safe, comfortable environment.
- **Increasing use of smart products and increasing acceptance of AI:** Use of Smart Home / AI in private possibly increases awareness and acceptance.

T technological

- **Growing popularity of voice assistants:** mainly in B2C
- **Advancements in AI and Machine Learning:** allows real-time monitoring and predictions; enhancing hospital safety and efficiency.
- **Interoperability and Integration**: ability to integrate with existing hospital management systems → interface with Electronic Health Records (EHR) systems
- **Room Air Technology for Infection Prevention:** prevent postoperative infections (POI); systems must comply with regulations (e.g., DIN 1946-4) to ensure sterile environment
- **Ventilation Systems Compliance:** ÖNORM H6020 for use in medical environment

E environmental

- **Regulations on Environmental issues:** EU's Energy Performance of Buildings Directive (EPBD) requires that all new buildings meet strict energy efficiency standards.
- **Sustainable Healthcare Initiatives:** Hospitals are under pressure to reduce their environmental impact (e.g. set by EU's Green Deal)
- **Air Quality Control:** Maintain high indoor air quality in hospitals is essential, particularly in operating rooms and intensive care units → meet environmental standards.
- **Temperature Control Challenges:** Climate change poses challenges for maintaining optimal temperature control within hospital environments.

L legal

- **Data Protection:** by integrating AI, hospitals must comply with the Data Protection Regulation. Esp. because sensitive data is included, it is possibly better to run the program locally.
- **Medical Liability:** healthcare providers have a high level of legal responsibility for patients, including liability for medical malpractice.
- **Healthcare Regulations:** Compliance with DIN 1946-4 for operating rooms and ÖNORM H6020 for ventilation systems ensure necessary hygiene and technical standards.