11th International Conference on Management Studies (ICMS-2024)

A TOOL FOR PRIVACY CULTURE ASSESSMENT

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Author's short biographies

Raphael Batista Ribeiro: Graduated in Computer Science, with a postgraduate degree in Management and Governance in IT and a master's degree in Governance, Technology and Innovation. Certified in ANBIMA Series 10 Professional Certification (CPA-10) and OMG Certified Expert in BPM. Currently, works with risk management in Private Pension. Professional career dedicated to risk mitigation as 2nd line of defense integrated with the principles of Corporate Governance, such as: transparency, accountability and responsibility.

João Souza Neto has a PhD degree in Electrical Engineering from UnB - University of Brasília / FCI - Faculty of Engineering. Master in Electronics Engineering at Philips International Institute in the Netherlands (1984). Currently is a Lecturer at the Cybersecurity Master's degree Program at the University of Brasília. Specialist in IT Governance, Risk Management, Information Security and Privacy Management. Holds several IT certifications like CGEIT, CRISC, CDPSE, PMP, RMP, COBIT 2029 Design Implementation. Senior Engineer at Brazil Post, Correios.

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Introduction

- This research is intended to obtain an organizational culture assessment tool so institutions can diagnose and develop the culture of privacy. In order to achieve the established objective, the research included a survey and evaluation, with 100 market professionals, of the requirements considered necessary for the development of a culture of privacy; in addition, an assessment of the culture of organizations using the suggested tool, the OCAI questionnaire, designed by Cameron and Quinn (2011), was also carried out in 06 organizations. The assessment allows knowing the cultural levels of the organization, including the current perception of the dominant culture and the status that is intended to be achieved.

The Literature Review

Privacy culture and the areas that study it:

- The protection of privacy as the “right to be left alone” associated with isolation or seclusion no longer allows defining parameters to evaluate what privacy actually represents for the world today, due to the incessant increase in the flow of information and the advancement technology and information digitization, the private sphere has become a fragile point that can suffer influences or even violations (DONEDA, 2019).

- The advancement of digital technology in the last two decades has brought several significant changes that have facilitated the storage, availability and sharing of information and personal data in the routines of society and, mainly, in the relationship between organizations and their customers, such as: immediate access; use of cell phones, applications and tablets; cloud computing; speed in the provision of services; large data storage and processing capacity, which transformed people's lifestyle and, consequently, the culture of humanity to a reality marked by the use of the Internet (CASTELLS, 1999).

The Literature Review

Privacy culture and the areas that study it:

- Digital transformation was predicted by Castells (1999), stating in his studies that the Internet would be the most important global interconnection channel, where everything would be connected to systems invariably open to people and institutions.

- Castells (1999) argues that the digital transformation in society, applied to a complex economic and cultural system, has made the representation of the Internet a reflection of the behavior and characteristics of society itself, providing an understanding of people and their needs through technological tools. This reality has brought numerous challenges to legal science and human rights, as the risks of violating freedom, equality and dignity of human life have increased considerably (RAMOS, 2005).

The Literature Review

Privacy culture and the areas that study it:

- The demands that now shape the privacy profile today are from a different order, with relationships focused on personal information conditioned by the use of technology. Currently, the unwanted exposure of a person to the eyes of others is more likely to occur due to the disclosure of data by the person themselves than due to the deliberate intrusion of a third party into a home or correspondence, for example. Personal data are indicative of a person's personality; therefore, they deserve protection by law (DONEDA, 2019).
- The theme of privacy culture assessment is applicable to the organizational context, therefore, it is part of the context of Law No. 13,709/18, General Personal Data Protection Law (LGPD), which is based on the following elements: respect for privacy; informational self-determination; freedom of expression, information, communication and opinion; the inviolability of intimacy, honor and image; economic and technological development and innovation; free enterprise, free competition and consumer protection; and human rights, the free development of personality, dignity and the exercise of citizenship by natural persons (Brazil, 2018)

The Literature Review

Privacy culture and the areas that study it:

- Hofstede (2010) describes culture as a set of unwritten values and norms that define, for a group of people, what is acceptable and “right”; and that which is unacceptable and “wrong”. In addition, Hofstede makes a parallel between culture and an iceberg, where the visible part represents people's behavior, symbols and rituals of culture, that is, it represents what can be easily observed; the non-visible part represents the values.

- Chiavenato (1999) defines that organizational culture has visible (formal) and invisible (informal) aspects. The formal elements are composed of policies, guidelines, methods, procedures, structure and technology; and informal ones by perceptions, feelings, attitudes and values

- Therefore, organizational culture relates to privacy through the attitudes, assumptions, beliefs, values and knowledge practiced by an organization's employees, contributing to data protection and, consequently, to the formation of a privacy culture (DA VEIGA; MARTINS, 2015).

The Study

- Given the concerns about data processing and the risks inherent to privacy, the need for this research is justifiable, which aims to evaluate the privacy culture of organizations using the OCAI tool, which allows diagnosing the profile of organizational culture, helping to identify the type of culture that is most dominant in the organization, according to the Competitive Values Model proposed by Cameron and Quinn (2011), and in directing changes and adaptations to be made to achieve a desired state.

Research Question

- **What are the main requirements that are part of a privacy culture assessment instrument?**

Methodology

- The research is based on the propositions of Silva and Menezes (2005), which classify research according to the following perspectives: regarding nature; regarding how to approach the problem; regarding its objectives; and regarding technical procedures.
- Silva and Menezes (2005) report that the purpose of the methodology is to present details of the steps to be followed during research, helping to reflect and seek creative observations about the world.

Methodology

- **Research Classification**: applied, descriptive, bibliographic, and qualitative.
- **Research Methodological Strategy**: systematic literature search on Privacy Culture.
- **Research Methodological Course**: from the choice of theme to the application of tools to evaluate the privacy culture of an organization.
- **Research Corpus**: systematic literature searches for scientific articles on the research theme in 03 databases.
- **Narrative Review**: to find articles associated with technical terms from Privacy Culture.

Methodology

- A method was created for the archival management of EHRs using Blockchain and Smart Contracts, encompassing:

- Macroprocess: Assessment of privacy culture in organizations:

- Process 1: Identification of necessary requirements for the development of a privacy culture;
- Process 2: Application of a survey to evaluate the identified requirements;
- Process 3: Relationship of requirements with the Competitive Values Model;
- Process 4: Assessment of privacy culture in organizations using the OCAI tool.

Results

Procedures used:

- **Bibliographic research:** Power (2007) e Da Veiga (2018); Clark e Culnan (2009)
- **Documentary research:** Institutional studies of the Federal Data Processing Service – SERPRO
- **Survey** applied for 100 participants to understand to importance of the requirements.

	Preliminary list of requirements
1	Senior Management Support
2	Meeting customer privacy expectations
3	Managers' commitment
4	Privacy Risk Communication
5	Ethical Conduct
6	Regulatory compliance
7	Privacy awareness
8	Public demonstration by senior management
9	Institutional policies and norms
10	Accountability to customers
11	Privacy Program
12	Training and capacity building
13	Values and beliefs

Results

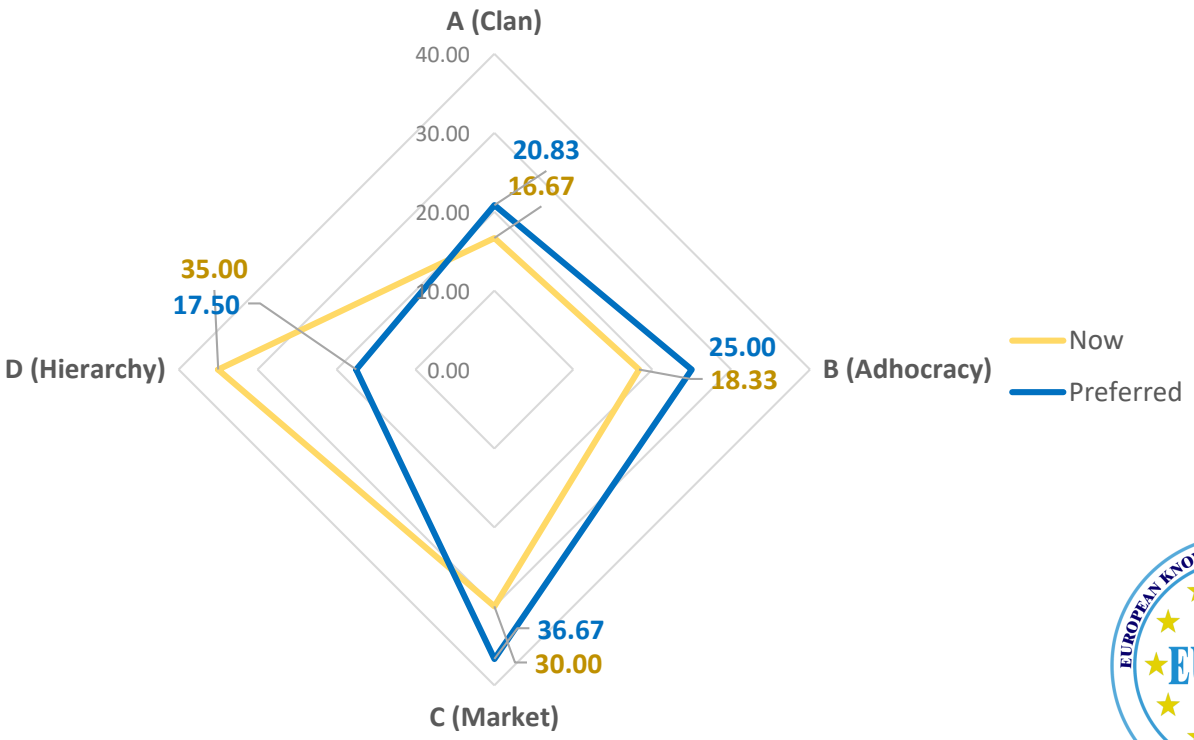
Relationship of requirements with the Competitive Values Model

Flexibility and Discretion			
Internal Focus and Integration	**Clan Culture (A)** • Ethical Conduct. • Privacy awareness. • Training and capacity building. • Values and beliefs.	**Adhocracy Culture (B)** • Senior Management Support. • Managers' commitment. • Public demonstration by senior management.	External Focus and Differentiation
	Hierarchy Culture (D) • Privacy Risk Communication. • Regulatory compliance. • Institutional policies and norms. • Privacy Program.	**Market Culture (C)** • Meeting customer privacy expectations. • Accountability to customers.	
Stability and Control			

Results

ORGANIZATION 1 – BANKING INSTITUTION

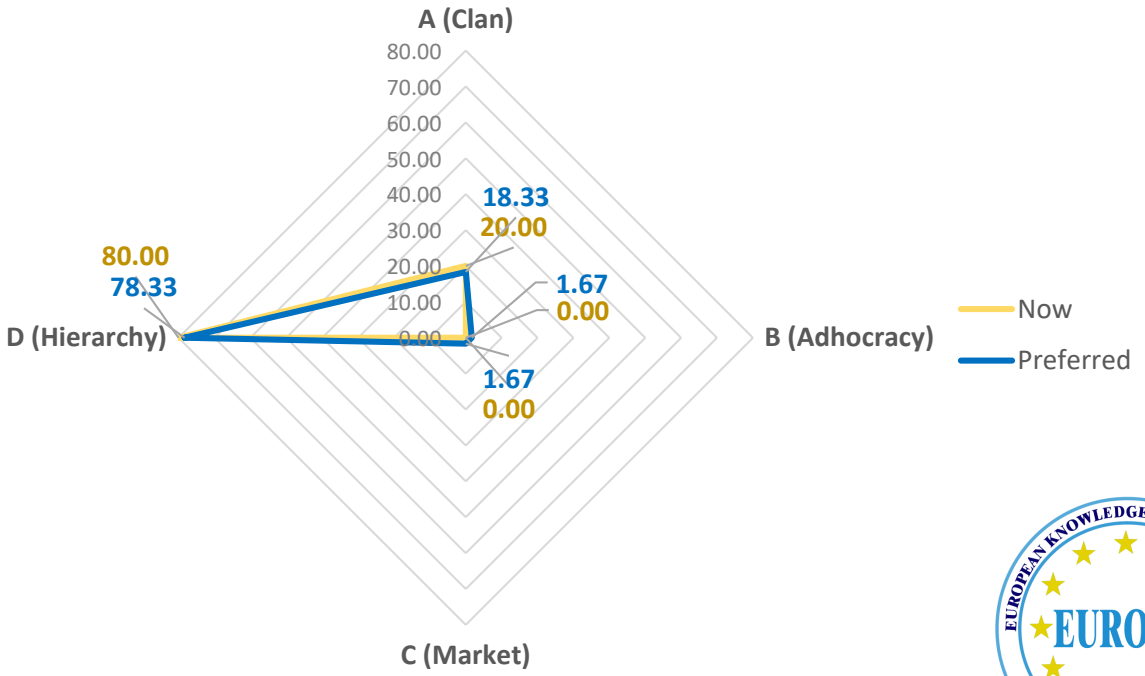
Condition	A (Clan)	B (Adhocracy)	C (Market)	D (Hierarchy)
Now	22,74	18,81	28,10	30,36
Preferred	24,52 (+1,78)	25,95 (+7,14)	25,83 (-2,27)	23,69 (-6,67)



Results

ORGANIZATION 2 – RESEARCH FOUNDATION

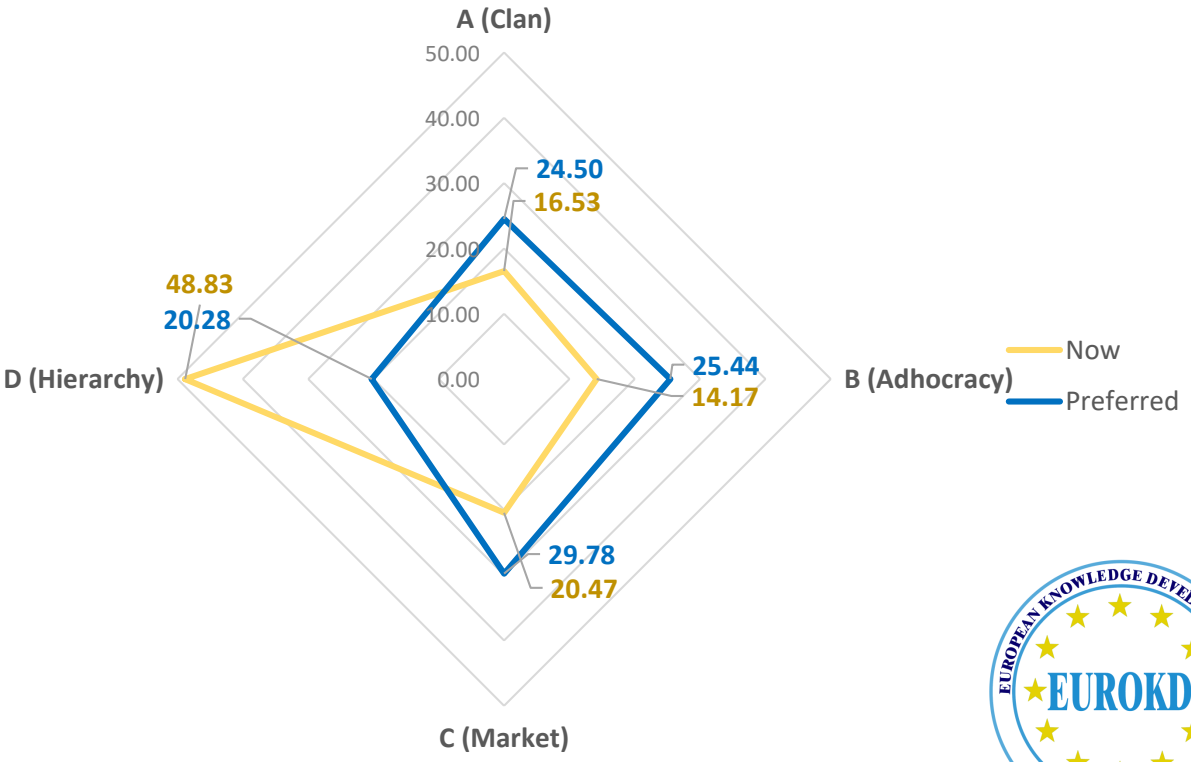
Condition	A (Clan)	B (Adhocracy)	C (Market)	D (Hierarchy)
Now	20,00	0,00	0,00	80,00
Preferred	18,33 (-1,67)	1,67 (+1,67)	1,67 (+1,67)	78,33 (-1,67)



Results

ORGANIZATION 3 – PUBLIC COMPANY

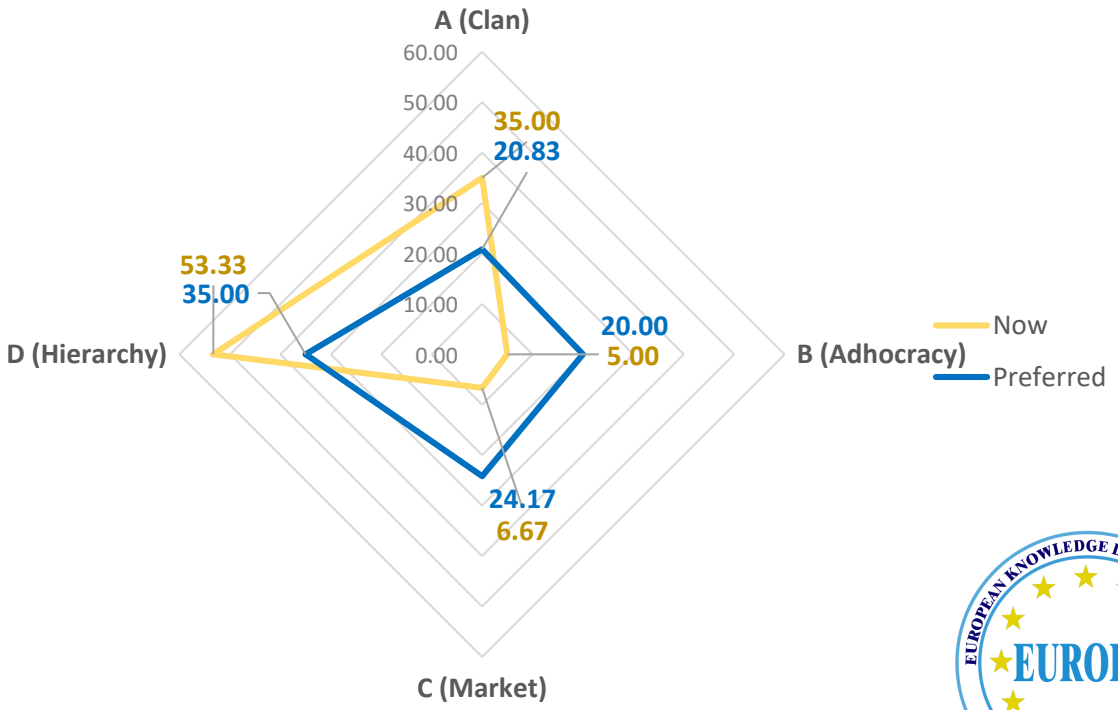
Condition	A (Clan)	B (Adhocracy)	C (Market)	D (Hierarchy)
Now	16,53	14,17	20,47	48,83
Preferred	24,50 (+7,97)	25,44 (+11,27)	29,78 (+9,31)	20,28 (-28,55)



Results

ORGANIZATION 4 – CIVIL ASSOCIATION

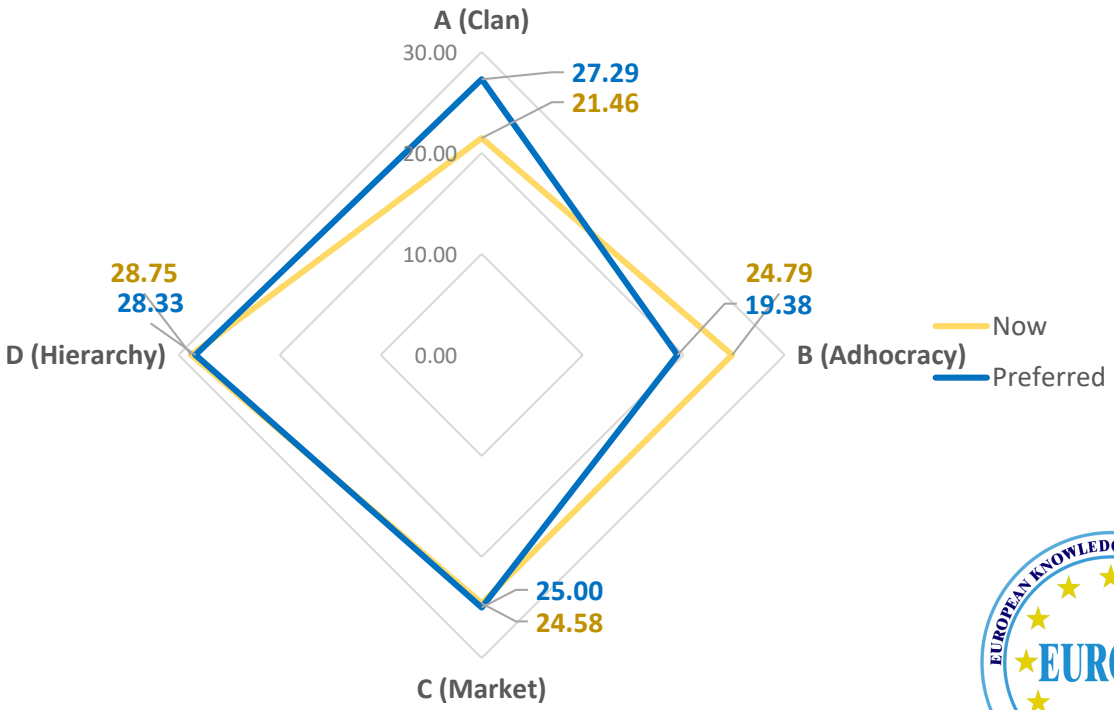
Condition	A (Clan)	B (Adhocracy)	C (Market)	D (Hierarchy)
Now	35,00	5,00	6,67	53,33
Preferred	20,83 (-14,17)	20,00 (+15,00)	24,17 (+17,50)	35,00 (-18,33)



Results

ORGANIZATION 5 – SOCIAL INSTITUTION

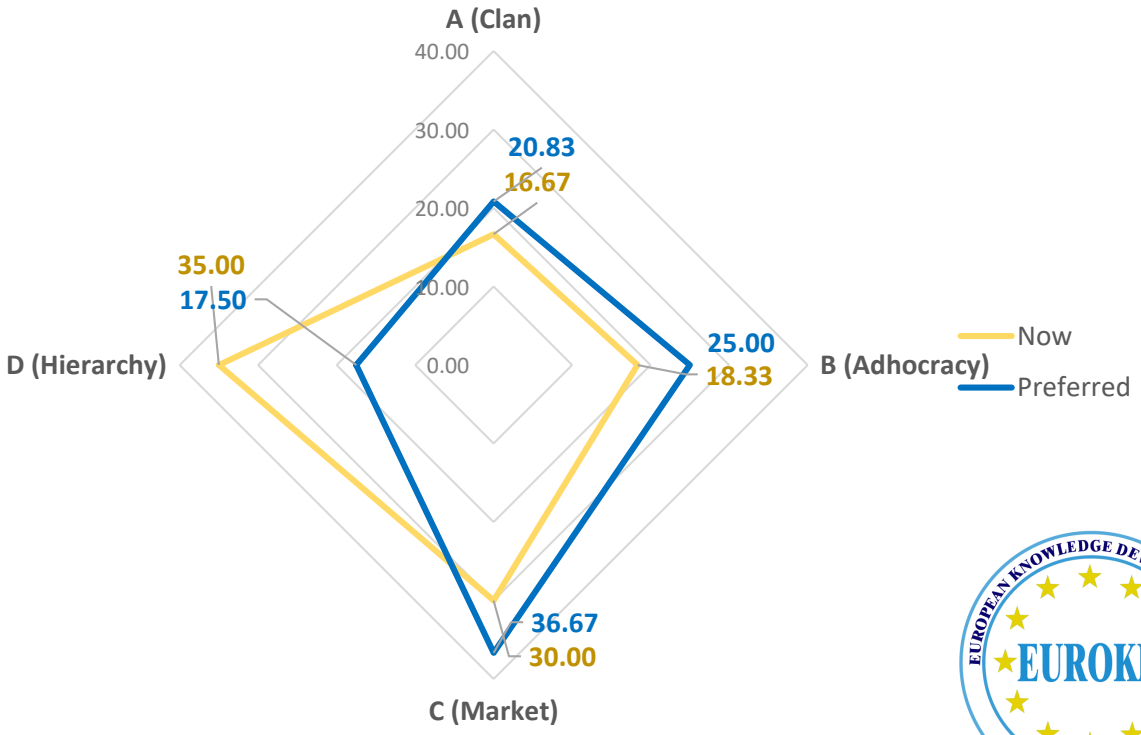
Condition	A (Clan)	B (Adhocracy)	C (Market)	D (Hierarchy)
Now	21,46	24,79	24,58	28,75
Preferred	27,29 (+5,83)	19,38 (-5,41)	25,00 (+0,42)	28,33 (-0,42)



Results

ORGANIZATION 6 – FEDERAL AGENCY

Condition	A (Clan)	B (Adhocracy)	C (Market)	D (Hierarchy)
Now	16,67	18,33	30,00	35,00
Preferred	20,83 (+4,16)	25,00 (+6,67)	36,67 (+6,67)	17,50 (-17,50)



Discussion

- This research proposed the use of the OCAI form as a tool for evaluating the privacy culture of organizations, allowing the diagnosis of the current state, the desired future state and the dominant orientation of an organization according to the types of culture established in the Competitive Values Model of Cameron and Quinn (2011).

- As a condition for using OCAI, the author identified the necessary requirements for the development of a privacy culture through bibliographic and documentary research. After the survey, the requirements were evaluated by professionals from organizations using an online survey. As a result, 13 necessary requirements were identified for the development of a privacy culture in organizations.

Discussion

- After the identification and survey steps, the 13 requirements were compared with the characteristics of the Competing Values Model culture types: orientation, leader type, key value and associated effectiveness theory. This comparative analysis provides the possibility of knowing what requirements are necessary to develop a privacy culture in accordance with the organization's cultural diagnosis.

- As the final stage of the research, the Organizational Culture Assessment Instrument – OCAI was applied to 6 organizations, with the participation of 20 professionals. As a result of this practical application, it was possible to identify the dominant types of culture in organizations, as well as the current state and desired future state of organizational culture.

Implications

- This research presented directions for achieving the desired future state, given the comparative analysis carried out of the 13 requirements of the privacy culture with the types of culture of the Competitive Values Model. Depending on the culture to be developed, whether Collaborative, Innovative, Market and/or Hierarchical, this research indicated which requirements must be observed and addressed within the organization in accordance with the intended objectives.

Suggestions for Further Research

- It is recommended to apply the OCAI form in an organization, with wide dissemination to employees, through a case study. In addition, it is recommended that an assessment of the effectiveness of the 13 requirements identified in this research be carried out to verify whether they contribute to achieving the desired state according to the types of culture, according to the Competitive Values Model.

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