Jerusalem Multidisciplinary College
Since 1970

MVŠO

WORKSHOP:
Future Problem-Solving in Digital Healthcare Transformation

May 4-9, 2025 | MVSO, Olomouc

Strategic Management of Non-Profit Organizations:
The Case of Healthcare Organizations

Lior Naamati-Schneider , PhD.

1

Global Future Problem-Solving in Non-Profit Healthcare Organizations
Navigating Adaptation to Innovation, Digital Transformation, and AI Integration

Workshop Objectives

01 | Understand how digital transformation is shaping healthcare.

02 | Identify future challenges stemming from AI and technology.

03 | Use PESTEL analysis to assess external factors impacting healthcare.

04 | Develop strategic solutions for emerging healthcare issues.

2

Problem-Based Learning (PBL)

- A student-centered learning approach where you solve real-world problems
- Encourages critical thinking, teamwork, and strategic problem-solving.
- In this workshop, you will use PBL to develop AI-driven solutions for healthcare challenges.

3

- The healthcare sector is rapidly evolving, requiring innovative future-oriented solutions.
- This workshop focuses on emerging global healthcare challenges, such as AI ethics, telemedicine security, and digital transformation.
- Understanding global trends allows students to create strategies that address healthcare issues beyond their local context.
- Cross-Cultural Collaboration: Working in diverse teams enhances problem-solving through different perspectives.
- Exposure to International Healthcare Systems: Learning how digital transformation varies across healthcare systems worldwide.
- Developing Global Competency: Enhances adaptability to work in international healthcare settings.

4

Examples of Future Healthcare Problems

- ✓ Ethical issues in AI-powered diagnostics.
- ✓ Privacy concerns in telemedicine & patient data security.
- ✓ Workforce reskilling for AI-driven healthcare.
- ✓ Sustainability challenges in digital healthcare.
- ✓ Bias in AI algorithms and its impact on decision-making.

5

Workshop Overview

Each group will:

future healthcare problem
Select a future healthcare problem related to digital transformation

Analyze it using PESTEL
(Political, Economic, Social, Technological, Environmental, and Legal factors).

Identify opportunities & threats
Linked to their chosen issue.

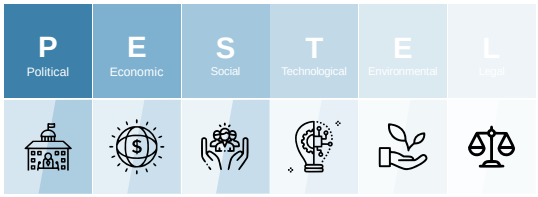
Develop strategic solutions
To address the problem

Prepare a final presentation for May 8, 2025.

6

What is PESTEL Analysis?

A framework for analyzing external factors affecting organizations:



7

PESTEL Analysis

P Political	E Economic	S Social	T Technological	E Environmental	L Legal
Healthcare policies, government funding, public health initiatives •Government policies on AI and digital healthcare. •Public health initiatives and regulations. •Healthcare funding and budget allocations.	Funding stability, healthcare costs, inflation effects •Cost of implementing AI and digital solutions. •Economic stability affecting healthcare investments. •Availability of financial incentives or subsidies for tech adoption.	Cultural values, demographic shifts, healthcare accessibility •Changing demographics (aging population, cultural diversity). •Public attitudes toward AI-driven healthcare. •Ethical concerns regarding AI decision-making in patient care.	AI, telemedicine, automation in healthcare •Adoption of AI, telemedicine, and automation. •Challenges in integrating new technologies into existing systems. •Cybersecurity concerns in digital healthcare	Sustainability, waste management, climate change impact •Sustainable healthcare solutions (energy-efficient hospitals, green tech). •Impact of climate change on healthcare facilities and services. •Waste management and eco-friendly digital solutions.	Regulations, patient data laws, compliance standards •Compliance with healthcare regulations (GDPR, HIPAA). •Intellectual property rights for AI-driven medical solutions. •Liability concerns in AI-assisted diagnoses and treatments.

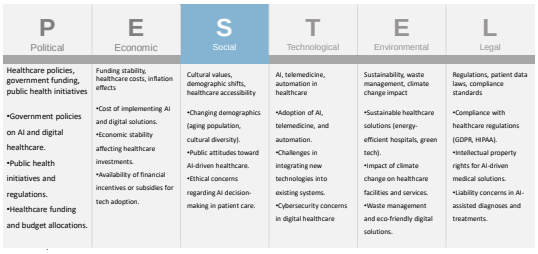
8

PESTEL Analysis

P Political	E Economic	S Social	T Technological	E Environmental	L Legal
Healthcare policies, government funding, public health initiatives •Government policies on AI and digital healthcare. •Public health initiatives and regulations. •Healthcare funding and budget allocations.	Funding stability, healthcare costs, inflation effects •Cost of implementing AI and digital solutions. •Economic stability affecting healthcare investments. •Availability of financial incentives or subsidies for tech adoption.	Cultural values, demographic shifts, healthcare accessibility •Changing demographics (aging population, cultural diversity). •Public attitudes toward AI-driven healthcare. •Ethical concerns regarding AI decision-making in patient care.	AI, telemedicine, automation in healthcare •Adoption of AI, telemedicine, and automation. •Challenges in integrating new technologies into existing systems. •Cybersecurity concerns in digital healthcare	Sustainability, waste management, climate change impact •Sustainable healthcare solutions (energy-efficient hospitals, green tech). •Impact of climate change on healthcare facilities and services. •Waste management and eco-friendly digital solutions.	Regulations, patient data laws, compliance standards •Compliance with healthcare regulations (GDPR, HIPAA). •Intellectual property rights for AI-driven medical solutions. •Liability concerns in AI-assisted diagnoses and treatments.

9

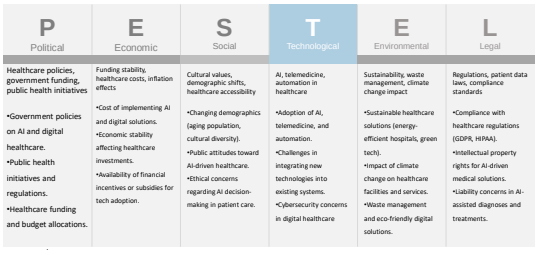
PESTEL Analysis



P Political	E Economic	S Social	T Technological	E Environmental	L Legal
Healthcare policies, government funding, public health initiatives •Government policies on AI and digital healthcare. •Public health initiatives and regulations. •Healthcare funding and budget allocations.	Funding stability, healthcare costs, inflation effects •Cost of implementing AI and digital solutions. •Economic stability affecting healthcare investments. •Availability of financial incentives or subsidies for tech adoption.	Cultural values, demographic shifts, healthcare accessibility •Changing demographics (aging population, cultural diversity). •Public attitudes toward AI-driven healthcare. •Ethical concerns regarding AI decision-making in patient care.	AI, telemedicine, automation in healthcare •Adoption of AI, telemedicine, and automation. •Challenges in integrating new technologies into existing systems. •Cybersecurity concerns in digital healthcare	Sustainability, waste management, climate change impact •Sustainable healthcare solutions (energy-efficient hospitals, green tech). •Impact of climate change on healthcare facilities and services. •Waste management and eco-friendly digital solutions.	Regulations, patient data laws, compliance standards •Compliance with healthcare regulations (GDPR, HIPAA). •Intellectual property rights for AI-driven medical solutions. •Liability concerns in AI-assisted diagnoses and treatments.

10

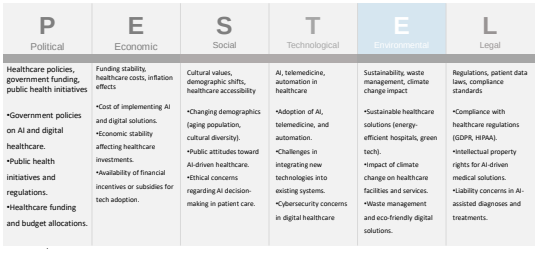
PESTEL Analysis



P Political	E Economic	S Social	T Technological	E Environmental	L Legal
Healthcare policies, government funding, public health initiatives •Government policies on AI and digital healthcare. •Public health initiatives and regulations. •Healthcare funding and budget allocations.	Funding stability, healthcare costs, inflation effects •Cost of implementing AI and digital solutions. •Economic stability affecting healthcare investments. •Availability of financial incentives or subsidies for tech adoption.	Cultural values, demographic shifts, healthcare accessibility •Changing demographics (aging population, cultural diversity). •Public attitudes toward AI-driven healthcare. •Ethical concerns regarding AI decision-making in patient care.	AI, telemedicine, automation in healthcare •Adoption of AI, telemedicine, and automation. •Challenges in integrating new technologies into existing systems. •Cybersecurity concerns in digital healthcare	Sustainability, waste management, climate change impact •Sustainable healthcare solutions (energy-efficient hospitals, green tech). •Impact of climate change on healthcare facilities and services. •Waste management and eco-friendly digital solutions.	Regulations, patient data laws, compliance standards •Compliance with healthcare regulations (GDPR, HIPAA). •Intellectual property rights for AI-driven medical solutions. •Liability concerns in AI-assisted diagnoses and treatments.

11

PESTEL Analysis



P Political	E Economic	S Social	T Technological	E Environmental	L Legal
Healthcare policies, government funding, public health initiatives •Government policies on AI and digital healthcare. •Public health initiatives and regulations. •Healthcare funding and budget allocations.	Funding stability, healthcare costs, inflation effects •Cost of implementing AI and digital solutions. •Economic stability affecting healthcare investments. •Availability of financial incentives or subsidies for tech adoption.	Cultural values, demographic shifts, healthcare accessibility •Changing demographics (aging population, cultural diversity). •Public attitudes toward AI-driven healthcare. •Ethical concerns regarding AI decision-making in patient care.	AI, telemedicine, automation in healthcare •Adoption of AI, telemedicine, and automation. •Challenges in integrating new technologies into existing systems. •Cybersecurity concerns in digital healthcare	Sustainability, waste management, climate change impact •Sustainable healthcare solutions (energy-efficient hospitals, green tech). •Impact of climate change on healthcare facilities and services. •Waste management and eco-friendly digital solutions.	Regulations, patient data laws, compliance standards •Compliance with healthcare regulations (GDPR, HIPAA). •Intellectual property rights for AI-driven medical solutions. •Liability concerns in AI-assisted diagnoses and treatments.

12

PESTEL Analysis

P Political	E Economic	S Social	T Technological	E Environmental	L Legal
Healthcare policies, government funding, public health initiatives •Government policies on AI and digital healthcare. •Public health initiatives and regulations. •Healthcare funding and budget allocations.	Funding stability, healthcare costs, inflation effects •Cost of implementing AI and digital solutions. •Economic stability affecting healthcare investments. •Availability of financial incentives or subsidies for tech adoption.	Cultural values, demographic shifts, healthcare accessibility •Changing demographics (aging population, cultural diversity). •Public attitudes toward AI-driven healthcare. •Ethical concerns regarding AI decision-making in patient care.	AI, telemedicine, automation in healthcare •Adoption of AI, telemedicine, and automation. •Challenges in integrating new technologies into existing systems. •Cybersecurity concerns in digital healthcare	Sustainability, waste management, climate change impact •Sustainable healthcare solutions (energy-efficient hospitals, green tech). •Impact of climate change on healthcare facilities and services. •Waste management and eco-friendly digital solutions.	Regulations, patient data laws, compliance standards •Compliance with healthcare regulations (GDPR, HIPAA). •Intellectual property rights for AI-driven medical solutions. •Liability concerns in AI-assisted diagnoses and treatments.

By analyzing these factors, organizations can develop proactive strategies to address both current and future challenges in healthcare digital transformation.

13

How to Conduct PESTEL Analysis?

Research each factor relevant to your chosen problem.

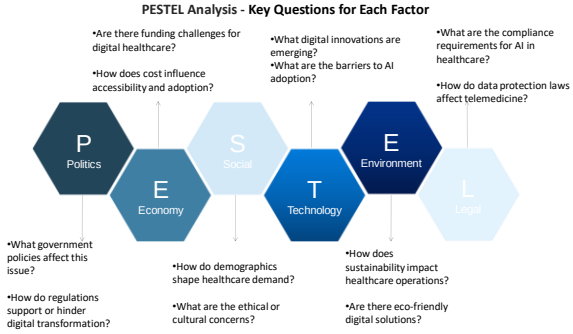
Ask key questions for each category.

Identify opportunities & threats from your findings.

Propose strategic solutions based on analysis.

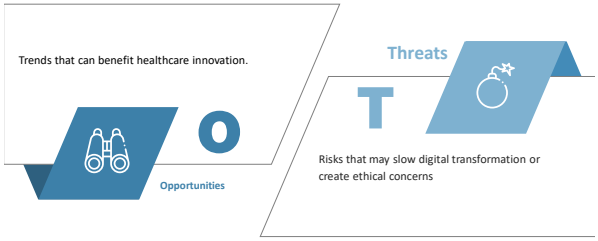
14

PESTEL Analysis - Key Questions for Each Factor



15

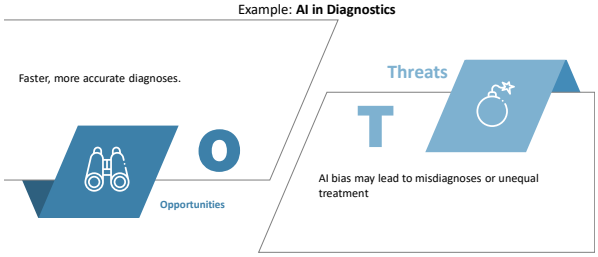
Identifying Opportunities & Threats



16

Identifying Opportunities & Threats

Example: **AI in Diagnostics**



17

Developing Strategic Solutions

Use your **PESTEL findings** to propose actionable solutions.

Consider:

Policy recommendations (Political) –
- ✓ Advocating for supportive regulations and ethical AI policies.

Financial strategies (Economic) –
- ✓ Identifying funding sources for AI adoption.

Workforce training & awareness (Social) –
- ✓ Upskilling healthcare professionals for AI integration.

Adoption & regulation of new technologies (Technological) –
- ✓ Ensuring safe implementation of AI-driven tools.

Sustainability initiatives (Environmental) –
- ✓ Implementing green healthcare technologies.

Compliance & legal considerations (Legal) –
- ✓ Addressing data security and ethical concerns.

What to Consider:

Feasibility: Can the solution be implemented with current resources?

Scalability: Can the strategy expand to other healthcare settings?

Ethical & Legal Concerns: Are there potential ethical dilemmas or compliance risks?

Pros & Cons: Weigh benefits (e.g., efficiency, accessibility) against risks (e.g., privacy issues, implementation costs).

18

Example – Telemedicine & Data Security Problem

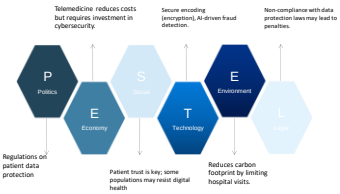
Problem:

Telemedicine expands access to care but raises privacy concerns.

19

Example – Telemedicine & Data Security

- Patient trust is key; some populations may resist digital health.



Strategic Solutions:

1. Strengthening Data Encoding & Cybersecurity Protocols.
2. Regulatory Compliance & Continuous Monitoring.
3. Patient Education on Secure Telemedicine Use.

20

Strengthening Data Encoding & Cybersecurity Protocols.

Tactics:
- ✓ Implement end-to-end encryption for patient data.
- ✓ Use multi-factor authentication for healthcare systems.
- ✓ Regularly update security firewalls & anti-malware protection.
- ✓ Develop AI-driven threat detection systems to monitor unusual activity.

Action Items:
- ✓ Conduct a security audit to identify vulnerabilities.
- ✓ Train IT teams on encoding best practices.
- ✓ Implement cloud-based backup solutions for data recovery.
- ✓ Create a response plan for cyberattacks

Regulatory Compliance & Continuous Monitoring

Tactics:
- ✓ Establish a continuous compliance monitoring system.
- ✓ Conduct regular risk assessments and audits.
- ✓ Implement automated compliance tracking tools.

Action Items:
- ✓ Appoint a Compliance Officer to oversee legal adherence.
- ✓ Schedule quarterly security audits to ensure regulation updates.
- ✓ Develop data breach protocols and an emergency response plan.
- ✓ Use AI to track and flag compliance violations in real time.

Patient Education on Secure Telemedicine Use

Tactics:
- ✓ Develop easy-to-understand digital guides for secure online consultations.
- ✓ Offer webinars & training for patients on protecting their health data.
- ✓ Use AI chatbots for real-time cybersecurity tips in patient portals.

Action Items:
- ✓ Design a cyber awareness campaign for patients.
- ✓ Create short video tutorials on secure telemedicine practices.
- ✓ Set up a helpdesk for cybersecurity concerns.

21

Alternatives & Their Pros and Cons – Patient Education on Secure Telemedicine Use

Alternative 1: Interactive Online Courses & Webinars

Pros	Cons
✓ Accessible to a broad audience. ✓ Can include real-time Q&A and expert guidance. ✓ Cost-effective after initial setup.	✓ Requires internet access and basic digital literacy. ✓ Engagement may be low without interactive elements. ✓ Needs regular content updates.

22

22

Alternatives & Their Pros and Cons – Patient Education on Secure Telemedicine Use

Alternative 2: AI-Powered Chatbots for Patient Guidance

Pros	Cons
✓ Available 24/7 for real-time assistance. ✓ Personalized responses tailored to patient concerns. ✓ Reduces workload on healthcare staff.	✓ Limited ability to handle complex queries. ✓ Potential privacy concerns with AI data collection. ✓ Requires maintenance and periodic improvements.

23

23

Alternatives & Their Pros and Cons – Patient Education on Secure Telemedicine Use

Alternative 3: Printed Educational Materials & Posters in Clinics

Pros	Cons
✓ Effective for patients with limited digital access. ✓ Simple and easy to understand. ✓ Can be customized for specific healthcare settings.	✓ Not interactive or adaptable in real-time. ✓ Requires manual distribution and regular updates. ✓ May not effectively engage younger, tech-savvy patients.

24

24

Alternatives & Their Pros and Cons – Patient Education on Secure Telemedicine Use

Alternative 4: One-on-One Patient Counseling by Healthcare Providers

Pros	Cons
✓ Provides personalized guidance and patient-specific advice.	✓ Time-consuming for healthcare providers.
✓ Ensures patient understanding and addresses individual concerns.	✓ Limited scalability due to resource constraints.
✓ Builds trust in telemedicine services.	✓ May not be feasible for large patient populations.

25

25

Choosing the Right Strategy – Patient Education

- **Factors to Consider:**
  - ✓ **Patient Demographics:** Which method suits the target audience best?
  - ✓ **Cost vs. Benefit:** Which alternative is most cost-effective?
  - ✓ **Scalability:** Can it be expanded to reach more patients?
  - ✓ **Digital Literacy Levels:** Do patients have the skills to access digital solutions?
  - ✓ **Long-Term Impact:** Which method ensures sustained learning and awareness?

26

Student Presentation Assessment Criteria

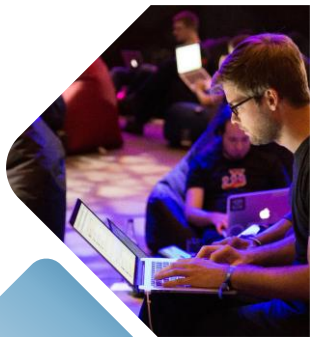
Each group will be evaluated based on:

- ✅ **Problem Identification**
  (Clear definition & relevance to healthcare challenges)
- ✅ **Depth of PESTEL Analysis**
  (Thorough research & insights)
- ✅ **Strategic Solutions**
  (Feasibility, innovation, impact)
- ✅ **Presentation Quality**
  (Clarity, structure, visual appeal)
- ✅ **Engagement & Q&A Handling**
  (Ability to answer questions effectively)

27

Let's Get Started!

MVSO-JMC Final Assignment



28