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RESEARCH ARTICLE – QUALITY MANAGEMENT

Diagnosing the Reality Application of the Business Continuity System According to ISO 22301:2019: A Case Study in the General Directorate of Urban Planning- Iraq

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Article Info.	Abstract
<i>Article history:</i> Received 14 February 2025 Accepted 30 May 2025 Publishing 30 June 2025	The research aims to identify the application level of the business continuity system according to the ISO 22301:2019 specification and to determine the gap between the specification clauses and the actual reality. The case study method was adopted for the research, and to diagnose the reality of the application of the business continuity system in the General Directorate of Urban Planning, the research sample, through field experience and review of documents, records and interviews conducted in the researched directorate. To collect data and information, the checklist was used, which included seven clauses to assess the business continuity system application (context of organization, leadership, planning, support, process, performance evaluation, Improvement). The statistical methods represented by (weighted arithmetic mean, percentage measurement, gap measurement), to diagnose the extent of application of the clauses, and to identify the most and least applied clauses. The results showed that the overall application rate of the business continuity system was 41% and the gap was 59%, which indicates the weakness of the application and documentation of the business continuity management system. The research recommended providing support and supplies, supervising the work of departments, and activating control by the competent authorities in the directorate to reduce the gap and raise the application level of the risk management system, crisis management, and business continuity

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1. Introduction

The International Organization for Standardization published a statement on the variety of crises and risks that organizations face due to the swift changes in political, economic, social, and technological circumstances. The Business Continuity Management System (BCMS) ISO22301:2019 is the second version of the international standard, while the first version was released in 2012. Its requirements can be applied to a variety of activities, such as jobs, operations, assets, and goods. Because the project sector represents the most important axis for building countries, and preparing infrastructure for them. The Directorate General of Planning was selected Al-Omrani is one of the formations of the Ministry of Construction, Housing and Public Municipalities, as a sample for research.

As the work of this specification in the directorate and the application of its provisions in its management, helps to achieve a competitive advantage for it, hence the requirement for a methodology to develop a business continuity management system that offers readiness and protection. Regarding any emergency situations that the business may encounter [1]. This is offered by the relevant international standard, which addresses how organizations can develop and validate a plan for how to continue operating or restore and recover the essential functions in order in order to ensure the continuity of operations and the capacity to continue working following a crisis. Because it provides a clear and directed guide that helps, ISO 22301:2019 Business continuity management system helps organizations classify, identify, and understand business continuity risks, and develop appropriate plans and procedures.

So that risks can be minimized and respond to incidents in a way that enables them to continue their operations, activities and basic services, As BCM has emerged, as a modern branch of management science, which appeared to reduce the consequences for organizations in cases of crises and disasters and affect most of their activities at certain times[2]. Accordingly, the International Organization for Standardization (ISO) sought to issue specifications concerned, with business continuity management (BCM) to enhancing the ability of organization, to continue their activities. Within an acceptable time frame, and enabling leaders of organizations, to think systematically based on business continuity management, in the event of exposure, to crises and risks, and therefore the application of organizations to these Requirements. It is a basic

administrative system, which aims to develop, enhance and respond to its various activities for every emergency that may affect the normal functioning of its business [3].

2. Research Methodology

2.1. The research problem

The problem of research was diagnosis based on the Iraqi organizations needs to apply the ISO 22301:2019 Business Continuity Management System specification in the General Directorate of Urban Planning of the Ministry of Construction, Housing and Public Municipalities, which is responsible for supervising and implementing many projects in Iraq, and the need apply a business continuity management system in its management and projects that it supervises the implementation or design to ensure the continuity of work in the event of exposure to crises and disasters and to reduce the resulting negative effects and recover from their complications. Accordingly, a set of questions can be raised:

- What is the implementation level of Business Continuity Management System ISO 22301:2019 in the surveyed directorate?
- What is the performance gap between the requirements of the specification and the actual reality of the application?

2.2. The importance of research

This importance presented by following: -

- The need of the directorate and the projects that supervise its implementation or design to apply the standard to ensure the continuity of the performance of its projects and face the risks and crises it faces.
- The present research helps to bridge the gap between theory and practice by offering a scientific study to define business continuity and its contribution to achieving the competitive advantage of the researched department.
- It is an Iraqi study concerned with applying international specifications in service organizations to early identification of issues and obstacles facing project management and take corrective procedures to confront risks and crises and ensure the continuity of its work.
- The significance of the field problem that the research tackles by emphasizing the significance of the following topics that are brought up in the specification: the context of organization, leadership, planning, support, process, performance evaluation, and Improvement.

2.3. Research objectives

- Determination the implementation level of Business Continuity Management System ISO 22301:2019 in the surveyed directorate..
- Diagnosing the gap between the requirements of business continuity management specification and reality of application in the research sample directorate.

2.4. Search limits

These limits are represented by:

- The business continuity system represents scientific limits according to the specification ISO 22301:2019.
- Spatial boundaries: Represented by the General Directorate of Urban Planning of the Ministry of Construction, Housing, and Public Municipalities.
- Time limits: The data were collected during the period from 5/1/2024 to 8/1/2024, and personal interviews and field visits were conducted in the researched directorate.

2.5. Research methodology

The research depended on the case study approach, which relies on observations and field coexistence through the researcher's roaming in the corridors of the field of research. Personal interviews with workers at different administrative levels to obtain accurate information, by viewing the secondary data provided by the organization, such as documents, records, and administrative orders. The case study is an appropriate approach to test the extent to which the ISO 22301:2019 specification is applied in the field of application to achieve the objectives of research, come up with research results and recommendations.

2.6. Statistical methods and analytical tools

In order to know the extent to which the actual reality of directorate matches with the specification clauses, check lists were prepared in accordance with ISO 22301:2019 specification with a triple scale, and each clause of the specification was allocated a specific weight according to application and documentation level of it, as shown in Table 1.

After calculating the scores for each item based on the checklist responses, the specification items were measured using the statistical techniques listed below. The percentage of conformance was then extracted using the following equations:

The weighted arithmetic average is used to find the approximate rate of the extent of compliance of the actual documentation and implementation of the requirements of the specification (clauses 4 to 10) in the General Directorate of Urban Planning compared to the requirements of (ISO 22301:2019) through the following equation:

$$\text{Weighted arithmetic mean} = \sum(\text{frequencies} \times \text{weights}) / (\sum \text{frequencies}) \quad (1)$$

The percentage of the extent of conformity:

$$\text{Percentage of conformity} = (\sum (F \times W) / \sum F) \times 100 \quad (2)$$

Degree (2) is the highest weight on the triple scale, which represents complete conformance.

The gap can be calculated by:

$$\text{Gap size} = 1 - \text{percentage of conformity} \quad (3)$$

Table 1. The triple scale of conformity with the standard (degree)

Sequence	Item Scale	Item Weight
1	Completely applied and thoroughly documented	2
2	Partially Applied Partially Documented	1
3	Not applicable Not documented	0

3. Previous Studies

Table 2 shows a number of previous studies.

Table 2. Previous studies

The Effectiveness of Business Continuity Management System in Enterprises,2022 [2]	Study Title
<ul style="list-style-type: none"> The purpose of this study is to provide some insight into how well enterprises use business continuity management systems (BCMS) 	Study Objective
<ul style="list-style-type: none"> Assess the effectiveness of a Business Continuity Management System (BCMS) in enhancing the resilience of organizations to unforeseen events and disruptions 	Study problem
<ul style="list-style-type: none"> Analytical Method. 	Study Methodology
<ul style="list-style-type: none"> The implementation of the business continuity strategy and the application of preventive measures (removing organizational failures), mitigation measures (reducing risks), emergency measures (preventing disruptions), and recovery measures (restoring vital business operations in the organization) should be tracked by business continuity performance measures. 	Conclusions
<ul style="list-style-type: none"> Diagnosing the reality of applying the operating requirement according to the international specification for the business continuity management system (ISO 22301:2019) applied research in the General Tax Authority,2023 [3]. 	Study Title
<ul style="list-style-type: none"> By adopting the checklist, this study aims to assess the General Tax Authority's implementation of the eighth requirement (operation) of the business continuity management system, which is related to planning, implementing, and controlling particular processes and procedures to address risks and opportunities, in accordance with the international standard (ISO 22301: 2019). 	Study Objective
<ul style="list-style-type: none"> What is the level of diagnosing the gap between the actual reality of the business continuity system in this organization and the standards for implementing operation requirement according to the international standard ISO 22301:2019? 	Study problem
<ul style="list-style-type: none"> Analytical Methodology Case Study 	Study Methodology
<ul style="list-style-type: none"> The degree of application and documentation of this requirement was 7%, which is a 93% gap, and this falls below of the level of conformance required by the international standard. 	Conclusions

4. Theoretical Aspect

4.1. The concept of business continuity management according to the international standard ISO 22301

The International Organization for Standardization. Which, is based in Geneva, Switzerland, is the largest organization in the world to set standards independently, as it is a non-governmental organization and works to make efforts to raise and develop standards and standards in all activities and fields, which contributes to international exchange [5]. As it has become today part of the market requirements and to achieve the competitive advantage that guarantees us to achieve a large market share, which obligated organizations of all kinds to build and adopt administrative systems that adopt On ISO standards and specifications [6]. And to ensure the quality and continuity of business in organizations (CBO). The International Organization ISO issued an international standard in 2012. The first version of the first comprehensive specification for business continuity. Which complies with the specifications 9001 and 14001, to help organizations reduce risks, prevent accidents and prevent any disruption, and in 2019 the Organization for Standardization issued the second version of the business continuity specification, which replaces the first version, which contained ten basic clauses that can be for application regardless of the size or activity of organizations to ensure the effective application, of the Business Continuity Management System [7]. There are several objectives of the application of the business continuity system in organizations. Including the establishment, and strengthening of an internal system and the development of goals, policies, and procedures to ensure business continuity management, the discovery of risks and weaknesses, avoiding any disruption or collapse in the production of products and services in the organization, and obtaining certificates of conformity [8]. ISO 22301 is an international standard that provides a framework for business continuity management to help organizations prepare for and respond to incidents such as natural disasters, cyber-attacks and supply chain disruptions. ISO 22301 aims to reduce the effect of disruptions on the critical business functions of the organization and help it recover quickly and efficiently. ISO 22301 adoption has steadily increased, as most organizations either implement or plan to implement the standard [9]. ISO 22301 applies to all sizes and types of organizations, in both the private and public sectors, and can be used by any organization. That wants to ensure that it can continue its important business operations, during disruptive events. The standard is designed to comply with other management system standards, such as ISO 9001 and ISO 27001 to facilitate integration and reduce duplication of effort as noted by the International Organization for Standardization (ISO). The integration of business continuity management with other management systems, can help organizations achieve Greater efficiency and effectiveness [10]. The collection of interconnected elements that organizations utilize to establish, deploy, operate, monitor, evaluate, manage, and enhance their business continuity capabilities is known as a business continuity system. These components, which make up an organization's overall management system, include people, policies, plans, procedures, processes, structures, and resources. These components are employed to ensure operations continuity, product and service delivery, and the protection of stakeholder interests, reputation, and brand [11]. Either [12] Define it as the comprehensive

international administrative standard, that is concerned with identifying the potential effects, that may threaten the organization and affect the processes that these threats can cause, and this is done through planning for the continuity of the work of organizations and their resumption, disaster recovery and crisis and disaster management through the five response programs: mitigation, preparedness, response, recovery and prevention.

4.2. Benefits of applying business continuity management in accordance with the international standard ISO 22301

One of the main benefits of ISO 22301 is that it helps organizations identify potential threats and vulnerabilities that they may not have thought about. By performing business impact analysis and risk assessment, organizations can gain a better understanding of the potential impact of disruptions on critical business functions, and prioritize their response accordingly. This can help organizations allocate resources more effectively and develop more robust and targeted business continuity plans. It was found that organizations with ISO 22301 certification reported a higher level of confidence in their ability to recover from disruptions compared to those without ISO certification [13]. The application of the terms of the Business Continuity Management Standard can provide some benefits as indicated by the international standard [10]:

- Protect the value of stakeholders and key stakeholders – customers, suppliers and partners – and increase their trust in the organization.
- Recognize the weaknesses of the organization's critical work.
- Enhance understanding of the organization's work by identifying and analyzing risks.
- Operational flexibility that produces risk reduction.
- Reduce downtime and develop alternative solutions.
- Protection of vital records, physical assets and commercial assets.
- Increase competitive advantage and enhance public security.

4.3 Business Continuity Management Requirements in accordance with ISO 22301

The terms of the standard are made up of what the ISO has indicated [12]

- Field: It is applied in any organization regardless of its size, type or nature of work, and the application depends on the work environment and the degree of complexity.
- Standard references: All clauses of the standard are a basic reference for business continuity in organizations.
- Terms and definitions: These are all the definitions contained in the standard.
- Organization context: The requirements for establishing a business continuity management system context, are clearly defined in this item, the scope of the business and the parts that will be excluded from the system are clearly defined, and the needs and expectations of stakeholders affected by the system are understood.
- Leadership: In this item, the objectives of the system are verified, the tasks and responsibilities are determined, and the commitment of senior management to the application and the development of policies for business continuity and delivery to all.
- Planning: In this item, procedures for dealing with risk and opportunities are clearly defined, strategic objectives and guidelines are clearly set for the business continuity management system, addressing threats and maintaining the system, with the minimum acceptable level of products and services determined.
- Support: In this item, the type of support needed to establish, implement and maintain the system of Business Continuity Management is determined, including the required resources, staff competencies, awareness of all stakeholders, communications, and the requirements necessary to manage and document innovation and modernization.
- Process or operation: This item includes, operational planning and control, meaning that the implementation, was done as planned, the planned changes were monitored, the impact analysis on the business, development the strategy of a business continuity, to deal with incidents and disruptions, the establishment and execution of business continuity procedures through the establishment of downtime procedures, continuity management, the establishment of a response structure, the establishment of response procedures, the establishment of recovery procedures, and the establishment and implementation of a business continuity plan.
- Performance Evaluation: This item includes monitoring, measurement, analysis and evaluation, by identifying needs to be measured and monitored, including business continuity processes, methods of monitoring, measurement, analysis and evaluation to ensure that the correct results are obtained, and conducting internal audits and management review at specific and planned times to ensure compliance with the standard, to ensure efficiency and effectiveness.
- Improvement: This item includes avoiding cases of non-conformity and taking appropriate corrective action in a timely manner while maintaining non-conformity reports and submitting them periodically to senior management, and to ensure the efficiency of the system, attention should be paid to continuous Improvement and reform and its continuous support from senior management.

4.4 Steps to implement business continuity management in accordance with ISO 22301

To achieve positive results from the application of the standard, there must be support from senior management, and this is done in accordance with the following paragraphs, which were referred to by [14] as follows:

- Conduct a comprehensive business impact analysis as it helps organizations identify and prioritize important business functions and processes. Environmental impact analysis should be take into account potential disruptions and impact on operations, financial and reputational consequences.
- Develop a business continuity plan, which outlines strategies and procedures to respond to potential disruptions, minimize their impact, and ensure the continuity of important business functions. To address changes in the organization and the effects of external factors, this plan should be reviewed and updated continuously.
- Establish a crisis management team responsible for responding to disruptions and implementing a business continuity plan. The team should include representatives from all important functions and be trained and prepared to respond to different scenarios.
- Testing and validating a business continuity plan after regular testing and validating a business continuity plan is essential to ensure it remains effective and relevant. Tests should be conducted in different scenarios and with different teams to identify any weaknesses and areas for Improvement.
- Monitor and improve the Business Continuity Management System continuously in order to ensure the effectiveness of the system. This includes conducting regular internal audits, reviewing and updating policies and procedures, and addressing any non-compliance.

5. Practical Side

5.1. Evaluation of the application of the requirements of the context of the organization according to ISO 22301

This section aims to present and analyze the results of the field research for the check list based on the responses the researchers received from records, personal interviews, and documents pertaining to the Directorate General of Urban Planning's quality management system, up to the weighted arithmetic mean to determine the rate of the extent of application of business continuity management requirements in the directorate, as well as the application gap for each clauses of the check list, At the overall level of the main clauses. Tables 3-9 indicate the checklist for clauses related to the activities and processes of business continuity management.

Table 3. Checklist for the requirements of the context of the organization

The context of the organization	0	1	2
Understanding the organization and its context			
The directorate identifies external and internal issues that impact its ability to get the desired Business Continuity Management System (BCMS) results.			*
The directorate shall identify and document activities, functions, and relations with interested parties.			*
The directorate determines defines establishes its risk appetite and deals with it			*
The directorate clearly defines the scope and purpose of the Business Continuity Management System			*
The directorate determines potential risks through management meetings or reviews			*
Understand the needs and expectations of stakeholders			
The directorate shall identify the relevant stakeholders related to the Business Continuity Management System.			*
The directorate determines the needs, requirements and expectations of the concerned parties			*
Define the scope of the business continuity system			
The directorate shall determine the possibilities and limits of the Business Continuity Management System implementation.	*		
The directorate determines the Business Continuity Management System scope taking into account its internal and external	*		
The directorate shall establish the requirements of the (BCMS) as information available and documented to all.	*		
Business Continuity Management System			
The directorate establishes, implements, maintains and improves the BCMS in accordance with ISO 22301:2019	*		
Duplicate	4	0	7
Result = (weights * duplicates)	0	0	14
Weighted mean = (result / sum of occurrences)			1.3
Percentage of matching = (weighted mean / highest weight on the scale)			64%
Gap size			36%

Table 4. Checklist for matching the requirements of the Leadership

Leadership	0	1	2
Leadership & Commitment			
1. The senior management of the directorate is committed to approving and supporting the BCMS	*		
2. Senior management establishes objectives for the BCMS in line with the department strategic direction	*		
3. Senior management emphasizes ensuring that BCMS requirements are integrated into their operations	*		
4. Directing senior management employees in the directorate to contribute to the effectiveness of the BCMS	*		
5. Senior management is working on continuous Improvement of the BCMS	*		
Politics			
6. The senior management works to develop an appropriate policy of business continuity for the Directorate purpose	*		
7. The policy ensures a commitment to meet the business continuity requirements	*		
8. The policy includes a continuous improvement commitment.	*		
9. The policy shall be available to everyone in the directorate and documented	*		
Roles, Responsibilities and Powers			
10. Senior management in the directorate ensures that the roles and responsibilities related to the Business Continuity Management System are defined			*
11. Compliance of senior management system with the requirements of the international standard.			*
12. Reports of the BCS performance shall be submitted to senior management.	*		
Duplicate	12	0	2
Result = (weights * duplicates)	0	0	4
Weighted mean = (result / sum of occurrences)			0.29
Percentage of matching = (weighted mean / highest weight on the scale)			14%
Gap size			86%

Table 5. Checklist for matching the requirements of the Planning

Planning	0	1	2
Procedures for dealing with risks and escape			
1. The directorate's management shall establish procedures for dealing with risks and opportunities.			*
2. Integration and implementation the procedures in the processes of the BCMS	*		
3. The effectiveness of specific actions is evaluated			*
Business continuity goals and planning to achieve them			
4. The senior management of the directorate sets the BCMS objectives	*		
5. The objectives align with the quality continuity policy in the directorate.	*		
6. The set goals are measurable	*		
7. The objectives set shall be announced to all those involved in the work of the Directorate	*		
8. Objectives are constantly monitored and updated periodically in the Directorate	*		
9. Documents and maintains goals.	*		
Duplicate	7	0	2
Result = (weights * duplicates)	0	0	4
Weighted mean = (result / sum of occurrences)		0.44	
Percentage of matching = (weighted mean / highest weight on the scale)		22%	
Gap size		78%	

Table 6. Checklist for matching the requirements of the support

Support	0	1	2
Resources			
The directorate identifies and provides the resources required to create, implement and sustain continuous Improvement of the BCMS.			*
Efficiency			
The directorate shall appoint the necessary competencies for individuals who are influential in the performance of activities.			*
Appropriate training and education shall be provided to individuals to achieve the necessary competence.		*	
Take appropriate measures to acquire the necessary competencies to work on the BCMS.		*	
Save information of education and training, experience and skills as appropriate competence evidence			*
Awareness			
The directorate shall determine a program to educate employees about their roles to be performed during chaos incidents.			*
The directorate ensures that employees are fully aware of the business continuity policy		*	
The employees of the directorate contribute to the BCS effectiveness and improve performance		*	
Contact			
The directorate determines the communication related to the BCMS			*
The directorate determines the time of communication			*
The contact party is determined			*
The party responsible for the communication process is determined			*
Processes affected by the connection are determined			*
Management ensures the torrent of communication during the sabotage incident			*
Facilitate organized communication with the competent authorities during chaos situations			*
Documented information: general requirements			
Determine the required documented information in accordance with the international standard			*
Personnel competency information is documented			*
Policy and domain are documented		*	
Procedures for dealing with risks and opportunities are documented.			*
Ensure that documented information is available for use when needed			*
Documented Information: Innovation and Modernization			
Identify and describe each of the appropriate (title, date, reference)			*
Determine the language of information and means of documentation (paper - electronic).			*
Ensure that documented information is adequate and fit for purpose			*
Documented Information: Monitoring			
Ensure that appropriately documented information is protected by confidentiality, correct use or loss of integrity			*
Accessibility, retrieval and use of documented information			*
Duplicate		1	4 20
Result = (weights * duplicates)		0	4 40
Weighted mean = (result / sum of occurrences)			1.8
Percentage of matching = (weighted mean / highest weight on the scale)			88%
Gap size			12%

Table 7. Checklist for matching the requirements of the operating

Operating	0	1	2
Management and Control			
The Directorate plans, implements and monitors the processes required in the requirements of business continuity in accordance with the standard	*		
Implement plans to achieve the goals of business continuity.	*		
The directorate identifies and monitors operations that take place outside it.	*		
Business Impact Analysis and Risk Assessment			
The directorate shall establish a formula for analyzing and evaluating the effect of works as a result of exposure to a closure accident or damage.		*	
Identify the outputs required in business effect analysis and risk assessment		*	
Document the results of the evaluation that can lead to business interruption		*	
Business Continuity Strategic Plan			
The directorate sets a business continuity strategy and downtime procedures	*		
The directorate sets incident response requirements from various resources (personnel, buildings, equipment, transportation, etc.)	*		
The directorate sets the requirements for a proactive business continuity plan	*		
Establish procedures for the resumption of work after exposure to a case of sabotage	*		
The directorate shall develop and implement the procedures of any sabotage incident using human resources with responsibilities, powers and competencies to manage the incident.	*		
The directorate creates implements and maintains the procedures for detecting and monitoring incidents and internal and external communication.	*		
The directorate shall develop a BCM plan within a predetermined time frame.	*		
The directorate shall establish documented procedures for benefiting and returning business systems from the temporary measures taken for normal business tasks.	*		
The directorate chooses its business continuity procedures to ensure their compatibility with the objectives.	*		
Duplicate	1	3	0
	2		
Result = (weights * duplicates)	0	3	0
Weighted mean = (result / sum of occurrences)		0.2	
Percentage of matching = (weighted mean / highest weight on the scale)		10%	
Gap size		90%	

Table 8. Checklist for matching the requirements of the performance evaluation

Performance Evaluation	0	1	2
Monitoring, measurement, analysis and evaluation			
The directorate works on evaluating the performance of business continuity.	*		
The directorate shall determine the methods of monitoring, measurement, analysis and evaluation.	*		
Documented reports are prepared after each evaluation.	*		
The directorate shall take the necessary measures to address the adverse results before the nonconformance occurs.	*		
The directorate evaluates business continuity procedures to ensure their appropriateness, efficiency and effectiveness	*		
These assessments are conducted through periodic reviews and planned time periods	*		
Internal Audit			
The directorate conducts internal audits within a planned period of time to provide information on the conformity of business continuity management with the requirements of the directorate	*		
Compliance with International Standard ISO22301:2019	*		
Ensure audit reports are submitted to senior management.	*		
Maintain documented information on audit results	*		
Management Review			
The directorate reviews within specified time periods the BCMS to ensure its efficiency and effectiveness	*		
Management review outputs ensure decisions related to continuous improvement opportunities and the need for changes in the system	*		
The directorate shall maintain documented information on the results of management reviews	*		
Duplicate	13	1	0
Result = (weights * duplicates)	0	0	0
Weighted mean = (result / sum of occurrences)		0	
Percentage of matching = (weighted mean / highest weight on the scale)		0	
Gap size		100%	

Table 9. Checklist for matching the requirements of the improvement

Improvement	0	1	2
Mismatch and corrective action			
The directorate sets up control and control procedures for non-conformity with system requirements and corrects it			*
The directorate shall determine the procedures for eliminating cases of non-conformity			*
The directorate reviews the corrective actions taken			*
The reasons for the mismatch are determined			*
The need for corrective action is assessed			*
Continuous Improvement			
The directorate ensures the procedures for continuous Improvement of the efficiency, appropriateness and effectiveness of the BCMS		*	
Ensure the system continuous improvement through policies, audit results, corrective actions and management review		*	
Duplicate	0	2	5
Result = (weights * duplicates)	0	2	10
Weighted mean = (result / sum of occurrences)		1.7	
Percentage of matching = (weighted mean / highest weight on the scale)		86%	
Gap size		14%	

5.2. Summary of the results

Based on the standard researched, a summary of the level of conformance results for the actual implementation shown in Table 10.

Table 10. Summary of the results of conformity level for actual implementation requirements of the Business Continuity Management Specification ISO 22301:2019 in the Directorate General of Urban Planning

Requirements	Percentage of commitment	The Gap
Context of the organization	%64	%36
Leadership	%14	%86
Planning	%22	%78
Support	%88	%12
Operation	%10	%90
Performance Evaluation	%0	%100
Improvement	%86	%14
Total	%41	59%

Through the above Table, we note that the total conformity rate for the application of the business continuity system in the Directorate General of Urban Planning is estimated at 41% with a gap of 59%, as will be shown in Fig. 1.

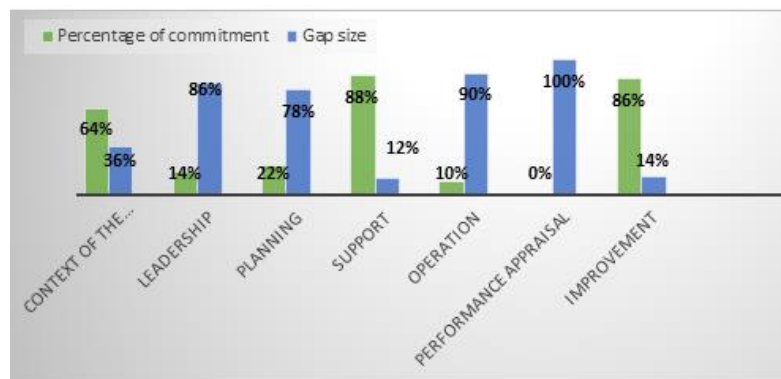


Fig. 1. An overview of the results about the degree of the actual implementation of the requirements of the Business Continuity Management Specification ISO 22301:2019 of the Directorate General of Urban Planning

6. Results

- Through the case study conducted on the Directorate General of Urban Planning research sample and using the check lists shown in the above tables and the evaluation results shown in Table 10 above, it was noted that the percentage of application and the extent of commitment by the directorate to the application of the ISO22301 standard is below the required level of 41% and the existence of a gap of 59%, which indicates the non-application of this standard.
- It was noted that the item of support and Improvement are the most applied clauses in the directorate surveyed and this is due to the application of the Directorate requirements of the specification ISO9001 and that the directorate has fertile ground for the application of the specification of business continuity because the directorate identifies and analyzes risks and problems according to the forms of identification and analysis of risk and statement of the level of impact of the risk and address or accept the risk or turn it into opportunities.
- It was noted that the context of the organization clause achieves an application rate of 64% and a gap of 36%, because the directorate identifies internal and external issues affecting it. The continuity of its business, as well as identifying the concerned parties and their requirements, determines the emerging risks that are presented in periodic meetings and administrative review meetings. However, the directorate does not clearly define the scope of the business continuity system, nor does it determine the limits and possibilities of applying the business continuity system, and there is no documentation related to the business continuity system.

- It was noted that the leadership clause achieves an application rate of 14% and a gap of 86% due to the lack of commitment from the senior management to the importance of applying the specification, and the senior management of the department does not set goals for its business continuity system.
- The planning clause refers to the conformity rate, as it has 22% conformity and a gap of 78%, because the directorate applies the procedures for identifying, analyzing, and assessing the risk according to annual and periodic plans. The directorate develops procedures to deal with the risks and opportunities, and the directorate constantly monitors the goals to ensure their achievement, which leads to the elimination of the danger before it occurs.
- The support clause indicates the existence of a conformity rate estimated at 88% and the size of the gap of 12%, due to the analysis of the impact of the risk and the assessment of the risk according to the severity of the risk and its type and at any stage the reality of the danger and try to cancel and avoid the danger before it occurs and develop plans to eliminate the danger and transform the risk into opportunities and strengths that benefit the directorate and enhance its value as the directorate sets the requirements for responding to accidents of personnel, buildings, equipment, transport and others and develops procedures for the resumption of work after the occurrence of any danger or emergency through Develop risk management plans and try to continue its business according to documented procedures compatible with its objectives.
- As for the performance evaluation clause, it obtained a conformity rate of 0% and a gap rate of 100%, due to the directorate's commitment to internal audit, management review, and risk assessment, but it lacks a business continuity performance evaluation because it has not applied it.
- The improvement clause gets the conformity rate and of 86% and a gap rate of 14%, because there is no business continuity system at the directorate, and thus there is no work to improve, and there are no corrective measures taken.

7. Conclusion

Through conducting the study and practical application on the research sample represented by the General Directorate of Urban Planning, one of the formations of the Ministry of Construction, Housing, Municipalities and Public Works, it was observed that there is partial implementation of the researched standard, due to the fact that the directorate is applied to the quality management system in accordance with the ISO 9001:2015 standard, which is a fertile ground for the application of other specifications, including the ISO 22301:2019 business continuity specification, as the directorate has documentation and audit procedures, the context of the organization, and the risk and opportunity procedure, which contributes to Enhancing work according to business continuity.

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