UNIVERSITÀ DEGLI STUDI DI SALERNO

DIPARTIMENTO
DI SCIENZE AZIENDALI
MANAGEMENT
& INNOVATION SYSTEMS

ASvSA

SIMAS

SISTEMI PER L'INNOVAZIONE
E MANAGEMENT SOSTENIBILE

Marketing Strategy in Service Business

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Programme

- Marketing and Service Marketing: an overview
- Marketing plan
- Complexity management
- New marketing strategies approaches: Relationship Marketing and Many-to-Many network; Experiential marketing; Unconventional marketing
- New marketing vision: Service Research - from S-D logic & Service Science to service ecosystems & service systems
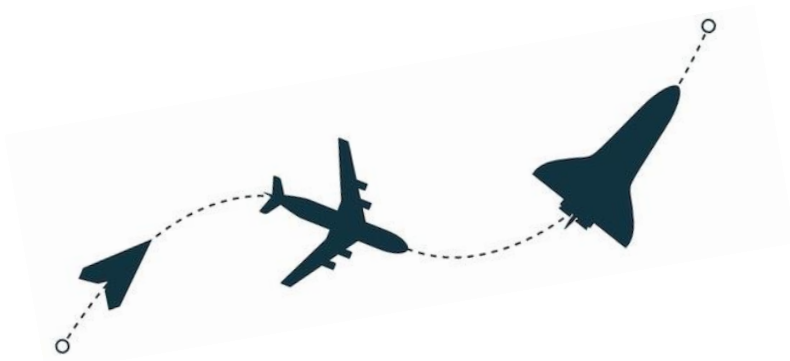- Technologies as Decision Support Systems for marketing strategies

Case studies
Examples
Project work

Agenda: Lesson 5

- Technologies as Decision Support Systems for marketing strategies

Examples

5.1

Data-driven decision making

Need for new technologies in marketing

Today innovation is increasingly associated with the function of encouraging companies in pursuing and maintaining their survival, through the achievement of a competitive advantage.

Service innovation occurs within networks when existing value propositions are modified through a process of integrating existing resources or by inventing new resources and involves the creation, renewal and transformation of pre-existing knowledge. Innovation cannot be exclusively linked to the use of new technologies; they have the "task" of providing companies with data.

Need for new technologies in marketing

The use of data and technologies is closely linked to human behavior.

Innovation implies that through technologies, responsible entities may improve themselves, and, as service systems are centered on people, it occurs when people, thanks to technologies, are able to optimize service systems operation.

Need for new technologies in marketing

To be competitive and survive in their complex context, companies must be able to solve complex situations and adapt to the needs of their customers.

It is necessary to use a service approach and always look for interactions oriented to value co-creation.

Data-driven decision making

Decision Support Systems (DSS) are automatic data processing systems to process information, aimed at improving decision-making processes.

It is necessary to understand how decision makers can plan strategies and pursue conditions of viability, despite the uncertainty and turbulence of the market.

Data-driven decision making

BENEFITS OF DATA-DRIVEN DECISION MAKING

| Valuable Insights | Continual Growth | Improved Program Outcomes | Optimised Operations | Prediction Of Future Trends | Actionable Insights |

Data-driven decision making

The DSS have the purpose of supporting difficult decisions, relating to all levels of the organization, also favoring the integration of these levels if necessary.

They are studied in the literature because:

- their aim is to simplify and optimize the operational performance that underlies the decisions taken during all operations;
- their aim is to support communication between all levels of the organization.

Data-driven decision making

Data-driven decision making (DDDM) involves the use of metrics and data to comply with companies' goals and initiatives, in favor of more effective and timely decisions.

Data-driven is a mind-set, a new culture that is wrecking companies' business models, according to which data are conceived as *strategic resources* useful for decisions.

Data-driven decision making

However, it is necessary to create a **data-driven corporate culture**, which pervades the entire organization, to optimize the information flows and the interactions between actors.

To allow the spread of data-driven decision-making governance it is necessary to train **specialized skills** in data analysis for an in-depth knowledge of the context and its growth potentialities.

Data-driven decision making

A data-driven decision-making process can improve the competitiveness of companies and enable them to pursue their marketing aims, such as customer relationship management, improvement of the quality of the product or service proposed.

[E.g. Data-driven decision making can also support healthcare actors to improve their performance. The healthcare system is today increasingly patient-centered and, for example, patient data, if correctly interpreted, could allow a doctor/patient co-learning process.]

Data-driven decision making

Today, decision-making processes could be more "informed", thanks to a more precise exchange of information. This would support decision makers to define and implement a strategy in an ever timelier and precise manner, with an improvement in the overall performance.

Data-driven decision making can improve organizations' performance and enable them to pursue their survival goals.

5.2

Augmented decision making

HMIs and value co-creation

However, new technologies could also determine ineffective outcomes and value co-destruction.

As well, sub-optimal performances may occur, as assessed at different levels than the one of the Human-Machine Interactions (HMIs), also due to emergent consequences.

HMIs and value co-creation

The risk of data-deluge and the difficulty of having useful information is very high, while the possibility of making quick, accurate, thoughtful decisions becomes more and more necessary.
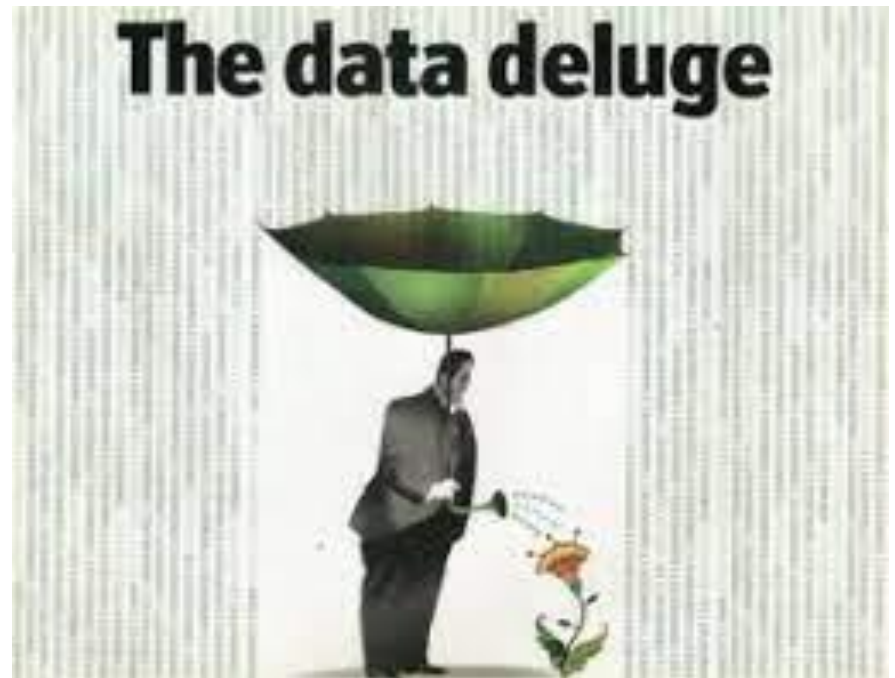
Augmented decision making

Augmented decision-making is a decision-making process in which algorithmic insights used may change the information variety of a decision-maker.

Information Variety

According to the Viable Systems Approach (vSa), complexity can be scaled through knowledge. There is in fact a close connection between decision and knowledge and the knowledge, in a given instant, of a given decision maker or viable system, is characterized by the variety of information.

Information Variety

The information variety of a viable system is composed of:

- Information units;
- interpretative schemes;
- value categories.

Information Variety

The *information units* are the structural composition of the knowledge of the viable system. It is all that can be perceived. Perception changes according to the characteristics of the viable system (previous information variety) and the relationship it develops with the external context.

Information Variety

The *interpretative schemes* define the forms of knowledge and have the task of transforming non-specific data into information relating to a specific context.

The interpretative schemes are divided into "general" and "synthetic".

The general interpretative schemes define a general rationalization of the information.

Synthetic interpretative schemes provide a way to filter specific information.

Information Variety

The *value categories* determine the resistance to change and represent the system of values, strong beliefs and are closely connected with the emotional level of the decision maker.

They represent the subjective filter with which the decision maker uses the interpretative schemes.
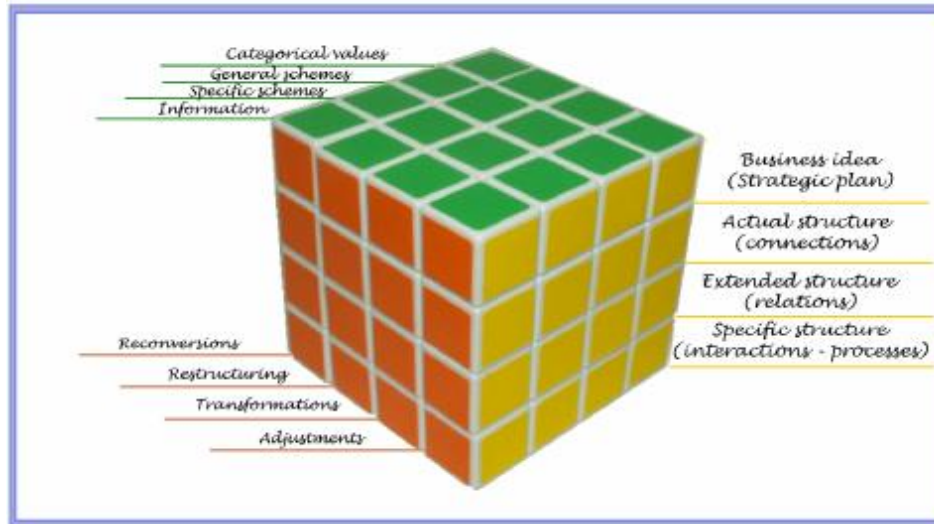
According to vSa, a system, in its search for viability in complex situations, can go through an adjustment, transformation, restructuring or reconversion phase depending on whether the specific structure, the extended structure, the actual structure or the business idea are modified.

These changes imply a different use of knowledge that is characterized by the information variety of the decision-maker, made up of information units, interpretative schemes and value categories.

Information Variety

The ability of the decision maker to acquire data, also through new technologies, can lead to a change in its variety of information as an increase in data determines a change in the information units held by the decision maker.

Is it sufficient to improve his/her ability to understand the context?

Intelligence Augmentation

According to vSa, the *Intelligence Augmentation*, as a perfect integration between wise people and Artificial Intelligence systems, may amplify the decision makers' ability to deal with a problem by changing their information variety and enabling their decision-making process.

Can IA Boost Your Business?

Intelligence Augmentation

Studies on Intelligence Augmentation are developed to predict a possible positive impact of the use of AI systems on humans in terms of wise decision-making skills increased in conditions of complexity.

The implications concern how value is co-created in the digital age based on human-machine interactions for the benefit of people, organizations and the planet as a whole.

Intelligence Augmentation

Intelligence Augmentation implies a perfect combination of artificial intelligence technologies and people who, through technologies, can amplify their decision-making skills thanks to a change in their information variety, not only due to the increase in information units but the capacity of the decision maker to use the latter to create new interpretative schemes.

Intelligence Augmentation

According to the vSa, Intelligence Augmentation favors an increase in information units that allows increased potential of interpretative schemes, as well as the ability to promptly form new ones, with a consequent overall optimization of the decision maker's thinking structure.

Intelligence Augmentation

When humans interact effectively with intelligent machines, an enhanced learning effect emerges that strengthens the subject's interpretative and decision-making abilities, including through a better understanding of contextual dynamics.

This effect determines a greater ability of the decision maker to border the problem, and therefore, to approach the solution.

Intelligence Augmentation

The vSa proposes an interpretation of IA as the result of the interaction between human and machine which is not, however, to be understood as a mere amplification of human cognitive abilities in terms of intellectual growth but as a collaborative integration that allows the system to evolve from a configuration intelligent to a wise one, in which the rational component of the machine integrates perfectly with the emotional component of humans.

Intelligence Augmentation

Intelligence Augmentation involves perfect human-machine interaction in which machines do what they do best to help humans do what humans do best: think.

Intelligence Augmentation is an intelligence that derives from a collaborative and effective human-machine interaction and integration.
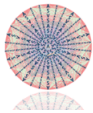
Intelligence Augmentation

Intelligence Augmentation allows systems to evolve into configurations that are not only smarter but wiser and also more dynamic and potentially reactive in solving complex situations thanks to a better ability to understand the dynamics of the context and of its market.

THANK YOU.

Questions? Comments?

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