**INNOVATION MANAGEMENT**

**18 FEBRUARY 2021**

**N1.** Which of the following is NOT an organizational consequence of automation of decision-making given to algorithms?

a. Line involvement in Interpretability and validation of algorithmic outcomes

b. elimination of some middle management activities related to control

c. Replacement of repetitive and routinary tasks

**d. Outsourcing and offshoring**

**N2.** Which of the following is a competitive implication of automation of decision-making given to algorithms?

1. **Scalability**
2. Less industry concentration (large companies becoming smaller)
3. reduced entry barriers and more companies in the market
4. none of the following options

**N3.** An organization using AI to innovate products and customer relationship logic should build an organizational culture based on:

a. Bureaucratic control and centralization in order to prevent algorithms and software overruling human decision-making

b. **Adaptiveness and decentralization to agile teams that explore opportunities of AI use on an exploration platform**

c. Large use of team working and smart work

d. Use of lean management

**N4.** Taxi drivers in London have a unique and immense knowledge of London’s stress, addresses and point of interests. Such knowledge comes from their preparation for a test, called the Knowledge, that requires three years of study and regulates the access to the industry. In strategic terms, their knowledge can be seen as (select the most appropriate item, only):

a. A source of bargaining power with the customer

b. **A source of competitive advantage**

c. A type of knowledge that can be protected through legal tools such as patent or copyrights

d. A determinant of cost advantage

**N5.** Taxi drivers in London have a unique and immense knowledge of London’s stress, addresses and point of interests. Such knowledge comes from their preparation for a test, called the Knowledge, that requires three years of study and regulates the access to the industry. Rise of GPS and digital maps have made taxi drivers’ unique and in-depth knowledge of London streets

a. **A commodity that can be easily accessed by new entrants**

b. A substitute product

c. A competitive disadvantage

d. An exit barrier

**M1.** What is the most common shape of Digital Platform markets’ value chain?

* 1. Linear Value Chain
  2. Circular Value Chain
  3. **None of the other**
  4. Vertical Value Chain

**M2.** Starting from Harvard University, Facebook has overcome the chicken-egg problem. What kind of strategy is this?

1. **Micro-market strategy**
2. Big-Bang adoption strategy
3. Single side strategy
4. Marquee strategy

**M3.** Select the false statement:

1. Nightclubs are an age-old digital platform model
2. Data enabled learning are not comparable to network effects
3. **Age discount is example of 1st degree price discrimination**
4. Focus group is an age-old data enabled learning technique

**M4 (Open Question).** Discuss what are the industrial sectors in which we have seen or in which it could be possible to observe the emergence of a Digital Platform. What is the common characteristics between these industrial sectors? Then, discuss the advantages of digital platforms when compared to traditional business.

**MO1.** Select True statement only (only one answer is correct)

* 1. System architectures fosters the dynamics of innovation
  2. **System architectures determines the dynamics of innovation**
  3. System architectures activates the dynamics of innovation
  4. System architectures induces specific the dynamics of innovation

**MO2.** Select True statement only (only one answer is correct)

1. **Design platform is a collection of assets used as the basis for developing a family of multiple derivative systems**
2. Design platform enables value interaction among the two sides of the platform
3. Design platform is based on complete commonalities among the assets
4. Design platform is a collection of technological assets that are proven to work together

**MO3.** Select True statement only (only one answer is correct)

1. Open architecture offers flexibility and standardization
2. Integral architectures cannot enable variety
3. System changes within the lifetime and between versions are enabled by standard components
4. **Global performances are enabled by integral architectures, as local performances by modular ones**

**MO4.** System architecture mirrors organization structures, but:

1. it does not determine development processes and the associated project management process.
2. it cannot lead to complete virtual systems
3. **consequently, affects value chain and technological paradigm as well**
4. it does not affect companies’ integration choices

**MO5.** Select True statement only (only one answer is correct)

1. Digitalization is enabled by modularization and the use of platforms, because of the diffusion of services
2. Digitalization is enabled by modularization and the use of platforms, because of the presence of digital processes
3. **Digitalization is enabled by modularization and the use of platforms, interoperability and decentralization are required**
4. Digitalization is enabled by modularization and the use of platforms, because they are those required by the specific sustaining technologies (Internet protocols, A/V R, storage capacity and Cloud Computing, Data Mining and Machine Learning)

**MO6.** Select True statement only (only one answer is correct)

1. Standards and dominant design are strictly related concepts
2. Standard wars are beneficial for society because force companies to improve their technologies
3. **Standards affect dynamics of innovations, since they impose network externality mechanisms**
4. Standards induce economies of scale and scope, therefore help to reduce costs

**MO7.** Select True statement only (only one answer is correct)

1. Forecasting analysis is proper in the moment of paradigm shift
2. **TRIZ-based methods are scenario analysis methods used to investigate value profiles and explore revolutionary changes**
3. both scenario analysis and forecasting analysis are used in evolutionary environments
4. technology forecasting models definitively consider performance progress as proportional to the performance reached by technology

**MO8.** Select True statement only (only one answer is correct)

1. Inversion in the temporal innovation dynamics between product and process is specifically typical of services
2. Services lead to longer stable dominant designs, because higher sunk costs in technology
3. Lock-in effects and the dominant design cannot prevail in the bundle of product service systems; in fact, the Abernathy and Utterback model cannot be adapted for interpreting dynamics in product-services industries
4. **Innovation dynamics in product-services industries definitively arise in the part of system (product vs. infrastructure) where you have less modularity and more integral architectures**

**MO9 (Open Question).** Discuss the role of knowledge as determinant of innovation.