

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
UKRAINIAN-AMERICAN CONCORDIA UNIVERSITY

School of Management and Business
Department of International Economic Relations, Business & Management

Bachelor's Qualification Work

(on the basis of
Information and communication in management)

Bachelor's student of

Field of Study 07 – Management
and Administration

Specialty 073 – IT Management

Educ. program – IT Management

Heorhii Mykhailets



Research supervisor



Ruslana Seleznova

(First Name, Last Name)

Ph.D. in Technical Science

Kyiv – 2023

Abstract

The work is devoted to consideration of the problem of gender equality and inequality in Ukraine in the context of deepening Ukraine's relations with the European Union. The work summarizes theoretical approaches to gender issues, including sociological approaches to the study of gender stereotypes, as well as their role in Ukrainian society based on sociological surveys. The influence of gender stereotypes on the life of Ukrainians in various spheres of social life was established. Autor identified most problematic spheres, in which the implementation of additional reform is necessary. A comparative analysis of gender equality in Ukrainian and European society was conducted, and special regularities were revealed that require effective implementation of gender policy. The general level of perception of European values by Ukrainians was established, depending on the regions where the respondents live and their age.

Keywords: gender equality, European integration, European values, gender policy, gender stereotypes, modern Ukrainian society.

Анотація

Робота присвячена розгляду проблем гендерної рівності та нерівності в Україні в контексті поглиблення відносин України з Європейським Союзом. В роботі узагальнено теоретичні підходи стосовно гендерних питань, в тому числі соціологічних підходів до вивчення гендерних стереотипів, а також їх ролі в українському суспільстві на основі соціологічних опитувань. Було встановлено вплив гендерних стереотипів на життя українців в різних сферах суспільного життя, та виявлено найбільш проблемні сфери, в яких необхідна імплементація додаткових реформ. Було проведено порівняльний аналіз гендерної рівності в українському та європейському суспільстві, та виявлено специфічні закономірності, що заважають ефективній реалізації гендерної політики. Встановлено загальний рівень сприйняття українцями європейських цінностей в залежності від регіонів де проживають респонденти, та їх віку.

Ключові слова: гендерна рівність, євроінтеграція, європейські цінності, гендерна політика, гендерні стереотипи, сучасне українське суспільство

PHEE-institute «Ukrainian-American Concordia University»

School of Management and Business

Department of International Economic Relations, Business and Management

Educational level: **bachelor degree**
Specialty: 073 “Management”
Educational Program “IT Management”

APPROVED

Head of Department Prof. Liubov Zharova

“25” April 2023

TASK
FOR BACHELOR’S QUALIFICATION WORK

Heorhii Mykhailets

(Name, Surname)

***Topic of the work: Information and Communication in Management
(based on the internship in Manna Nebesna)***

Supervisor of the work ***Ruslana Seleznova, Ph.D. in Technical Science.***

(surname, name, degree, academic rank)

Which approved by Order of University from

“22” September 2022 № 22-09/2022-4c - **MIT**

2. Deadline for bachelor’s qualification work submission **“23” April 2023**

3. Data-out to the bachelor’s qualification work_

Materials from internship received during consultation with representatives of the company. Information from open resources in the Internet, official reporting of financial and economic activities of the enterprise.

4. Contents of the explanatory note (list of issues to be developed).

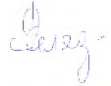





There are three main topics a student should develop in this work:

- 1. Information and communication in management***
- 2. Applying experience gained during the internship***
- 3. Effective information and communication management***

5. List of graphic material (with exact indication of any mandatory drawings)

Graphs and figures for analysis of economical and statistical information on the company and its development, visualization of mechanism of development, etc.

6. Consultants for parts of the work

Part of the project	Surname, name, position	Signature	
		Given	Accepted
1	<i>Ruslana Seleznova, Ph.D. in Technical Science</i>		
2	<i>Ruslana Seleznova, Ph.D. in Technical Science</i>		
3	<i>Ruslana Seleznova, Ph.D. in Technical Science</i>		

7. Date of issue of the assignment

Time Schedule

№	The title of the parts of the bachelor's qualification work	Deadlines	Notes
1.	I chapter	<i>31.12.2022</i>	<i>In time</i>
2.	II chapter	<i>20.02.2023</i>	<i>In time</i>
3.	III chapter	<i>11.04.2023</i>	<i>In time</i>
4.	Introduction, conclusions, summary	<i>23.04.2023</i>	<i>In time</i>
5.	Pre-defense	<i>27.04.2023</i>	<i>In time</i>



Student. Heorhii Mykhailets

(signature)



Supervisor Ruslana Seleznova

(signature)

Conclusions:

The study looks at how theoretical frameworks for IT management have evolved, as well as how globalization dynamics in online trade have fueled the growth of IT management. The useful advise was well-written and concentrated on the duties and primary objective of the position. The thesis might be deemed "good" overall if the defense is successful.

Supervisor

Ruslana Seleznova



(signature)

Content

INTRODUCTION

CHAPTER I. INFORMATION AND COMMUNOCATION IN MANAGEMENT

1.1 ICM Strategy

1.2 Setting up a strategy development team

1.3 The Role of Communication in Management

1.4 The Communication-Process Model

1.5 Common Missteps in Communication

1.6 Formal and Informal Communication Systems

CHAPTER II. APPLYING EXPERIENCE GAINED DURING THE INTERNSHIP

2.1 ICM Strategy implementation during the internship

2.2 Importance of information and communication technology in business

2.3 What is information and communication technology?

2.4 Role of information and communication technology in business

2.5 Collecting, storing, and analyzing information

2.6 Digital communication

2.7 Information and Communication Technology in Business – Summary

CHAPTER III. Effective information and communication management

3.1 Positive Factors Impacting Information and Communication Management

3.2 Skilled Workforce

3.3 Effective Processes and Systems

3.4 Outdated Technology

3.5 Evaluation of Opportunities to Enhance Efficient Development

CONCLUSION

REFERENCE LIST

Introduction

In today's dynamic and rapidly evolving business landscape, effective management of information and communication has emerged as a critical factor in achieving organizational success. As businesses face increasing complexity, globalization, and technological advancements, the ability to access, process, and utilize information efficiently becomes paramount. This bachelor's thesis aims to delve into the realm of information and communication in management, exploring its significance, challenges, and strategies for optimizing these crucial aspects.

The purpose of this research is to provide a comprehensive examination of the role of information and communication in the field of management. By analyzing relevant theories, frameworks, and practical examples, this study seeks to shed light on the importance of information and communication processes in decision-making, organizational performance, and overall business effectiveness. Additionally, it aims to identify key challenges and potential solutions for enhancing information flow, knowledge sharing, and collaboration within organizations.

The scope of this bachelor's thesis encompasses various dimensions of information and communication in management. It will explore topics such as the role of technology in facilitating efficient information flow, the impact of effective communication on employee engagement and motivation, the utilization of data analytics for decision-making, and the importance of information security and privacy in today's digital age. By examining these diverse aspects, this study intends to provide a holistic understanding of the multifaceted nature of information and communication in management.

The research methodology employed in this study will involve a combination of literature review, case studies, and qualitative analysis. Through an extensive review of scholarly articles, books, and reputable sources, relevant theories and concepts will be synthesized to form the theoretical framework. Additionally, real-world case studies will be analyzed to illustrate practical applications and provide valuable insights into

successful information and communication practices in different organizational contexts.

The findings of this research are expected to contribute to the existing body of knowledge on information and communication in management, offering valuable insights for practitioners, managers, and researchers. The outcomes of this study will serve as a foundation for developing strategies, guidelines, and best practices for optimizing information and communication processes within organizations, ultimately leading to enhanced decision-making, improved collaboration, and increased operational efficiency.

Overall, this bachelor's thesis seeks to explore the intricate relationship between information, communication, and effective management. By investigating various aspects and dimensions, it aims to provide a comprehensive understanding of the role of information and communication in the modern business environment and its implications for organizational success. Through the insights gained from this research, organizations can strive towards leveraging information and communication as strategic assets to thrive in today's competitive landscape.

Chapter 1

Information and communication in management

The software that runs our daily lives, from work to leisure to travel, is vital in managing complex information that is often communicated across networks to meet our needs. The amount of data and the complexity of software systems pose significant challenges to industries, as seen in the New York Stock Exchange, which requires fast, reliable, and highly available software that can handle large amounts of data and adapt to user needs and changing technologies. The Information and Communication Management Track of the Computer Science Master's program addresses these challenges and prepares students to become the architects of tomorrow's successful computer science stories.

Organizations today have information in various formats, including electronic and hard copies, which can be accessed through shared computer networks both within and outside the organization. The use of information and communication technologies (ICTs) has made it easier to access and disseminate information across various platforms. All departments generate information for decision-making purposes, making it a valuable organizational asset that requires holistic management, including appointing custodians responsible for its generation, transformation, dissemination, and security. In modern society, software plays a crucial role in our daily lives, shaping the way we work, play, travel, trade, and interact with one another. It is responsible for managing complex information, often communicating across networks with other software systems to meet our needs. However, the vast amounts of data that need to be managed, the availability of communication infrastructures, and the complexity of resulting software systems have become major challenges for entire industries.

One example of this is the New York Stock Exchange, which requires software that can respond within fractions of a second to tens of thousands of users every day, with just seconds of downtime per year. Achieving such high responsiveness and extreme availability poses a significant challenge. Updating and querying large amounts of data in real-time, ensuring fast and reliable communication, maintaining service availability, adapting to ever-changing user needs and new technologies, ensuring data integrity and communication security, assessing quality, and avoiding vulnerabilities are some of the critical questions researched by the ICM track of the Computer Science Master's program.

This program focuses on combining modern information and communication systems technology with advanced software engineering practices to build large-scale, data and communication-intensive systems. The joint teaching of these topics enables students to become the architects of tomorrow's success stories in computer science.

Information is a vital resource in any organization, and it can be found in both electronic and hard copy formats. It encompasses a broad range of formats, including computer databases, paper reports, instructional videos, audio recordings, and more. Information and communication technologies (ICTs) facilitate access to this information through shared computer networks within an organization and externally through networks in the public domain.

All departments generate information as part of their designated work programs, including personnel, finance, research, marketing, computer, and public relations departments. Therefore, information in an organization is not limited to the holdings of the library, information resource center, record management center, or computer center. It is crucial to have a holistic view of information as both an organizational resource and a valuable asset. As a resource, information is required for decision making at all levels and should be perceived as valuable to an organization as its finances, personnel, plant and machinery, and clients. The appointment of custodians of information is necessary to manage information and information infrastructure, ensuring its generation, transformation into usable formats, dissemination, and security. Furthermore, with the widespread availability of communication

infrastructures, managing large amounts of data and building complex software systems have become major challenges for industries. For example, the New York Stock Exchange requires its software to respond within fractions of a second to tens of thousands of users every day with just a few seconds of downtime per year. Achieving high responsiveness and extreme availability raises questions about how to update and query large amounts of data in real-time, ensure fast and reliable communication, design systems that are maintainable without disrupting service availability, adapt to ever-changing user needs and new technologies, and ensure data integrity and communication security.

These are some of the questions tackled by the groups in the Information and Communication Management (ICM) track of the Computer Science Master's program. By combining modern information and communication systems technology within the framework of advanced software engineering practices, the ICM track trains students to become the architects of tomorrow's successful computer science systems.

Data and information are available in various formats, such as computer databases, paper reports, instructional videos, audio recordings, and more. Information and communication technologies (ICTs) facilitate access to these formats, both within an organization's shared computer networks and externally through public networks. Information is generated across all departments, including personnel, finance, research, marketing, computer, and public relations. Therefore, it is essential to have a holistic view of information as both an organizational resource and a valuable asset.

As a resource, information is essential for decision-making at all levels of an organization, and it should be regarded as valuable as finances, personnel, and other tangible assets. This perception is reflected in how an organization manages its information and infrastructure, including appointing custodians responsible for generating, transforming, disseminating, and securing information. The perception of an organization's information assets by top management can be inferred from various indicators. These include how the organization responds to information needs, the accountability expected of custodians, the provision of adequate funding, the availability and accessibility of a documented information strategy, and the position of

the information department in the organization chart relative to other assets. Effective management principles are essential for achieving organizational goals and mandates for all resources and assets, including information and communication resources. Therefore, Information and Communication Management (ICM) must encompass both the management of information and the management of information and communication technology. Horton suggests that strategic information management involves relating information issues to program and corporate strategic objectives and developing related strategies. He identifies five guiding principles for strategic information management, including the management of information holdings and technologies as major assets, information investments made in support of organizational goals, and the accountability of end-users for information planning, management, and control. This manual emphasizes the importance of linking the development of an ICM strategy to the organization's mission, vision, mandate, and goals. The ICM strategy outlined in a corporate ICM strategy document must support the organization in achieving its objectives.

Furthermore, the effective management of information assets requires a multidisciplinary approach that spans several disciplines, including information technology, information management, communication, and management. The ultimate goal of ICM is to improve the use of information within organizations and society at large.

To achieve effective strategic information management, organizations must adopt a formal management approach to the life-cycle phases of information. This includes managing information from its creation to its retirement and disposition. The responsibility for managing information effectively and efficiently falls on both line and staff managers, as well as employees in different departments within the organization. End-users are also accountable for the planning, management, and control of the information they use, produce, process, store, deliver, and share internally and externally with stakeholders.

In summary, the value placed on an organization's information assets by top management can be assessed through various indicators, such as the organization's

response to information needs, accountability, funding, and accessibility of a documented information strategy. Effective strategic information management requires a multidisciplinary approach and the adoption of management principles to achieve organizational goals and mandates. The development of an ICM strategy should support an organization in achieving its mission, vision, mandate, and goals while managing information effectively and efficiently throughout its life-cycle phases.

It is also important to note that effective information and communication management can have significant benefits for organizations. For example, it can enhance decision-making, improve collaboration, increase efficiency and productivity, and promote innovation. Additionally, effective management of information assets can also improve the organization's ability to manage risk and comply with legal and regulatory requirements.

To achieve these benefits, organizations must prioritize the management of their information assets and adopt a comprehensive approach to information and communication management. This involves developing a clear strategy that outlines how information will be managed, who is responsible for managing it, and what systems and processes will be used to support the management of information.

Overall, effective information and communication management is essential for organizations looking to remain competitive and achieve their strategic goals. By adopting a comprehensive approach to managing their information assets, organizations can improve their decision-making, collaboration, productivity, and innovation, while also mitigating risk and complying with legal and regulatory requirements.

1.1 ICM Strategy

An ICM strategy provides direction and priorities for managing an organization's information and communication resources to support program and project execution. It is beneficial for all organizations, regardless of size or sector, to have a written ICM strategy available to all staff. Benefits include objective allocation of information

resources, priority accorded to ICT capacity, acquisition and updating of hardware and software, standard budget items for information acquisition and use, internal and external networking, optimal flow of information, staff informed about priority programs and plans, capacity building for ICM, and mechanisms for monitoring and evaluation of information acquisition, generation, use, and dissemination. Six steps are presented for formulating an ICM strategy document: creation of buy-in, appointment of a strategy development team, analysis of the current situation, preparation of a SWOT analysis, development and formulation of strategic objectives, core strategy, and preparation of the ICM strategy document, and implementation, presentation, monitoring, evaluation, and updating of the strategy. These steps can be used by any organization, and a hypothetical organization called Agrimark is used as an example. Step 2 involves the appointment of a strategy development team, which should consist of representatives from key sections and divisions of the organisation. This team should be led by a project manager or coordinator who has the responsibility of guiding the process and ensuring that all the necessary inputs are obtained. The team should be multi-disciplinary in nature, including members from various areas such as IT, communication, and programme management.

In Step 3, the current situation of the organisation is analyzed, with a focus on the information and communication resources and assets. This analysis should include a review of the existing policies and procedures, hardware and software infrastructure, staffing, training and capacity building, as well as the information needs and requirements of the various programmes and projects. This step helps to identify gaps and weaknesses in the current system and provides a basis for developing a strategy to address these issues.

Step 4 involves the preparation of a SWOT analysis, which helps to identify the organisation's strengths, weaknesses, opportunities, and threats in relation to information and communication management. This analysis should be comprehensive, and the team should consider both internal and external factors that could affect the organisation's performance in this area.

In Step 5, the strategic objectives and core strategy are developed based on the findings of the previous steps. The ICM strategy document is then prepared, which outlines the goals and objectives, strategies and action plans, as well as the monitoring and evaluation mechanisms that will be used to track progress and make adjustments as needed.

Finally, Step 6 involves the implementation, presentation, monitoring, and evaluation of the strategy. This step requires ongoing commitment and support from management and staff, and a system for monitoring and reporting progress towards the achievement of the goals and objectives. The strategy should also be periodically reviewed and updated to ensure that it remains relevant and effective in meeting the organisation's evolving needs.

In summary, the formulation and implementation of an ICM strategy can provide many benefits to organisations of all sizes and types. By following a systematic approach such as the one presented here, organisations can develop a comprehensive and effective strategy that supports their programmes and projects and helps them to achieve their goals and objectives.

Step 5 involves the development and formulation of strategic objectives, core strategy and preparation of the ICM strategy document. This step is crucial as it lays out the framework for the organisation-wide ICM strategy. Strategic objectives should be specific, measurable, achievable, relevant, and time-bound (SMART). These objectives must be aligned with the organisation's mission, vision, goals, and mandates. Once strategic objectives are set, the core strategy can be developed. The core strategy must be a comprehensive and flexible plan that addresses the entire range of an organisation's information needs, such as data management, information security, knowledge management, communication, and collaboration. The ICM strategy document should be prepared based on the core strategy and must contain clear guidelines and procedures for all aspects of information and communication management.

Step 6 involves the implementation, presentation, monitoring, and evaluation, and updating of the ICM strategy. The implementation of the ICM strategy should be

accompanied by training and capacity building programs for all members of staff. This will help to ensure that all staff members understand their roles and responsibilities in the ICM strategy and can effectively contribute to its implementation. The ICM strategy should also be presented to all members of staff, including senior management, to ensure that they understand and support the strategy. Monitoring and evaluation should be conducted regularly to ensure that the ICM strategy is achieving its objectives and to identify areas where improvements can be made. Finally, the ICM strategy should be updated periodically to reflect changes in the internal and external environment of the organisation.

In conclusion, the development and implementation of an organisation-wide ICM strategy is essential for effective information and communication management. The process involves six steps, which should be carefully followed to ensure that the strategy is aligned with the organisation's mission, vision, goals, and mandates. An effective ICM strategy provides direction and establishes priorities for the management of an organisation's information and communication resources and assets to support the execution of its programmes and projects.

The development of an ICM strategy document is a process that involves several steps. The first step is to create "buy-in" by management and line staff, which involves convincing all stakeholders of the need for an ICM strategy and obtaining their commitment to support its development and implementation. This can be achieved through awareness-raising sessions, discussions, and presentations that highlight the potential benefits of an ICM strategy for the organisation.

The second step is to appoint a strategy development team that will be responsible for overseeing the development of the ICM strategy. The team should be composed of members with a range of skills and expertise in information and communication management, project management, and organisational development.

The third step is to conduct an analysis of the current situation to identify the strengths, weaknesses, opportunities, and threats (SWOT) of the organisation's information and communication management system. This involves reviewing existing policies, procedures, and practices, as well as conducting surveys and interviews with

staff and stakeholders to assess their perceptions of the effectiveness of the current system.

The fourth step is to prepare a SWOT analysis that summarises the findings of the current situation analysis. This provides a basis for identifying the critical issues and challenges that need to be addressed in the development of the ICM strategy.

The fifth step is to develop and formulate strategic objectives, core strategy, and prepare the ICM strategy document. This involves defining the goals and objectives of the ICM strategy, identifying the strategies and tactics that will be used to achieve them, and outlining the implementation plan, including timelines, responsibilities, and resource requirements.

The final step is to implement, present, monitor and evaluate, and update the strategy. This involves communicating the ICM strategy to all stakeholders, ensuring that the necessary resources are available for its implementation, monitoring progress towards achieving the strategic objectives, evaluating the effectiveness of the strategy, and updating it as needed.

In the case of Agrimark, the organisation would need to follow these steps to develop an ICM strategy document that aligns with its objectives and supports the efficient management of its information and communication resources. The ICM strategy would need to address the specific challenges and opportunities that Agrimark faces in the agricultural sector and provide a roadmap for achieving its mandate.

Figure 1. Agrimark: Organisation chart



Figure 1.1 AGRIMARK: ORGANIZATION CHART

The preparation for the development of an ICM strategy involves gaining approval from senior management and the commitment of all staff members. The creation of "buy-in" is essential and involves appointing a champion or change agent, gaining commitment from the CEO and corporate services, and commitment from all staff members. The champion or change agent is responsible for introducing the concept of an ICM strategy, networking at the intra-departmental and inter-institutional levels, and must be knowledgeable, persistent, flexible, and non-threatening in demeanor.

If the champion or change agent is not a member of the management team, convincing the CEO and senior managers of the importance of an ICM strategy, and gaining commitment from line and support staff can be a challenge. Two possible approaches to convince management include preparing and presenting a briefing paper and engaging in lobbying division managers, department heads, and senior staff members. The briefing paper should not be longer than two pages and should provide a short paragraph about the advantages of implementing an ICM strategy, identify at least one information problem that can be solved through the implementation of an ICM strategy, and demonstrate how this action will assist in meeting one of the organization's corporate objectives.

The preparation of an ICM strategy document requires a considerable investment of time and generates costs, so management's approval is essential for the deployment of resources, allocation of funds, and obtaining access to files that may contain confidential information. In some circumstances, selecting a sub-system for development of an ICM strategy may be more practical than developing an ICM strategy for the entire organization at the same time.

Commitment from staff is essential, and they must understand the process and how the implementation of an ICM strategy can assist them to carry out their job functions more efficiently. Communication is essential in relieving anxieties and dispelling rumors that are sure to spread with the introduction of any new system in an organization. Separate briefing sessions should be held for stakeholders from whom

active participation will be crucial to the success of the development and implementation of the ICM strategy.

Organizations in traditional societies must follow their cultural norms for communicating information, which may include using the first line of communication through the chief of the village or following norms in patrilineal or matrilineal societies.

Once the "buy-in" has been established, the next step is to mobilize resources and set up a strategy development team. The strategy development team should be multidisciplinary, with representation from all key departments and stakeholders. The team should be led by a project manager who is responsible for overseeing the process and ensuring that the team stays on track. The project manager should have excellent communication skills and be able to manage competing priorities.

The strategy development process should be guided by a clear methodology that outlines the steps to be taken and the timelines for completion. The methodology should be flexible enough to accommodate changes as the process unfolds. One approach that can be used is the Information Strategy Planning (ISP) methodology, which is a proven methodology for developing information strategies.

As part of the strategy development process, it is important to collect relevant data and information. This can be done through a variety of methods, including surveys, focus groups, interviews, and data analysis. The data and information collected should be used to identify information gaps, assess information needs, and develop strategies for addressing those needs.

The ICM strategy should be based on a thorough analysis of the organization's information needs and requirements. It should also take into account the organization's business objectives and goals. The strategy should be focused on improving the management and use of information to support the organization's overall mission and objectives.

Once the ICM strategy has been developed, it should be communicated to all stakeholders. This can be done through a variety of methods, including presentations, briefings, and training sessions. The communication plan should be comprehensive and

should address the needs of all stakeholders, including staff, management, and external partners.

Finally, the implementation of the ICM strategy should be monitored and evaluated to ensure that it is meeting its objectives. This can be done through a variety of methods, including performance metrics, surveys, and user feedback. The monitoring and evaluation process should be ongoing and should be used to identify areas for improvement and to make adjustments to the strategy as needed.

In conclusion, the development of an ICM strategy requires careful planning, strong leadership, and the commitment of all stakeholders. The process can be challenging, but the benefits of a well-designed and implemented ICM strategy can be significant, including improved efficiency, better decision-making, and enhanced organizational performance.

1.2 Setting up a strategy development team

It is important to ensure that the consultant is fully briefed on the organisation's operations, policies and culture before beginning work.

In addition to a team leader, you may also want to consider forming a team of individuals from different areas of the organisation to work on the strategy development process. This could include representatives from departments such as marketing, operations, finance, human resources and IT, as well as individuals with experience in strategic planning and implementation.

When forming the team, it is important to ensure that each member has a clear understanding of their role in the process, as well as the goals and objectives of the strategy development initiative. It may also be helpful to establish a clear timeline for the process, with specific deadlines for each stage of the development process.

Regular communication and feedback are also important throughout the strategy development process, both within the team and with other stakeholders in the

organisation. This can help to ensure that everyone is on the same page and that any issues or concerns are addressed in a timely manner.

Overall, setting up a strategy development team requires careful planning and consideration, as well as a willingness to invest the time and resources necessary to ensure that the resulting strategy is well-informed, well-supported and well-executed.

Be sufficiently senior in the organization to have direct access to the CEO or members of the management team. Consultation and inputs may be required from the CEO or senior managers during the development process. It will be useful for the team leader to have direct access to these individuals to ensure that the project is aligned with the overall goals of the organization and to gain support for the project.

- Strong analytical skills. The team leader must be able to critically evaluate data and information collected during the research phase and identify key issues and trends.

- Project management skills. The team leader must be able to manage the project timeline, ensure that tasks are completed on time and within budget, and communicate progress to stakeholders.

- Conflict resolution skills. The team leader must be able to manage conflict and negotiate compromises between team members with different viewpoints.

- Ability to work well in a team. The team leader must be able to facilitate group discussions and ensure that all team members have an opportunity to contribute to the development process.

- Flexibility and adaptability. The team leader must be able to adapt to changes in the project scope or timeline and make adjustments as necessary to ensure the successful completion of the project.

- Excellent analytical skills. Team members should be able to analyse complex data and information and provide useful insights to the team. This is important in developing a robust ICM strategy document.

- Knowledge about the organisation's operations and functions. This will enable team members to provide valuable inputs to the team discussions and ensure that the ICM strategy document is aligned with the organisation's goals and objectives.

- Ability to work under pressure and meet deadlines. Developing an ICM strategy document can be a time-consuming process and team members should be able to work under pressure and deliver quality work within the specified deadlines.

- Willingness to learn and adapt. The ICM strategy development process may involve new concepts and methods that team members may not be familiar with. A willingness to learn and adapt to new ideas and ways of working is essential for the success of the team.

- Knowledge of the local context and culture. Team members with knowledge of the local context and culture can provide valuable insights into how the ICM strategy can be implemented effectively and efficiently in the local setting.

In summary, setting up a strategy development team requires careful consideration of the composition of the team and the desirable attributes of team members. A diverse team with representatives from different departments and with a range of personal attributes and skills is likely to be more effective in developing a robust ICM strategy document.

By selecting a staff member with these key attributes to partner with the consultant, your organisation can ensure that the strategy development process is conducted efficiently and effectively, with the ultimate goal of producing an ICM strategy document that aligns with the overall vision and goals of the organisation.

The team should not be excessively large in size. Try to include representatives from the core information gathering and disseminating areas and from user groups in the organisation. Each team member will have responsibilities and must be required to complete these efficiently. If additional inputs are needed, you could consider co-opting of members for a specific reason.

The composition of the ICM strategy development team was decided at a meeting of the CEO and the Directors of the Marketing Division and Corporate Services.

The managers sought candidates with technical competence and desirable personal attributes as well as a strong commitment to the goals of Agrimark and a tendency to think “outside of the box” in pursuit of creative solutions to challenges.

The Director of Corporate Services contributed further information from personnel records for those who were being recommended to sit on the strategy development team. At the end of the meeting, six members were appointed to the Agrimark strategy development team.

1.3 The Role of Communication in Management

The purpose of management is to achieve organizational goals. Managers accomplish this by developing a plan that outlines the tasks, deadlines, and methods. They must then communicate this plan to the entire organization. However, effective communication by managers involves more than simply informing people of their responsibilities. It also requires motivating individuals to support the plan, fostering commitment to the organization, establishing rapport and collaboration, and keeping everyone informed about relevant events and actions. A strong communication strategy not only provides information but also cultivates a culture where people feel connected to and invested in the organization. The initial example demonstrates the consequences of poor communication. Here are some advantages of successful communication:

Enhances clarity: Clarity reduces discomfort and uncooperative behavior caused by confusion, uncertainty, and ambiguity. Clearly defining roles, responsibilities, and relationships equips individuals with the necessary information to perform their tasks and understand their contributions. Effective communication minimizes conflicts, misunderstandings, and errors, thereby reducing associated costs.

Fosters relationships: A culture that encourages open communication alleviates tensions between different levels of employees, both professionally and socially. In a trusting and collaborative environment, individuals are more likely to seek assistance, propose solutions, and suggest improvements. Effective communication nurtures a collegial culture that promotes teamwork and cooperation.

Instills commitment: Effective communication involves not only transmitting information but also actively listening to employees. By attentively considering their concerns, allowing their input in decision-making, and valuing their suggestions, managers can create a sense of worth and contribution among all individuals in the

organization. When employees feel valued, they are more likely to be engaged and motivated, leading to increased commitment to the organization. Effective communication nurtures support and commitment.

Establishes clear expectations: Uncertainty regarding expectations and performance evaluation hampers individuals' ability to perform their jobs effectively. Without clear performance standards, conducting performance reviews becomes challenging as employees lack awareness of the criteria against which they will be assessed. Furthermore, if corrective measures are necessary, employees may harbor resentment if they cannot discern how their behaviors have hindered their effectiveness. By providing clarity and explicit standards, effective communication ensures that employees understand what is required to receive a positive review and the associated benefits.

These examples illustrate only a few of the numerous benefits derived from effective communication. Organizational goals can only be achieved when individuals within the organization are committed to those goals.

Aspect	Description
Clarity	Effective communication ensures clarity of goals, expectations, and responsibilities among team members. It reduces confusion and minimizes the likelihood of errors and misunderstandings.
Coordination	Communication is essential for coordinating the efforts of team members and achieving a common objective. It helps to ensure that everyone is working together toward the same goal and enables the efficient allocation of resources.
Motivation	Communication can be used to motivate employees by providing feedback, recognition, and encouragement. It helps to build trust and confidence among team members and fosters a positive work environment.
Conflict Resolution	Communication plays a critical role in resolving conflicts that arise within teams or between individuals. By facilitating open and honest dialogue, communication can help to identify the root causes of conflicts and find mutually agreeable solutions.
Decision Making	Communication is essential for effective decision-making. It enables managers to gather information, seek input from team members, and evaluate alternatives before making a final decision.
Innovation	Communication can foster innovation by encouraging the exchange of ideas and facilitating creative thinking. By encouraging diverse perspectives and promoting collaboration, communication can help to generate new ideas and approaches to problem-solving.

Table 1.3 The Role of Communication in M 1

1.4 The Communication-Process Model

The act of communication may appear straightforward: one person transmits a message, and others receive it. Yet, the process grows more intricate due to the need for accurate transmission and reception of information within the message. The communication-process model elucidates the mechanisms by which information is effectively sent and received.

The following diagram shows this model.

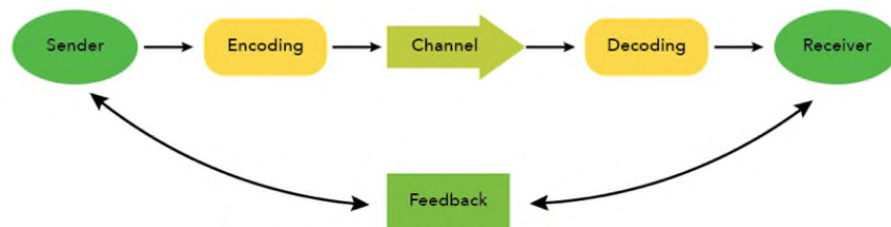


Figure 2.1.4 The Communication-Process M 1

Understanding the communication-process model is simplest when two individuals are involved in the communication. The sender, who initiates the communication, possesses information that they wish to convey to the receiver. However, before the information can be transmitted, it needs to be encoded into a suitable form. In a straightforward scenario, the information is transformed into spoken words directed at the receiver. Alternatively, it may be converted into written text, tables, charts, or graphs that are provided to the receiver. In more complex cases, the information is encoded into words or images, which are then transformed into electronic signals and transmitted to the receiver. The channel serves as the medium through which the information is conveyed. This could be the air carrying sound waves, paper carrying printed material, or wires and magnetic fields carrying electronic signals. (Further discussion on channels will be presented later in this module.) In the given example, the management possessed the information about Mathias being hired and his starting date. They wanted to share this information with the company's

employees, so they formulated a message and dispatched it to the employees. The receiver plays a crucial role in the communication process by reversing the steps. Upon receiving the encoded message, the receiver proceeds to decode it, converting the message back into understandable information. In the provided example, an employee reads the message and gains knowledge of the newly hired individual and their starting date. Thus, information has been effectively transmitted from the managers to the employees.

In an interactive communication process, the receiver possesses the ability to provide feedback to the sender, indicating the receipt of the message and conveying their interpretation of it. This feedback initiates an interactive exchange, facilitating a back-and-forth conversation that ensures the sender that the message has been received and understood correctly. This feedback loop contributes to a clearer understanding between the sender and the receiver, thereby enhancing the overall effectiveness of communication.

The two-person model can be extended to encompass situations where one person communicates with multiple individuals. This can take various forms, such as a person delivering a presentation to a room full of people, a manager sending an email to employees, a Facebook post shared with friends, or a tweet reaching hundreds of followers.

1.5 Common Missteps in Communication

Every stage in the communication-process model carries the possibility of encountering errors or missteps. In the provided scenario, two internal email messages within the company were described, each yielding distinct outcomes. What distinguished these messages and led to their different results?

The first potential misstep arises during the encoding phase, where the information being communicated may not be encoded accurately. In the case of the email sent by management to announce Mathias's appointment, the management possessed clear and concise information to convey. They successfully encoded this information into a simple email format, effectively communicating the message.

In Mathias's case, his email had a different objective. He intended to convey to his superiors that he was following their instructions and working on a plan to reduce costs. However, when he encoded the information into text, he did not do so effectively. Instead of conveying that he was still in the process of formulating a plan and had not made any decisions yet, his message implied that he would implement cost-cutting measures by any means necessary and in the near future. The inaccurate encoding led to the transmission of incorrect information.

The initial and fundamental step in effective communication is the ability to clearly and succinctly convey information, whether through writing, speaking, visuals, or numerical data. If the information is not encoded properly, the subsequent steps become irrelevant. Later on, we will explore specific suggestions on tailoring messages to consider the receivers' needs.

Missteps can also occur during the decoding stage when the receiver interprets the message differently than the sender intended. In Mathias's situation, the message he conveyed was, "I am considering ways to reduce costs, and I will inform you when I have a plan." However, employees interpreted the message as, "I will do whatever it takes to cut costs." This discrepancy in interpretation demonstrates a decoding misstep.

Since feedback involves sending a message in the opposite direction, from the receiver to the sender, all of these problems can arise during the feedback process as well. In many cases, feedback may not be significant or expected. Often, information is communicated simply to keep individuals informed, without necessarily seeking acknowledgement or response. For instance, when management sent the notice about Mathias's appointment, they did not anticipate a response from every employee. However, there are situations where feedback is crucial to ensure that both the sender and the receiver have the same understanding of the information and interpret it in the same way. The original sender must ensure they comprehend the feedback provided,

address any misinterpretations through clarifying questions, and respond to any queries.

Finally, being a good listener is essential in effective communication. In the following sections, we will delve further into the issues of miscommunication and explore methods for collecting feedback.

Common Missteps in Communication	Description
Assumptions	Making assumptions about the other person's understanding or feelings can lead to misunderstandings
Language barriers	Using jargon, technical language or words that are unfamiliar to the listener can create confusion
Distractions	Being distracted or interrupting the speaker can cause important information to be missed
Emotions	Allowing emotions to interfere with communication can lead to misinterpretation or escalation of conflict
Lack of listening	Failing to actively listen to the speaker can result in misunderstanding or missing important information
Stereotyping	Making assumptions about someone based on their appearance or group membership can lead to biased communication
Power dynamics	Unequal power dynamics, such as a boss talking down to a subordinate, can create barriers to effective communication
Cultural differences	Cultural differences in communication styles, values, and norms can lead to misunderstandings and misinterpretations

Table 2.1.5 Common Missteps in Commu 1

1.6 Formal and Informal Communication Systems

Within most organizations, both formal and informal information systems exist. Formal communication systems encompass the methods employed to convey information necessary for the organization's operations. Such communications adhere to established rules and regulations dictated by the profession or law. Examples include formal reporting procedures for tracking workplace injuries. Formal communication typically follows the chain of command or pertains to specific task responsibilities. Messages within formal systems may entail procedures for submitting regular progress reports to managers or scheduled meetings to exchange project status updates. Human resources departments may organize seminars to disseminate new policies and procedures. The purpose of formal communication systems is to ensure the smooth

flow of necessary information throughout the organization while maintaining control over its distribution. Access to progress reports or attendance at project meetings may be restricted to specific individuals or groups, guaranteeing that information reaches those who require it and not others.

However, not all communication within an organization adheres to formal channels, nor is it subject to strict control. Informal communication systems exist outside the formal structure and provide connections between individuals across hierarchical levels, departments, and functions. These systems transcend formal boundaries. In the opening scenario, we observed how misinformation propagated through the informal communication system had a detrimental impact on the organization. Nonetheless, informal communication systems are not inherently disruptive. In many organizations, the informal network serves as the primary means of spreading information and accomplishing work. In certain instances, the informal network's influence on job performance may outweigh formal qualifications or knowledge, emphasizing the importance of personal connections.

Informal communication systems can be categorized into two main types: social networks and the grapevine. A social network comprises personal relationships that

extend beyond hierarchical, departmental, and organizational boundaries. The following diagram depicts a simple social network system:

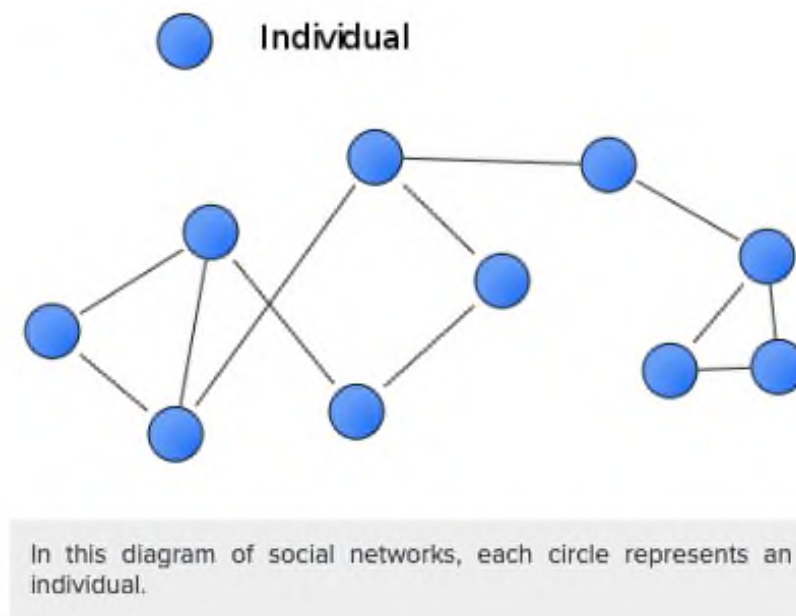


Diagram 1.1.6 1

Within a social network, individuals have the ability to seek information or assistance from anyone within their network. Additionally, through linking members, they can even extend their reach to other groups. Individuals with large social networks have access to a wealth of information, and linking individuals play a significant role in disseminating information throughout an organization. Their influence within the organization can be considerable.

On the other hand, the grapevine refers to the informal channel through which gossip and rumors spread within an organization. It is sometimes referred to as a rumor mill. Almost everyone participates in gossip to some extent, making it an effective means of spreading information. In fact, information often travels more quickly through the grapevine than through formal communication channels. Unfortunately, the grapevine lacks control, and the information transmitted through it can be distorted or entirely fabricated. It becomes particularly significant when formal communication

channels are insufficient. People dislike being uncertain about matters that affect them, so when the formal system fails to provide information, they turn to the grapevine to seek and distribute information.

Unlike a social network, the grapevine operates in an unstructured and transitory manner, although it can align with social network connections. Information within the grapevine flows through chance encounters, informal gatherings, and conversations that are overheard. The advent of electronic communication and social media has significantly accelerated the speed and reach of the grapevine.

Formal Communication Systems	Informal Communication Systems
Follows a specific chain of command and is officially recognized by the organization	Does not follow any specific chain of command and is not officially recognized by the organization
Uses predefined channels for communication, such as meetings, memos, reports, and email	Uses unofficial channels for communication, such as gossip, rumors, and grapevine
Messages are usually related to official business, policies, and procedures	Messages may be related to both official and personal matters
Communication is structured and deliberate	Communication is spontaneous and less structured
Information flow is controlled and regulated by management	Information flow is unregulated and may not always be accurate
Examples: Annual reports, employee handbooks, policies and procedures manuals, official memos, management meetings	Examples: Watercooler conversations, social media groups, hallway conversations, personal email exchanges

Table 3.1.6 1

Chapter II

Applying experience gained during the Internship

The internship provided me with an opportunity to apply theoretical knowledge in real-life scenarios, develop practical skills, and gain insight into the role of a project manager in the marketing industry.

Objectives

The primary objective of the internship was to gain experience in managing marketing projects and the associated responsibilities. Specifically, I aimed to:

1. Understand the role of a project manager in the marketing industry.
2. Learn how to develop marketing project plans and timelines.
3. Gain experience in working with marketing project teams and stakeholders.
4. Develop communication and leadership skills.
5. Learn how to track and report marketing project progress.

Organization

I completed my internship at Manna Nebesna, which is a mid-sized marketing firm. The company specializes in providing digital marketing solutions for clients across various industries. The company has a dedicated project management team responsible for managing marketing projects, ensuring timely delivery, and maintaining client relationships.

Experience

During my internship, I worked on several marketing projects as a project manager. I was assigned to a marketing project team and was responsible for leading the team, ensuring timely delivery of the marketing project, and communicating with stakeholders.

My day-to-day responsibilities included:

1. Creating marketing project plans and timelines
2. Assigning tasks to team members and ensuring they meet deadlines
3. Communicating project progress to stakeholders
4. Leading team meetings and managing team dynamics
5. Ensuring project quality and adherence to client requirements

6. Tracking and reporting project progress

Challenges Faced

During the internship, I faced several challenges that tested my project management skills. One of the significant challenges was managing stakeholder expectations. Clients often have high expectations regarding the timeline, quality, and budget of the project. It was challenging to manage these expectations while ensuring the project was completed on time and within the budget.

Another challenge was managing team dynamics. As a project manager, it is crucial to ensure team members are motivated and working collaboratively towards the project goals. I had to develop strategies to resolve conflicts and maintain a positive team environment.

Conclusion

Overall, the internship provided me with valuable experience in managing marketing projects, working with teams and stakeholders, and developing communication and leadership skills. It has prepared me for a career in project management in the marketing industry.

2.1 ICM Strategy implementation during the internship

In the marketing industry, changes such as introducing a new marketing campaign, implementing a new marketing technology or revamping the marketing strategy can be significant and have a significant impact on the organization. As a project manager, an ICM strategy can be utilized to manage these changes effectively.

Here is a general outline of how an ICM strategy could be used in the role of a project manager in a marketing company:

Identifying the change: The first step is to identify the change that needs to be implemented within the organization. For example, this could be a new marketing campaign or the implementation of a new marketing technology.

Understanding the impact of the change: Once the change has been identified, it is important to understand the impact it will have on the organization. This includes

identifying the stakeholders who will be affected and the potential risks associated with the change.

Developing a change management plan: With a clear understanding of the change and its impact, the project manager can develop a change management plan that outlines the steps needed to implement the change effectively. The plan should include a communication strategy to ensure all stakeholders are informed and engaged throughout the process.

Executing the plan: With the plan in place, the project manager can begin executing the change management strategy. This involves implementing the change while managing the risks and ensuring that stakeholders are kept informed throughout the process.

Monitoring and evaluation: Once the change has been implemented, it is important to monitor the impact and evaluate the effectiveness of the change management strategy. This includes assessing whether the change has been successful and identifying any areas for improvement.

In summary, an ICM strategy can be used by project managers in marketing companies to manage changes effectively and ensure the success of marketing projects. By developing a clear plan, communicating effectively with stakeholders, and monitoring the impact of the change, project managers can successfully manage change within their organization.

2.2 Importance of information and communication technology in business

Can you name a business that does not use a computer to keep its logs or a mobile phone to communicate? I can't. Businesses have to compute their sales, keep a track of employee attendance, and communicate with customers and other stakeholders daily. As an integral part of these processes, information and communication technologies (ICT) are becoming an inseparable part of businesses' day-to-day activities. Because of information technologies, businesses can now process the data they collect. Communication technologies help to coordinate things better. Imagine

what would happen if Google shut down for a day. Or if news channels were unable to coordinate live broadcasts? Or if a multinational company lost all information on their overseas employees? These ‘what if’ scenarios are as scary for companies as they are for employees. Businesses today are so dependent on ICT technologies that without them, many businesses would not exist. This is how crucially important ICT is to businesses.

Benefits of ICT in Business	Description
Improved Efficiency	ICT streamlines business processes, reduces manual efforts, automates repetitive tasks, and enables real-time access to data, leading to improved efficiency and productivity.
Better Decision-Making	ICT provides timely, accurate, and relevant data to business owners, managers, and employees, facilitating informed and effective decision-making.
Increased Collaboration	ICT enables remote communication, virtual meetings, online document sharing, and other collaborative tools, improving teamwork and productivity.
Enhanced Customer Service	ICT enables businesses to respond quickly and efficiently to customer needs, provide 24/7 customer support, and deliver personalized service.
Competitive Advantage	ICT helps businesses to stay ahead of the competition by improving operations, developing innovative products and services, and expanding their reach through online platforms.
Cost Savings	ICT reduces the cost of communication, information storage and retrieval, and other business processes, leading to cost savings and higher profits.

Table 4.2.2 1

2.3 What is information and communication technology?

Information and Communication Technologies (ICTs) encompass a range of technologies utilized in the processing and exchange of information within business operations. These technologies play a crucial role in facilitating communication between businesses and their stakeholders. Here are some examples of ICTs:

Intranet: An intranet is a private network that enables internal communication and collaboration within an organization. It serves as a centralized platform for sharing information, documents, and resources among employees.

Extranet: An extranet extends the functionality of an intranet to include external stakeholders such as clients, partners, and suppliers. It allows for secure communication, file sharing, and collaboration with authorized external parties.

Website: A website serves as an online presence for a business, providing information about products, services, and company details. It serves as a platform for communication, customer interaction, and e-commerce transactions.

Mobile Apps: Mobile applications are software programs designed to run on mobile devices such as smartphones and tablets. They provide specific functionalities, such as accessing services, making purchases, and interacting with the business.

E-commerce Websites: E-commerce websites enable businesses to sell products or services online. They facilitate secure transactions, order processing, and customer support, enhancing the reach and accessibility of the business.

Software Robots: Software robots, also known as bots, automate repetitive tasks and processes, increasing efficiency and reducing human effort. They can perform various functions like data entry, customer service, and data analysis.

Servers: Servers are powerful computers that store and process data, host websites and applications, and facilitate network communication. They enable centralized data management and provide access to resources for users.

Cloud Technologies: Cloud technologies involve the use of remote servers and networks to store, manage, and process data. They offer scalable storage, computing power, and software services, eliminating the need for on-premises infrastructure.

Digital Communication Apps: Digital communication applications include platforms like email, instant messaging, video conferencing, and collaborative tools. They enable real-time communication and collaboration among team members and stakeholders.

Technology to Facilitate Work from Home: With the rise of remote work, businesses rely on various technologies to support virtual collaboration, such as virtual private networks (VPNs), remote desktop applications, and project management tools.

These ICT examples illustrate the diverse technologies that businesses utilize to process information, enhance communication, and streamline their operations in today's digital age.. Let's introduce them one by one.

2.4 Role of information and communication technology in business

ICT has significantly impacted businesses in various aspects, leading to improved efficiency and productivity. Here are some key areas where ICT has played a transformative role:

Work Location: ICT has enabled businesses to embrace remote work arrangements, allowing employees to work from anywhere with internet connectivity. This flexibility reduces geographical constraints, promotes work-life balance, and expands the talent pool for businesses.

Information Management: ICT enables businesses to efficiently collect, store, and analyze vast amounts of data. With digital databases, cloud storage, and data analytics tools, businesses can make informed decisions based on real-time insights, leading to better operational efficiency and strategic planning.

E-commerce: ICT has revolutionized the way businesses engage in online transactions. E-commerce platforms provide a seamless shopping experience, secure payment gateways, personalized recommendations, and efficient order processing, enabling businesses to reach a wider customer base and increase sales.

Digital Communication: ICT has revolutionized communication within businesses and with stakeholders. Digital communication tools such as email, instant messaging, video conferencing, and collaborative platforms enhance real-time collaboration, knowledge sharing, and decision-making, irrespective of geographical locations.

Role of Information and Communication Technology in Business
Improved communication with customers and suppliers
Increased efficiency in operations and processes
Enhanced decision-making through access to real-time data
Improved collaboration among employees and teams
Access to a wider market through e-commerce platforms
Ability to gather and analyze customer data for better targeting
Improved customer service through automated systems and chatbots
Remote work and telecommuting options for employees
Cost savings through automation and streamlined processes
Increased security through secure data storage and encryption

Table 4.2.4 1

Location of employees

The impact of ICT on businesses has been profound, particularly in the context of remote work and automation. Here are some notable points regarding the influence of ICT on businesses:

Rise in Remote Work: The COVID-19 pandemic accelerated the adoption of remote work, with a significant increase in the proportion of adults working from home. This trend was facilitated by ICT tools like Microsoft Teams, Slack, and Zoom, enabling seamless communication and collaboration among remote teams.

Global Operations and Outsourcing: Many businesses have expanded their operations internationally, establishing overseas units, factories, call centers, or administrative departments. ICT plays a vital role in connecting and coordinating these geographically dispersed teams, facilitating efficient communication and workflow management.

Outsourcing and Automation: Businesses are increasingly leveraging ICT to automate various tasks and processes, reducing the reliance on human resources. Examples include self-service kiosks in fast-food restaurants like McDonald's and self-checkout counters in supermarkets, which streamline operations and enhance customer experience.

Communication and Collaboration Tools: ICT tools such as Microsoft Teams, Slack, and Zoom have revolutionized how businesses communicate and collaborate, providing efficient platforms for both informal and formal communication. Email remains a prevalent channel for formal communication in many organizations.

The strong impact of ICT is evident in the transformation of work environments, the facilitation of global operations, and the integration of automation technologies. As businesses continue to embrace digital transformation, ICT will play a central role in shaping the future of work and driving operational efficiency.

2.5 Collecting, storing, and analyzing information

Data analysis is crucial for businesses to understand trends and customer behavior, shaping their strategies. Companies employ various methods to collect data, such as Tesco tracking frequently purchased items and customer spending patterns. Feedback forms also serve as a means to gather valuable insights and improve business processes.

Once collected, data needs to be stored effectively, either through in-house servers or cloud services like Amazon or Google. Analysis involves identifying correlations in the data to inform decision-making. For instance, determining the preferred Coca-Cola flavor in South London helps optimize shelf stocking, avoiding unnecessary inventory.

Steps in Collecting, Storing, and Analyzing Information	Description
Identification of Information Needs	Determining what information is needed and why
Data Collection	Gathering information from various sources such as surveys, interviews, and observations
Data Entry and Coding	Entering the data into a system and assigning codes to each data point
Data Cleaning	Reviewing the data for errors or inconsistencies and correcting them
Data Storage	Storing the data in a secure and organized manner to facilitate retrieval
Data Analysis	Examining the data to identify patterns, trends, and relationships
Interpretation of Results	Making sense of the data and drawing conclusions based on the analysis
Reporting and Presentation of Results	Communicating the findings to stakeholders through reports, presentations, or other means
Feedback and Evaluation	Seeking feedback from stakeholders on the effectiveness of the information collected and analyzing the process for continuous improvement

Table 5.2.5 1

E-commerce involves online platforms like Amazon, eBay, and Aliexpress, enabling buying and selling goods over the internet. M-commerce refers to e-commerce transactions conducted through mobile devices. Customers appreciate the convenience of shopping, searching, and returning items from home. Online shopping provides access to a wide range of products not limited by physical store locations. Clothing businesses, in particular, have embraced e-commerce to reach new markets and reduce inventory costs. However, managing websites and establishing efficient supply chains are necessary investments for businesses in this domain.

2.6 Digital communication

Digital communication encompasses various platforms such as email, texts, webchats, videoconferencing, communication apps, and social media. Popular examples include Gmail, WhatsApp, Messenger, Zoom, Google Hangouts, Facebook, Instagram, and LinkedIn. These tools facilitate efficient and instant communication, enabling individuals and businesses to connect and interact digitally.

Digital communication refers to the transmission of information between two computers or electronic devices using digital technology. It has significantly impacted businesses by providing various means of communication and interaction.

Through digital communication, businesses can effectively communicate with potential customers by creating websites that showcase their products or services. Websites serve as a platform for businesses to provide information, engage with customers, and facilitate online transactions.

Additionally, businesses utilize digital communication tools such as social media platforms (Twitter, Instagram, Facebook) to connect with their target audience. These platforms allow businesses to make announcements, gather feedback, and engage in marketing activities. Social media has become an integral part of modern business communication strategies, enabling businesses to reach a wider audience and foster customer relationships.

Overall, digital communication has revolutionized how businesses interact with customers and stakeholders, providing new opportunities for engagement, marketing, and building brand awareness.

Advantages and disadvantages of information and communication technology in business

ICT has helped businesses work efficiently and develop fast - but there are some drawbacks along with the benefits.

Advantages of ICT:

Fast communication: emails are quick, but chat on platforms like WhatsApp are quicker. ICT lets businesses communicate anywhere on the globe within a fraction of a second.

Cost-effectiveness: working from home simply saves money and time. Efficient technologies reduce the time required to complete the task. For example, a tractor will plow better and faster as compared to the old way of using various practical tools.

Better information security: private data can be better protected by ICT in comparison to paper files. Sensitive information can be protected using a high level of encryption. This tool can also save customers from fraudsters and identity thieves.

Overcome cultural barriers: Technology does not differentiate between users based on religion, race, or gender. Technology also helps people understand different views and opinions.

Disadvantages of ICT:

Lack of security: Even though IT provides better security than traditional ways, it is still susceptible to external attacks like hacking or software viruses.

Unemployment: Many information and communication technologies are replacing human employees. It is making many jobs such as customer support

redundant. For instance, recent driverless car technology may replace all taxi drivers in the future.

The initial cost of implementation and maintenance: It may cost a lot to implement and maintain a secure and user-friendly website. Also, businesses have to comply with new laws and regulations that are introduced.

No human touch: Working from home has increased mental health concerns within individuals. Many businesses worry about their employees lacking human interaction. When it comes to chatbots, many customers wish to talk to a real person who can understand and solve problems faster rather than the software.

ICT is highly important for businesses to survive, compete, and grow. ICT has an impact on every part of the business from production, supply chains, marketing and sales, and business communication. There are many advantages of ICT like cost-effectiveness, efficiency, and security. But if not implemented properly, ICT can be disastrous to businesses because of disadvantages such the high initial cost of implementation, unemployment, lack of human touch, and cyber attacks.

Advantages	Disadvantages
Increased efficiency and productivity	Dependence on technology
Improved communication and collaboration	High implementation costs
Enhanced customer service and satisfaction	Cybersecurity risks and data breaches
Streamlined business processes and operations	Need for constant updates and maintenance
Access to global markets and opportunities	Potential for job displacement and automation
Data storage and analysis for better decision making	Limited face-to-face interaction and personal touch
24/7 accessibility and flexibility	Technology failures and system crashes

Table 6.2.6

2.7 Information and Communication Technology in Business – Summary

Information and communication technology (ICT) are any computing and communication systems that businesses might use to exchange information with stakeholders.

A network used by employees of a business to communicate privately is called an intranet.

An extranet is also a private network. Along with employees, other stakeholders like suppliers and wholesalers can access the extranet of the company.

Software robots are special software created to work as a virtual workforce.

Cloud servers let businesses store their data on the server of another company.

The buying and selling of goods that occurs using the internet are called e-commerce.

E-commerce that happens using mobile devices is called m-commerce.

Communication, where information is transmitted between two computers electronically, is called digital communication.

The benefits of ICT are fast communication, cost-effectiveness, better information security, and no cultural barriers.

ICT also has disadvantages including the high initial cost of implementation, unemployment, no human touch, and cyber attacks.

Information and Communication Technology in Business

ICT, which encompasses digital technology for information use, plays a crucial role in enhancing efficiency and effectiveness in businesses and organizations. It enables storage, retrieval, and transmission of digital data. By incorporating ICT, businesses can streamline various activities such as design, manufacturing, research and development, distribution, sales, and gathering customer feedback. Contrary to the belief that ICT would reduce face-to-face communication and disperse economic activity, research suggests that it actually promotes industrial agglomeration.

Additionally, ICT offers potential efficiency gains in the labor market through online job search and recruitment, reducing transaction costs, and facilitating better matching between workers and job vacancies by disseminating job information widely.

This theme delves into the extensive impact of information and communication technologies (ICT) on various dimensions of development and growth. It explores the financial, economic, and technological aspects, emphasizing the vital role of ICT in facilitating a wide range of services and transactions, such as online banking and digital services provided by companies. The theme discusses authentication methods employed in online banking and other online services.

ICT plays a significant role in enabling the supply and accessibility of diverse financial services, enhancing efficiency in institutions and corporations, reducing costs, and fostering effective communication. It serves as a major channel for development by facilitating economic growth.

Moreover, the theme highlights the connection between ICT and urbanization, underscoring the importance of ICT in delivering urban services. It explores how ICT can be utilized to promote and ensure effective urbanization, which has become a dominant aspect of twenty-first-century life and a critical challenge in achieving economic development and improved living standards.

Furthermore, the theme explores the concept of big data as a developmental tool. It demonstrates how the vast amount of digital data generated by the global population can be analyzed to support decision-making processes and generate actionable insights for policymakers. It emphasizes the significant role of big data in promoting various aspects of development.

One research avenue could focus on exploring the motivations and justifications behind software piracy behaviors, as well as the factors influencing these behaviors. Understanding the underlying reasons for software piracy can provide valuable insights into designing effective measures to combat this issue. Additionally, studying the prevalence and rates of software piracy in a specific context, such as Lebanon, can help in assessing the extent of the problem and its impact on software producers.

Another research direction could involve investigating the effectiveness of different interventions or strategies aimed at curbing software piracy. This could include analyzing the impact of legal measures, educational campaigns, or technological solutions in reducing software piracy rates and changing attitudes and behaviors related to piracy.

Furthermore, exploring the role of information and communication technology in facilitating or mitigating software piracy could be an interesting research avenue. This could involve examining how advancements in technology, such as the Internet and digital distribution platforms, contribute to the proliferation of software piracy and exploring potential solutions or strategies to address this issue within the digital landscape.

Overall, conducting research on software piracy and its relationship with information and communication technology can provide valuable insights for policymakers, software producers, and other stakeholders in developing effective measures to combat piracy and protect intellectual property rights.

Indeed, expanding the research to include diverse samples from different sectors of the Lebanese private and public sectors would strengthen the generalizability of the findings. This would allow for a more comprehensive understanding of software piracy attitudes, intentions, and behaviors across various professional contexts.

Including additional constructs, such as national culture, demographics, corruption index, and economic development, in future research models could provide a deeper understanding of the factors that influence the intention-behavior relationship regarding software piracy. These variables may act as moderators and shed light on the cultural, socio-economic, and contextual factors that impact software piracy rates and behaviors.

Moreover, considering longitudinal research designs could provide insights into the trends and changes in software piracy attitudes, intentions, and behaviors over time. Examining the dynamic nature of software piracy and its relationship with various factors would contribute to a more comprehensive understanding of this complex phenomenon.

Additionally, qualitative research methods, such as interviews or focus groups, could complement quantitative studies by providing in-depth insights into the motivations, justifications, and experiences of individuals engaging in software piracy. This qualitative approach can provide a rich understanding of the underlying reasons behind software piracy behaviors.

Overall, integrating diverse samples, exploring new constructs, adopting longitudinal designs, and employing mixed-method approaches would enhance the robustness and depth of future research on software piracy attitudes, intentions, and behaviors in Lebanon, as well as its broader implications.

Research focusing on the use of electronic business (e-business) and innovative information and communications technology (ICT) to enhance organizational competitiveness is an important area of study. Previous research has explored the impact of social network sites (SNSs) on word-of-mouth marketing, as well as the effects of SNSs on social and academic performance among university students, revealing significant influences on firm performance and student life.

Future research within this subtheme could explore the strategic utilization of SNSs as a tool for implementing a firm's strategy, the effects of e-commerce on market share, the role of SNSs in fostering social bonds among university students, the use of information systems to customize firm products, and comparisons between traditional communication tools and interactive tools in improving firm performance.

Additionally, research in the department of Developmental Sciences could focus on community-based dental education programs, particularly the potential of student-provided services as a revenue source for community clinics and practices. This research may involve the development of new community-based programs and the creation of educational messages for pre-school teachers regarding dental traumatology.

By investigating these areas, researchers can contribute to the understanding of how e-business, ICT, and community-based programs can enhance organizational

competitiveness, improve social and academic outcomes, and address specific needs within various industries and educational settings.

In a dynamic business environment, the accounting profession faces various complex new challenges. These include effectively recording innovative business transactions, expanding value-added business and information processes, disseminating valuable knowledge to a wide range of information users, and providing assurance services across diverse economic activities. The advent of information communication and technology (ICT) has significantly transformed business operations, with most companies now utilizing accounting information systems.

Developments in information technology have brought about radical improvements in accounting systems. Computers and other digital technologies have greatly enhanced office productivity, enabling fast document exchange and efficient data gathering and analysis. According to the research conducted by Dr. El-Haridi and Dr. Mandour, the implementation of enterprise resource planning (ERP) systems in corporations has a significant impact on their performance.

However, the full extent of the influence of technological innovations on accounting firms has not been thoroughly examined. Therefore, future research in this area is necessary to assess the effects of technological innovations on accounting firms. This can be achieved through surveys using structured questionnaires that can be sent to individuals responsible for accounting firms.

The widespread availability of vast amounts of information due to ICT advancements also brings significant risks to computer systems. Despite notable improvements in information security, many information systems are still vulnerable to internal and external attacks. Having an internal audit for information systems can help prevent these attacks or mitigate their negative consequences. Therefore, there is a need for exploratory research on informatics audit for information systems security.

Overall, understanding the impacts of ICT on accounting firms and the importance of information systems security is crucial for the accounting profession to adapt to the evolving business landscape effectively.

Information and Communications Managers play a vital role in organizations as they are responsible for planning, directing, and coordinating the development, acquisition, maintenance, and utilization of computer and telecommunication systems, resources, and activities. Their primary objective is to ensure that the organization's information and communication technology (ICT) infrastructure supports its overall goals and objectives.



Figure 2.2.7

Generic Competencies:

Physical abilities:

- Physical strength
- Eye hand coordination / precision / dexterity

Technology skills:

- Computer literacy

- Application of technology

Cognitive abilities:

- Creativity
- Visualisation
- Logical thinking

Comprehension and expression skills:

- Reading comprehension
- Oral / written expression

Social skills:

- Communication
- Negotiation
- Persuasion

Organisation and execution skills:

- Planning
- Organising
- Judgement
- Decision making

Problem-solving skills:

- Analytical thinking: Information and Communications Managers should possess strong analytical skills to identify and understand complex problems and develop effective solutions.
- Critical thinking: They should be able to evaluate different options, consider potential risks and benefits, and make informed decisions.
- Creativity: They should have the ability to think outside the box and come up with innovative solutions to challenges or issues.

Management skills:

- Leadership: Information and Communications Managers need to inspire and motivate their teams, provide guidance and direction, and foster a positive work environment.
- Financial management: They should be proficient in managing budgets, allocating resources effectively, and making financial decisions that support the organization's ICT objectives.
- Time management: They should have excellent organizational skills to prioritize tasks, meet deadlines, and ensure efficient use of time.
- People management: They should possess strong interpersonal skills to effectively manage and collaborate with team members, stakeholders, and external vendors.

Trade-specific competencies:

- Professional knowledge in information technology: Information and Communications Managers should have a solid understanding of information

technology principles, concepts, and trends. They need to stay updated with the latest advancements and apply their expertise to make informed decisions.

- **Resource allocation:** They should have the ability to allocate information and communication resources effectively, considering the organization's goals, priorities, and budgetary constraints.
- **Strategic planning:** Information and Communications Managers should be skilled in developing ICT strategies that align with the organization's overall objectives. This involves analyzing business needs, evaluating technological options, and formulating plans for implementation and development.

By leveraging their problem-solving skills, management abilities, and trade-specific competencies, Information and Communications Managers can effectively address challenges and drive the success of ICT initiatives within organizations.

Career Path

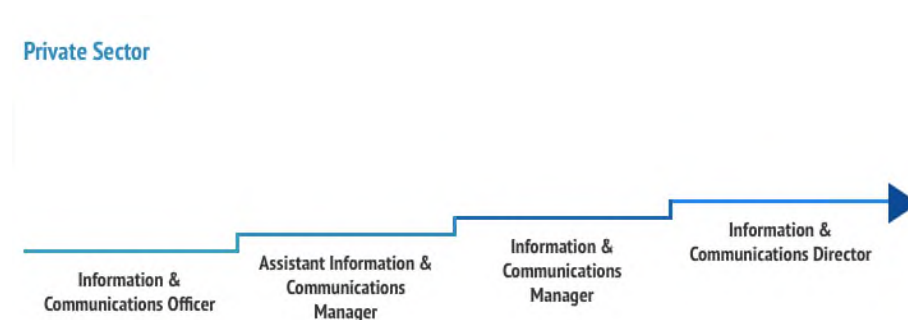


Figure 3.2.7

Government Sector

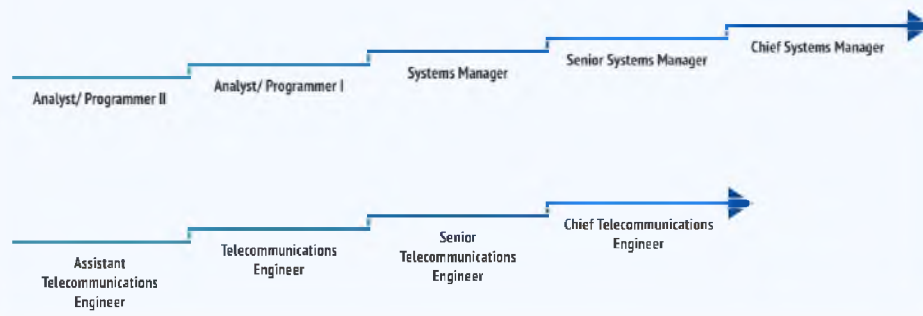


Figure 4.2.7

Chapter III

Effective information and communication management

Effective information and communication management is crucial for efficient development in various spheres of management. Positive factors, such as technological advancements, skilled workforce, and effective processes and systems, can enhance communication and collaboration, while negative factors, such as outdated technology, poor communication and collaboration, and inadequate training, can cause deficiencies. Identifying the causes of deficiencies and evaluating opportunities to enhance efficient development can help organizations improve their information and communication management and achieve their goals.

3.1 Positive Factors Impacting Information and Communication Management

Technological Advancements

New technologies have a significant impact on information and communication management. Technological advancements, such as cloud computing, big data analytics, and artificial intelligence, have enabled businesses to store and analyze vast amounts of data quickly and efficiently. This, in turn, has led to enhanced communication and collaboration, improving efficiency and productivity.

Cloud computing, for instance, enables businesses to store data and access it from anywhere, at any time. This means that teams can collaborate remotely, improving communication and reducing the time taken to complete tasks. Cloud-based project management tools, such as Asana and Trello, enable teams to collaborate on tasks and monitor progress in real-time.

Big data analytics, on the other hand, enables businesses to analyze large amounts of data to identify trends and patterns. This information can be used to make better-informed decisions and improve the efficiency of business processes. For instance, data analytics can be used to optimize supply chain management, improving the efficiency of logistics and reducing costs.

Artificial intelligence is another technology that is having a significant impact on information and communication management. AI-powered chatbots, for example,

can handle customer queries and provide support 24/7, improving communication and customer satisfaction.

3.2 Skilled Workforce

Effective information and communication management requires a skilled workforce. Employees with the necessary skills and training can effectively manage information and communication, reducing the risk of errors and improving decision-making. Skilled employees can also identify opportunities for improvement and implement changes that enhance efficiency and productivity.

3.3 Effective Processes and Systems

Streamlined processes and effective systems can increase efficiency and reduce the risk of errors. Effective processes and systems enable employees to access and share information quickly and efficiently, improving communication and collaboration. Processes and systems that are well-documented and standardized also reduce the risk of errors and ensure that tasks are completed consistently.

Negative Factors Impacting Information and Communication Management

3.4 Outdated Technology

Outdated technology can have a significant impact on information and communication management. Old and obsolete technologies can lead to inefficiencies and errors, which can negatively impact information and communication management. For example, outdated hardware may slow down communication and collaboration, leading to delays and errors.

Poor Communication and Collaboration

Lack of effective communication and collaboration can result in misunderstandings and errors, which can lead to deficiencies in information and communication management. Poor communication and collaboration can arise due to

factors such as language barriers, cultural differences, and poor leadership. For example, if team members are not clear about their roles and responsibilities, they may duplicate work, leading to inefficiencies and errors.

Inadequate Training

Employees who lack training and skills may struggle to manage information and communication, leading to inefficiencies and errors. Inadequate training can arise due to factors such as budget constraints, lack of time, and poor training programs. For example, if employees are not trained on how to use new technologies, they may struggle to collaborate effectively, leading to delays and errors.

Establishing Causes of Deficiencies

To establish the causes of deficiencies, it is important to conduct a thorough analysis of the processes and systems in place, as well as the skills and training of employees. This analysis can be conducted through techniques such as gap analysis and root cause analysis.

Gap analysis involves comparing the current state of information and communication management to the desired state. This comparison helps identify gaps between the two and also identifies areas for improvement. The analysis can be conducted through various methods, such as surveys, interviews, and observation.

Root cause analysis, on the other hand, involves identifying the underlying cause of a problem. This technique helps to identify the root cause of a deficiency, which can then be addressed through targeted interventions. Root cause analysis involves asking "why" questions repeatedly until the root cause is identified.

3.5 Evaluation of Opportunities to Enhance Efficient Development

Once the causes of deficiencies have been identified, opportunities to enhance efficient development can be evaluated. This involves identifying interventions that can be implemented to address the causes of deficiencies and improve information and communication management.

Some opportunities for enhancing efficient development in information and communication management include:

Investing in new technologies: Investing in new technologies, such as cloud computing and artificial intelligence, can enhance communication and collaboration and improve the efficiency of business processes.

Providing training: Providing training to employees can improve their skills and knowledge, reducing the risk of errors and improving decision-making.

Streamlining processes: Streamlining processes can improve efficiency and reduce the risk of errors. This involves identifying and eliminating unnecessary steps in processes and ensuring that processes are standardized and well-documented.

Improving communication and collaboration: Improving communication and collaboration can reduce the risk of errors and enhance efficiency. This involves identifying communication barriers and implementing strategies to address them.

Reducing language barriers: Language barriers can hinder communication and collaboration. Providing language training or hiring multilingual staff can help to reduce language barriers and improve communication.

Addressing cultural differences: Cultural differences can also hinder communication and collaboration. Providing cultural awareness training and ensuring that teams are diverse can help to address cultural differences.

Improving leadership: Poor leadership can lead to poor communication and collaboration. Providing leadership training and ensuring that leaders are effective communicators can improve information and communication management.

Conclusion

Effective information and communication management is crucial for efficient development in various spheres of management. Positive factors such as technological advancements, skilled workforce, and effective processes and systems can enhance communication and collaboration, while negative factors such as outdated technology, poor communication and collaboration, and inadequate training can cause deficiencies. Identifying the causes of deficiencies and evaluating opportunities to enhance efficient

development can help organizations improve their information and communication management and achieve their goals. By investing in new technologies, providing training, streamlining processes, improving communication and collaboration, reducing language barriers, addressing cultural differences, and improving leadership, organizations can enhance their information and communication management and improve their efficiency and productivity.

In conclusion, efficient development in various spheres of management depends on effective information and communication management. Organizations need to consider both positive and negative factors that impact their information and communication management to identify areas for improvement. Positive factors such as technological advancements, skilled workforce, and effective processes and systems can enhance communication and collaboration, while negative factors such as outdated technology, poor communication and collaboration, and inadequate training can cause deficiencies.

To address deficiencies and enhance efficient development in information and communication management, organizations need to evaluate opportunities for improvement. This involves identifying interventions that can be implemented to address the causes of deficiencies and improve information and communication management. These interventions can include investing in new technologies, providing training, streamlining processes, improving communication and collaboration, reducing language barriers, addressing cultural differences, and improving leadership.

By implementing these interventions, organizations can improve their information and communication management and achieve their goals more efficiently. Efficient development in information and communication management can result in increased productivity, improved decision-making, and enhanced collaboration among teams. It is therefore crucial for organizations to prioritize effective information and communication management to achieve their strategic objectives and remain competitive in today's business environment. Moreover, as technology continues to evolve and new communication channels emerge, organizations need to keep up with the latest trends to remain competitive. For instance, the increasing use of social media

and mobile devices has opened up new opportunities for communication and collaboration. Organizations that fail to adapt to these trends risk falling behind their competitors and losing their competitive advantage.

Another important factor to consider is the cultural context in which organizations operate. Cultural differences can impact communication and collaboration, especially in global organizations. Addressing cultural differences through cultural awareness training and diverse teams can enhance communication and collaboration and improve information and communication management.

Effective leadership is also crucial for efficient information and communication management. Leaders who are effective communicators can inspire their teams and create a culture of open communication and collaboration. Providing leadership training and ensuring that leaders are effective communicators can improve information and communication management and enhance overall organizational performance.

Finally, organizations need to continuously evaluate their information and communication management to identify areas for improvement. This can be done through regular assessments, surveys, and feedback mechanisms. By continuously improving their information and communication management, organizations can enhance their efficiency, productivity, and overall performance.

In summary, efficient development in various spheres of management depends on effective information and communication management. Positive factors such as technological advancements, skilled workforce, and effective processes and systems can enhance communication and collaboration, while negative factors such as outdated technology, poor communication and collaboration, and inadequate training can cause deficiencies. By identifying the causes of deficiencies and evaluating opportunities to enhance efficient development, organizations can improve their information and communication management and achieve their goals more efficiently. Furthermore, as the world becomes more interconnected, organizations need to prioritize effective communication and collaboration across different geographic locations and cultures. This requires the use of tools and technologies that can facilitate communication and

collaboration, such as video conferencing, instant messaging, and cloud-based collaboration tools. It also requires an understanding of cultural differences and the ability to adapt communication styles to different cultural contexts.

In addition, data security is an important consideration in information and communication management. Organizations need to ensure that their communication and information systems are secure and that sensitive information is protected from unauthorized access. This requires the implementation of appropriate security measures, such as firewalls, encryption, and access controls.

Another important aspect of information and communication management is the ability to manage and analyze data effectively. Data analytics can provide valuable insights into organizational performance and help organizations make data-driven decisions. However, to achieve this, organizations need to have effective data management systems and processes in place.

Finally, organizations need to prioritize effective training and development programs for their employees to ensure that they have the skills and knowledge necessary to succeed in their roles. This includes training in communication and collaboration skills, as well as technical skills related to information and communication management. It also involves providing opportunities for career development and advancement, which can improve employee engagement and retention.

In conclusion, effective information and communication management is essential for efficient development in various spheres of management. Organizations need to consider both positive and negative factors that impact their information and communication management to identify areas for improvement. By evaluating opportunities for enhancement, such as investing in new technologies, providing training, streamlining processes, improving communication and collaboration, reducing language barriers, addressing cultural differences, and improving leadership, organizations can improve their information and communication management and achieve their goals more efficiently. By continuously monitoring and improving their

information and communication management, organizations can remain competitive and achieve long-term success.

To summarize, effective information and communication management is critical for organizations to achieve their strategic objectives and remain competitive in today's business environment. Efficient development in various spheres of management depends on effective communication and collaboration, which can be impacted by a range of positive and negative factors.

Organizations need to evaluate their information and communication management regularly to identify areas for improvement. They should also invest in new technologies, provide training, streamline processes, improve communication and collaboration, reduce language barriers, address cultural differences, and improve leadership to enhance their information and communication management.

Moreover, organizations need to continuously adapt to new communication trends and technologies, such as social media and mobile devices, to remain competitive. They should also prioritize data security and effective data management to make data-driven decisions. Finally, providing effective training and development programs can improve employee engagement and retention and enhance overall organizational performance.

In conclusion, efficient development in various spheres of management is essential for organizational success. By prioritizing effective information and communication management and continuously evaluating and improving it, organizations can achieve their goals more efficiently and remain competitive in today's business environment.

To put these ideas into practice, organizations can take several steps. First, they should conduct a comprehensive assessment of their information and communication management to identify areas for improvement. This can involve conducting surveys, gathering feedback from employees, and analyzing key performance indicators.

Based on the assessment, organizations can then develop a strategic plan to enhance their information and communication management. The plan should prioritize

areas for improvement and set goals and objectives for achieving them. It should also outline specific actions, timelines, and responsibilities for each objective.

To implement the plan, organizations should allocate resources, including budget, technology, and human resources. They should also establish clear communication channels to ensure that all stakeholders are informed about the plan's progress and any changes or updates.

As the plan is implemented, organizations should continuously monitor and evaluate its effectiveness. This can involve conducting regular assessments, gathering feedback from employees and stakeholders, and analyzing key performance indicators.

Moreover, organizations should prioritize the development of a culture of open communication and collaboration. This involves creating an environment where employees feel comfortable sharing their ideas and opinions and collaborating with their colleagues. It also involves providing training and development programs to enhance communication and collaboration skills.

Finally, organizations should continuously adapt to new communication trends and technologies. This involves staying up to date with the latest developments in information and communication technologies and investing in new tools and technologies as necessary. It also involves regularly reviewing and updating policies and procedures related to information and communication management.

In conclusion, effective information and communication management is critical for efficient development in various spheres of management. Organizations need to evaluate their information and communication management regularly, develop a strategic plan to enhance it, allocate resources, establish clear communication channels, and continuously monitor and evaluate its effectiveness. They should also prioritize the development of a culture of open communication and collaboration and continuously adapt to new communication trends and technologies. By doing so, organizations can achieve their goals more efficiently and remain competitive in today's business environment.

To further enhance information and communication management, organizations can also leverage the power of data analytics. Data analytics can help organizations

gain valuable insights into their performance, customer preferences, and market trends. By using data analytics, organizations can make data-driven decisions that can help them achieve their strategic objectives.

To leverage the power of data analytics, organizations need to have effective data management systems and processes in place. This involves collecting and storing data in a secure and organized manner and ensuring that the data is accurate, complete, and up to date. It also involves developing data analytics capabilities, such as data mining, predictive analytics, and machine learning, to extract insights from the data.

Organizations can also use data analytics to improve communication and collaboration. For example, they can use analytics tools to identify communication patterns and gaps and develop targeted training programs to improve communication skills. They can also use analytics tools to track and monitor team performance and identify opportunities for improvement.

Finally, organizations can use data analytics to measure the effectiveness of their communication and information management strategies. By analyzing key performance indicators, such as response times, employee engagement, and customer satisfaction, organizations can evaluate the effectiveness of their strategies and make data-driven decisions to improve them.

In conclusion, data analytics can be a powerful tool for enhancing information and communication management. By developing effective data management systems and processes and leveraging data analytics capabilities, organizations can gain valuable insights into their performance, improve communication and collaboration, and measure the effectiveness of their strategies. By continuously monitoring and improving their information and communication management strategies, organizations can achieve their goals more efficiently and remain competitive in today's business environment.

Detailed suggestions for improving an organization's activities in communication and information management:

Develop a Communication and Information Management Plan: Create a comprehensive plan that outlines how the organization will manage and communicate

information. This plan should identify communication channels, procedures for collecting and storing data, and guidelines for accessing and sharing information.

Train Staff in Communication and Information Management: Staff should be trained in effective communication and information management practices. This training should include the use of communication tools and technology, data analysis, and data security.

Implement Information Security Measures: Develop and implement a security policy for all organizational data. This should include data backup, password management, and encryption protocols.

Use Collaboration Tools: Use collaboration tools to facilitate communication and information sharing among staff members. This could include tools like video conferencing, project management software, and cloud-based file sharing.

Develop a Knowledge Management System: Establish a system for capturing and sharing organizational knowledge. This could include creating a central database for storing important documents and data, creating a wiki for sharing best practices, or establishing a mentorship program.

Use Data Analytics: Use data analytics to identify trends and patterns in organizational data. This could include analyzing customer data to identify buying patterns or using financial data to identify areas where costs can be reduced.

Develop a Social Media Strategy: Develop a social media strategy to communicate with customers and stakeholders. This could include using social media platforms like Twitter, Facebook, or LinkedIn to share information about the organization, promote events, or share success stories.

Monitor Performance Metrics: Develop and monitor performance metrics related to communication and information management. This could include tracking the number of customer complaints related to communication, the time it takes to respond to customer inquiries, or the number of data security breaches.

Seek Feedback from Staff and Customers: Regularly seek feedback from staff and customers to identify areas where communication and information management

can be improved. This feedback could be gathered through surveys, focus groups, or individual interviews.

Continuously Improve Processes: Continuously evaluate and improve communication and information management processes. This could include reviewing the communication and information management plan on a regular basis, revising training materials, or incorporating new technologies or practices as they become available.

Here are some additional suggestions for improving an organization's activities in communication and information in management:

Regular communication and information audits help identify gaps, assess effectiveness, and recommend improvements. Collect data, evaluate channels and content, identify challenges, and make actionable recommendations. Implement changes and monitor progress for enhanced communication effectiveness.

Invest in technology: Advances in technology have revolutionized the way that businesses communicate and store information. Organizations should invest in the latest technology to streamline communication, enhance collaboration, and improve efficiency.

Develop a clear communication strategy: A clear communication strategy helps to ensure that all members of the organization are aligned in terms of communication goals, messaging, and channels. The strategy should be regularly updated to reflect changes in the organization and the external environment.

Promote a culture of communication: Communication should be viewed as a critical component of the organization's success. The organization should promote a culture of open communication, where all members of the organization feel comfortable sharing their thoughts and ideas.

Foster collaboration: Collaboration can enhance communication and information sharing. Organizations should promote collaboration through the use of team-building exercises, cross-functional projects, and other initiatives that bring employees together.

Provide training and development: Employees should be provided with the necessary training and development to improve their communication skills. This can include training on effective writing, public speaking, and active listening.

Measure and evaluate communication effectiveness: Organizations should regularly measure and evaluate the effectiveness of their communication efforts. This can be done through employee surveys, focus groups, and other feedback mechanisms.

By implementing these suggestions, an organization can improve its communication and information activities, leading to better collaboration, increased efficiency, and improved organizational performance.

Reference List

1. Breite, R., & Bailey, D. E. (2017). The impact of information and communication technology on knowledge management practices: An exploratory study. *Journal of Knowledge Management*, 21(1), 183-200. doi: 10.1108/JKM-03-2016-0114
2. Kim, J., Lee, C., & Lee, Y. (2016). Understanding the effects of information and communication technology on managerial work: A time-series cross-sectional analysis. *Journal of Business Research*, 69(11), 5198-5206. doi: 10.1016/j.jbusres.2016.04.001
3. Leidner, D. E., & Kayworth, T. (2016). Information and communication technology in management: Introduction to the special issue. *Journal of Management*, 43(8), 2299-2305. doi: 10.1177/0149206316653542
4. Nambisan, S., & Baron, R. A. (2019). Entrepreneurship in information and communication technology. *Journal of Business Venturing Insights*, 12, e00132. doi: 10.1016/j.jbvi.2019.e00132
5. Sarker, S., Sarker, S., & Sahaym, A. (2016). Technology-enabled knowledge management in organizations: A review and research agenda. *Journal of Knowledge Management*, 20(2), 360-378. doi: 10.1108/JKM-03-2015-0096
6. Simões, C., & Teixeira, R. (2015). The influence of information and communication technologies on organizational performance: A review of empirical studies. *Journal of Enterprise Information Management*, 28(3), 372-396. doi: 10.1108/JEIM-10-2014-0098
7. Subramaniam, N., & Venkatraman, N. (2017). Digital innovation and transformation: An institutional perspective. *MIS Quarterly*, 41(1), 223-238. doi: 10.25300/MISQ/2017/41.1.12
8. Teng, J. T. C., Chen, I. J., & Yang, C. C. (2016). The influence of information and communication technology, organizational agility, and supply chain integration on supply chain performance: A survey of manufacturing firms in Taiwan. *International Journal of Production Economics*, 181, 137-146. doi: 10.1016/j.ijpe.2016.08.002
9. Thakur, R., & Srivastava, M. (2017). An integrated framework for green supply chain management using interpretive structural modeling and fuzzy analytical

hierarchy process. *Journal of Cleaner Production*, 142(Part 4), 1646-1661. doi: 10.1016/j.jclepro.2016.11.168

10. Venkatesh, V., & Bala, H. (2016). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 47(5), 841-890. doi: 10.1111/deci.12215

11. Almarashdeh, I., Altarawneh, I., & Almasaeid, H. (2018). The impact of information and communication technology on organizational performance: The mediating role of knowledge management capabilities. *International Journal of Information Management*, 39, 121-135.

12. Bawaneh, S. S., & Alshehri, M. (2016). The impact of information and communication technology on knowledge management practices: A literature review. *International Journal of Information Management*, 36(6), 825-830.

13. Behrens, D., Sedera, D., & Drew, S. (2016). Boundary spanning information systems in a healthcare context. *Journal of the Association for Information Systems*, 17(8), 563-589.

14. Choi, S. Y., Lee, H., & Yoo, Y. (2010). The impact of information technology and transactive memory systems on knowledge sharing, application, and team performance: A field study. *MIS Quarterly*, 34(4), 855-870.

15. Karami, A., & Farajollahi, M. (2017). The effect of knowledge management on organizational performance: Mediating role of innovation capability. *Journal of Science and Technology Policy Management*, 8(2), 221-239.

16. Lim, S. H., Goh, D. H., & Chua, A. Y. (2015). Understanding information management capability in the context of service-oriented architecture adoption. *Information Systems Journal*, 25(5), 501-531.

17. Lu, Y., Cao, Y., Li, Y., & Shen, Z. (2018). The effect of organizational culture on knowledge sharing in information system development projects: An interpretive study. *International Journal of Information Management*, 43, 1-11.

18. Nielsen, J. H., Mathiassen, L., & Kautz, K. (2016). Implementing strategic information systems: Insights from a large-scale implementation in healthcare. *Journal of Strategic Information Systems*, 25(2), 135-157.

19. Rajapaksa, D., & Hui, W. (2017). Critical factors influencing knowledge sharing in IT project teams. *International Journal of Project Management*, 35(6), 1065-1077.
20. Wang, Q., & Dou, W. (2015). Exploring the role of IT capabilities in service innovation: The case of Chinese manufacturers. *Information & Management*, 52(7), 827-837.
21. Wu, W. W., & Lee, Y. T. (2016). Exploring the impact of knowledge management on organizational performance. *Journal of Business Research*, 69(5), 1560-1566.
22. Karim, N. S., Rahman, N. A. A., & Hamid, A. B. A. (2017). Examining the mediating effect of knowledge management between information technology capability and organizational performance. *Information Systems Frontiers*, 19(4), 881-898.
23. Zhao, J., & Zhu, Q. (2015). Antecedents of knowledge sharing in the virtual community of practice: A comparative investigation of collectivism and individualism. *Information & Management*, 52(2), 296-306.
24. Ravishankar, M. N., Pan, S. L., & Leidner, D. E. (2015). Customer knowledge management in online communities: Uncovering the motivations for knowledge sharing. *Information & Management*, 52(7), 801-812.
25. Chen, A. N. K., & Huang, Y. M. (2015). Knowledge sharing in virtual communities: Technology dependence and social exchange theory. *Information & Management*, 52(6), 677-687.
26. Deng, X., Doll, W. J., & Zhao, X. (2018). The impact of information technology on knowledge management practices: An empirical investigation. *International Journal of Information Management*, 43, 156-168.
27. Hung, Y. C., Hung, C. C., Jiang, M. F., & Tsai, C. M. (2018). Leveraging knowledge transfer performance in the knowledge management system. *Computers in Human Behavior*, 88, 119-130.
28. Lai, H. M., Zhao, Y., & Li, J. (2016). Understanding the influence of online social networks on knowledge sharing among IT professionals. *Information & Management*, 53(4), 484-497.

29. Lim, T. M., Kim, B. S., & DeLone, W. H. (2019). An empirical examination of the influence of organizational and personal factors on knowledge management system success. *Information & Management*, 56(4), 482-495.
30. Sanz-Valle, R., Jiménez-Jiménez, D., & Zárraga-Oberty, C. (2018). Linking knowledge management practices and ambidextrous organizational culture: A mediator model. *Journal of Knowledge Management*, 22(1), 102-122.