# MODULE 1 UNIT 2

## Activity submission

**Learning outcome:**

**LO4:** Analyse the trajectory and impact of different types of technologies in the digital ecosystem.

### Plagiarism declaration

1. **I know that plagiarism is wrong. Plagiarism is to use another’s work and pretend that it is one’s own.**
2. **This assignment is my own work.**
3. **I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as their own work.**
4. **I acknowledge that copying someone else’s assignment (or part of it) is wrong and declare that my assignments are my own work.**

### Name:

#### 1. Instructions and guidelines (Read carefully)

##### Instructions

1. Insert your name and surname in the space provided above, as well as in the **file name.** Save the file as: **First name Surname M1 U2 Activity Submission** – **e.g. Lilly Smith M1 U2 Activity Submission.** **NB:** *Please ensure that you use the name that appears in your participant profile on the Online Campus.*
2. Write all your answers in this document. There is an instruction that says, “Start writing here” under each question. Please type your answer there.
3. Submit your assignment in **Microsoft Word only**. No other file types will be accepted.
4. Do **not delete the plagiarism declaration** or the **assignment instructions and guidelines**. They must remain in your assignment when you submit.

**PLEASE NOTE:** **Plagiarism cases will be investigated in line with the Terms and Conditions for participants.**

**IMPORTANT NOTICE:** Please ensure that you have checked your programme calendar for the due date for this assignment.

##### Guidelines

1. There are 6 pages and 1 question in this assignment.

2. Make sure that you have carefully read and fully understood the questions before answering them. Answer the questions fully but concisely and as directly as possible. Follow all specific instructions for individual questions (e.g. “list”, “in point form”).

1. **The assignment must be your own work only**. Do not copy any text from the notes, readings, or other sources without proper attribution. Where you do use material from sources other than your own, make sure that you (1), acknowledge these sources appropriately in the text, and (2), provide a list of all references used. (For more information on referencing please also refer to [this guidance](https://www.ox.ac.uk/students/academic/guidance/skills/referencing)).
2. We encourage you to use AI tools to IMPROVE your answer, but please be aware that answers that evidently are solely generated by AI will lead to failing your assignment. If you are unsure how to use AI tools, we suggest refraining from using them until this is covered in the programme.

#### 2. Mark allocation

The question counts 16 marks. However, you will only receive a final percentage mark and will not be given individual marks for the sections of the question. Use the grading rubric to see how marks will be allocated.

#### 3. Contextual information

If you were a medical professional in the 1980s, the pager, a one-way communication medium, was probably part of your daily life. However, the pager is one of the mobile technologies that has failed, and you are unlikely to find one in a hospital today. Not only was the device very expensive, but it also proved to be of little use in that it merely notified a user that someone was looking for them. Despite providing little value to the user, pagers remained on the market for years to come, yet never made a real breakthrough. In contrast to this unsuccessful technology, think about the huge success and pervasiveness of mobile phone technology we see today. Many new technologies are developed and proposed, yet ultimately only those with added value in practice will be adopted.

In this submission, you will be asked to assess the impact that AI is likely to have on your organisation or industry sector, and whether you think it will be adopted in this context.

#### 4. Question

1.1 Analyse the reason behind the relative success of mobile phones, as compared to the limited success of pagers.

1.2 Based on the analysis and the factors that you identified in Question 1.1, predict the trajectory that AI will take over the next five years in your organisation or an organisation of your choice.

In your response, consider:

* The current, short-term, and medium-term needs of your organisation or an organisation of your choice,
* the solutions that AI may offer to address these short- and medium-term needs of that organisation, and
* the main obstacles or hurdles that an AI adoption in that organisation is likely to encounter.

The combined word count of your answers should not exceed 600 words.

Start writing here:

**1.1 Analyse the reason behind the relative success of mobile phones, as compared to the limited success of pagers.**

Some of the factors which caused the downfall of Pagers over the Mobile phones is its limited one-way communication service that notified users that someone wished to contact them, often displaying a phone number and requiring the user to find a telephone to return the call. While Mobile phones, offered two-way communication that allowed for immediate conversation and texting capabilities. Both pagers and mobile phones were expensive but mobile phone prices decreased significantly, making them accessible to a wider audience. Pagers remained relatively inexpensive, but their limited functionality made mobile phones a more attractive option despite the higher initial cost. Mobile phone technology rapidly evolved, incorporating features beyond basic voice communication. The introduction of SMS text messaging, mobile internet, and applications significantly expanded the utility of mobile phones, while Pagers experienced limited technological advancements. Mobile phones offered a more convenient and integrated communication experience, eliminating the need to find a separate phone to return calls which was a major driver of mobile phone adoption. Pagers, with their limited functionality, did not benefit from the same network effects.   
  
In conclusion, the superior functionality, decreasing costs, continuous technological advancements, convenience, and network effects of mobile phones led to their surpassing pagers in the market. Pagers, while initially useful, failed to adapt to changing user needs and technological advancements, which led to their decline.

**1.2 Predict the trajectory that AI will take over the next five years in your organization**

Artificial Intelligence (AI) will likely experience increasing adoption and integration within healthcare over the next five years. Hospitals currently face increasing administrative burdens, demands for greater diagnostic accuracy and speed, a need for personalized patient care, remote patient monitoring and the early detection of diseases.

In the short term (1-2 years), we can see hospitals implementing AI-powered tools to automate tasks such as appointment scheduling, insurance claims processing, and medical record management. Few AI algorithms to assist radiologists in image analysis for faster and more accurate detection of anomalies. Use of AI to analyze patient data and predict the risk of adverse events.   
  
In the medium term (3-5 years), AI systems will analyze patient data to generate personalized treatment recommendations for diseases. AI-powered wearable devices and sensors will continuously monitor patients with chronic conditions, and AI will accelerate the drug discovery process by identifying potential drug candidates and optimizing clinical trial design.

AI solutions will be provided through Natural Language Processing (NLP) to automate administrative tasks and improve patient care, Machine Learning (ML) to predict diseases and recommend personalized treatment plans, predictive analytics to optimize processes, reduce errors, and identify high-risk patients, and computer vision to analyze medical images and aid in disease diagnosis and treatment.

Some obstacles and hurdles are challenges with data quality and accessibility, Data security and privacy concerns, Regulatory and ethical considerations (Morley et al.,2020). A lack of trust and acceptance among healthcare professionals, technical complexity, skill gaps, financial constraints, and integration with existing systems pose additional challenges.

To overcome these obstacles, it's essential to invest in data governance, implement robust data encryption and security protocols, develop clear ethical guidelines (Reddy et al., 2020). By addressing these challenges and focusing on practical, value-driven solutions, healthcare organizations can successfully integrate AI into their operations and improve patient outcomes. As trust and confidence in AI grow, its use will gradually expand into clinical decision support and personalized medicine, leading to the development of integrated AI ecosystems that enable seamless data sharing and collaboration.

**References**:  
  
Morley, J., Machado, C. C., Burr, C., Cowls, J., Joshi, I., Taddeo, M., & Floridi, L. (2020). The ethics of AI in health care: a mapping review. Social science & medicine, 260, 113172. <https://doi.org/10.1016/j.socscimed.2020.113172>  
  
Reddy, S., Allan, S., Coghlan, S., & Cooper, P. (2020). A governance model for the application of AI in health care. Journal of the American medical informatics association, 27(3), 491-497. <https://doi.org/10.1093/jamia/ocz192>

#### 5. Rubric

Your Module 1 activity submission will be graded according to the following rubric:

|  | **Poor or incomplete** | **Satisfactory to good** | **Very good** | **Exceeds expectations** |
| --- | --- | --- | --- | --- |
| **Adherence to the instructions**  *The response addresses all the points posed in the question, adheres to the instructions, and is within the stipulated word-count limits.* | No submission.  OR  The response does not address any of the points in the question and does not adhere to any instructions.  OR  The response significantly exceeds the stipulated word-count limit. (0) | The response satisfactorily addresses the first section of the question but omits to address the second section of the question.  OR  The response slightly exceeds the stipulated word-count limit. (2) | The response sufficiently addresses most of the points in the question and instructions, but not all, and is within the stipulated word-count limit. (3) | The response addresses all the points in the question exceptionally well and is within the stipulated word-count limit. (4) |
| **Factors of success or failure (Question 1.1)**  *The response provides an analysis of factors contributing to the success of mobile phones relative to the limited success of pagers.*  *.* | No submission.  OR  The response shows a poor analysis of reasons for the success of mobile phones relative to the limited success of pagers. (0) | The response is a sufficient attempt at analysing the factors contributing to the success of mobile phones relative to the limited success of pagers. (2) | The response is a good attempt at analysing the factors contributing to the success of mobile phones relative to the limited success of pagers. (3) | The response is an excellent attempt at analysing the factors contributing to the success of mobile phones relative to the limited success of pagers. (4) |
| **Trajectory of AI  (Question 1.2)**  *The response provides a justified prediction of the trajectory that AI will take, and considers the factors that led to the success of mobile phones relative to the limited success of pagers*  *in Question 1.1.* | No submission.  OR  The response shows a poor attempt at predicting the trajectory of AI in the organisation. (0) | The response is a sufficient attempt at predicting the trajectory that AI will take in the organisation, but does not consider the factors that led to the success of mobile phones relative to the limited success of pagers in Question 1.1. (2) | The response is a good attempt at predicting the trajectory that AI will take in the organisation. and considers the factors that led to the success of mobile phones relative to the limited success of pagers in Question 1.1. (3) | The response is an excellent prediction of the trajectory that AI will take in the organisation, and considers the factors that led to the success of mobile phones relative to the limited success of pagers in Question 1.1. (4) |
| **Clarity and organisation of the writing**  *The response is structured clearly and logically.* | No submission.  OR  The response is unclear, unstructured, and in an incoherent format. (0) | The response is structured sufficiently well in terms of logic, clarity, and brevity. (2) | The response is structured very well in terms of logic, clarity, and brevity. (3) | The response is structured exceptionally well in terms of logic, clarity, and brevity. (4) |

**Total:** 16 marks