

Evaluate the Continuous Improvement of Operations According to the Business Continuity Model (ISO 22301: 2019) A Case Study: The General Company for Vegetable Oils

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Abstract

The main objective of the study is to evaluate the continuous improvement of operations by identifying the non-conformity gap and to assess the level of implementation of the requirements of (ISO 22301: 2019) in the General Company for Vegetable Oils. The method used is a case study, which included personal interviews and actual observation at the study site. The practical side included designing checklists and gap analysis using the requirements of the international standard (ISO 22301: 2019). The statistical analysis included the use of a five-weighted scale, the use of weighted average equations, and implementation and documentation ratios, to measure the non-conformity gap. The requirements amounted to (148), and they include the main subjects and their branches, while the percentage of non-conformity and the documentation gap for all requirements was less than the average. The study concluded: failure to identify external and internal problems related to risks and crises that the company/study sample may face, and failure to review information related to the strategic plan of the company and its stakeholders according to the requirements (ISO 22301: 2019). The study recommended the following: All exceptions that have an impact on the company's ability and responsibility, including risk assessment or analysis, and regulatory or legal requirements, must be documented, including all necessary processes.

Keywords: Continuous Improvement, Operations Performance, Evaluation, ISO22301, Business Continuity, Risk Management, (BCMS), Business Improvement, Business Organizations.

Introduction

Business organizations are exposed to situations of danger and crisis. Some accidents can cause significant physical or environmental damage if not managed properly. Therefore, organizations must have the capacity to face crises and rain before they happen (Heng, 2015: 9). When business organizations are disrupted by a technological or natural disaster, recovery and response from post-hazard events depend on the resilience of the business community (Bethune et al., 2008: 472). Business continuity has become more difficult nowadays, due to the risks of modern information technology in the field of business, which has led to an increase in the trend towards business continuity that focuses on all the important processes in an organization. (Randeree et al., 2012: 474). Effective planning contributes to the organization's preparedness for crisis because benefiting from planning and improving the organization's understanding of what it needs in times of crisis provides it with tangible benefits. (Atkinson: 2017:1) Business continuity aims to identify threats to the organization's work and cause disruption. The business continuity framework helps to enhance the resilience of the organization, expand the scope of critical operations, and contribute to providing assistance for the effective response to pre-identified risks and crises in the organization (Speight, 2011: 532). The implementation and assessment of business continuity require organizations to follow several standards, for example, the Process Evaluation Form, and helps in conducting assessments on organizations. The evaluation results obtained can be used to improve the performance of the operations. (ISO/IEC 33004:2015:4). The Process Reference Model helps organizations become more efficient in managing business continuity by clearly defining the scope of operations (ISO 22301:2019:6). (Pinto et al., 2022: 123). To create a reference model for evaluating a business continuity management system (BCMS), the author decided to rely on recent scientific literature for the purpose of obtaining the required information and data. This methodology assisted the author in answering and verifying research questions and drawing conclusions. This data was analyzed and strengths and weaknesses were identified.

Study Methodology

Study Problem

A good business environment is the main element of business success in organizations, which in turn affects business performance indicators. Therefore, measuring the level of implementation requirements of the (BCMS), according to the versions (ISO 22301) in its second edition of 2019, and for the purpose of facing the challenges facing modern business organizations, in the Iraqi business environment. And (the General Company for Vegetable Oils/sample study), for the purpose of improving business performance. The problem is summed up in the poor keeping up of the study sample with modern international programs in the (BCMS). Therefore, the problem study includes the following questions:

- a. Is there a (BCMS), in the study sample, that complies with the relevant (ISO 22301: 2019) with regard to business improvement?
- b. Is there, in the study sample, a working guide that includes the concepts principles, and programs, of BCMS (ISO 22301: 2019), that can be followed for the purpose of improving the actual reality in the study sample?
- c. Weakness of the procedures followed in (the General Company for Vegetable Oils/sample), in order to follow modern directions publications, (ISO 22301: 2019). As concepts, guidelines, and applications, in order to be a "fundamental" basis for improving business performance and actually improve the actual (BCMS) in the study sample.

Study Objective

A set of objectives to be achieved by the study can be clarified through the following:

- a. Reviewing the performance of the study sample, by identifying the non-implementation gap related to (BCMS), to the requirements of (ISO 22301: 2019), diagnosing weaknesses, and submitting proposals for the purpose of addressing them.
- b. Providing assistance to the study sample, in identifying and following relevant procedures to improve business performance, by applying (BCMS), according to (ISO 22301: 2019).
- c. Contribute to the development and support of business improvement culture among management and employees in the company, and stimulate practical guidance for the application of BCMS practices (ISO 22301: 2019), in Iraqi business organizations.

The Importance of the Study

The study contributes to clarifying the basic procedures for implementing (BCMS) in the company, through the following:

- a. The study is an essential step for self-assessment in order to assist and qualify (the General Company for Vegetable Oils/sample study), for verification and external audit by accredited bodies for registration to grant the international certificate (ISO 22301: 2019).
- b. The study contributes to assisting decision makers in the company's senior management in selecting workers who have the capabilities and knowledge appropriate for the application of (BCMS), according to (ISO 22301: 2019).
- c. The importance of the study was inspired by addressing the important risks and challenges facing business organizations in the study sample, and the industrial sector in Iraq, for the purpose of improving (BCMS), according to (ISO 22301: 2019).

Sources of Data and Information for the Practical Side

Data and information were obtained through viewing and studying some official documents, field visits, and personal interviews with a group of workers in the study sample. Gap analysis checklists have been prepared and designed for the purpose of assessing the levels of implementation of all requirements (BCMS), (ISO 22301:2019), and diagnosing the causes of the non-conformity gap in the company.

Statistical Interpretation of the Data

The scale used includes five levels for the purpose of analyzing and evaluating the data in the checklists. Table No. (1) shows those items and weights that range from the highest scores of The best performance with a weight of (5) degrees, and The Basic level with a weight of (1) degrees. The answers in the checklists are converted into quantitative codes, to determine the non-conformity gap in the study sample, in comparison with the (BCMS), according to (ISO 22301: 2019).

Table 1: The Template is Generic for Performance Appraisal Items and Criteria Related to Performance Maturity Levels

Performance maturity levels to achieve continuous improvement					
	Level 1	Level 2	Level 3	Level 4	Level 5
Requirement 1	Standard 1 Basic level				Standard 1 The best performance
Requirement 2	Standard 2 Basic level				Standard 2 The best performance
Requirement 3	Standard 3 Basic level				Standard 3 The best performance

ISO 9004: 2018," Quality management —Quality of an organization — Guidance to achieve sustained success", Fourth Edition, ISO Copyright Office, Geneva, 2018: p 25.

A set of equations was used to convert the answers contained in the checklists, into quantitative expressions according to the following (Grela, 2013: 1222):

- Calculate the Weighted average of all checklists (BCMS), by using the following equation:
- $A \text{ weighted average of all checklist requirements} = \frac{\sum \text{weights}(xi) * \text{frequency}(fi)}{\sum \text{frequency}(fi)}$
- $Percentage (\%) \text{ of all checklist requirements} = \frac{\sum \text{weights}(xi) * \text{frequency}(fi)}{\sum \text{total frequency}(fi) * \text{highest on the scale}}$

Literature

Business Continuity Management System (BCMS)

Business continuity as a dynamic process to identify the effects of potential losses and risks in the future, take steps that contribute to maintaining business continuity in organizations, and develop appropriate strategies and plans to achieve recovery (National Fire Protection Association 2016:7). Business Continuity Management (BCM) is The process of developing a framework for building effective organizational resilience to achieve the ability to respond quickly and to address risks, weaknesses, and threats that can affect the business performance of the organization. Continuous planning is strongly linked to the resilience of organizations and societies. (Disaster Recovery Institute 2016:2) (White and O'Hare 2014: 942). A business continuity management system is "a comprehensive management process that identifies potential threats to an organization and the impacts on business operations that these threats, if perceived, would cause, and provides a framework for building organizational resilience with the ability to respond effectively that protects the interests of key stakeholders, reputation, brand, and value creation activities.". (Heng, 2015: 9) (British Standards Institution, 2006, p. 1) (Brahim Herbane:2010:981) (ISO ISO22301:2012:24).

Business continuity helps all organizations facing crises and risks, to overcome current and future problems, and restore business practices to functional form. Continuity indicates that business performance, with planning, contributes to the rapid restart of core operations. The basic and essential advantages of business continuity are that the services and products produced by business organizations remain available, employees continue to work, and businesses and related industries are not disrupted. Business continuity is also demonstrated by maintaining the trust of shareholders and customers. (McKnight and Linnenluecke 2016:293). Business continuity is an important business model for organizations to face potential risks before they occur, for the purpose of reducing vulnerabilities, and achieving organizational resilience in the face of current and future crises. (Atkinson: 2017:1-2 (.

This document provides parameters, policies and guidelines for the implementation of a business continuity management system in public and private sector organizations. The main objective of the document is to encourage these organizations to implement business continuity management and prepare for any disaster. In addition, the primary business of the public sector is service delivery (service continuity management). The objectives of implementing business continuity in public sector organizations include the following: (Abu Bakar et al.;2019:22).

1. Minimizing the effects resulting from disruption or crises on the provision of goods and services in organizations.
2. Ensuring the continuity of the system of goods and services provided by the official authorities.
3. Ensure compliance and compliance with the requirements of international standards such as MS ISO / IEC 27001: 2007 Information Security Management Systems.

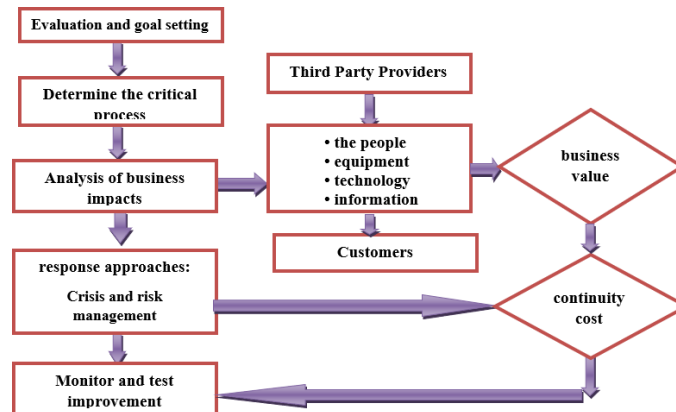
Business continuity management has become important and necessary nowadays, because most government services are provided online. Hence, the application of BCM in the public sector has become very important because citizens demand reliable services, and no failure is tolerated. Especially with the move towards implementing e-government, the concerned organizations must also ensure that it is available. (Abu Bakar et al, :2019:22).

Business Continuity Planning

Business continuity planning helps organizations develop the capabilities necessary to maintain their assets and competitive position, and to continue the main business operations after the occurrence of the crisis. Figure 1 shows the components of business continuity planning: how to recover from disasters and crises that have arisen in the information systems function during the past few years. For example, many of the principles that apply to data and information backup systems.

In recent years, disaster recovery response has expanded into business continuity planning, a term used to emphasize the need to move business continuity efforts to the management information technology and systems department and integrate them throughout the organization. Terms such as “business continuity management” and “business resilience” have also increased. The business continuity plan begins, as illustrated (Figure 1), with basic assessments at the executive level of the business continuity objectives of the organization, after which this assessment is followed by identifying the most important and important business operations of the organization.

Next, financial managers and other business managers analyze the critical components of those operations: the people, facilities, technology systems, and data the systems contain. The analysis should also take into account how unexpected business interruptions may affect suppliers and customers. The response processes after that ensure that all components that enable the critical business process are restored within a time-wise period. Determining the value inputs from the finance and accounting function is required because it requires a comprehensive understanding of (a) the value of each business process, and (b) the cost of restoring the process over a certain period of time. The resulting plan must then be monitored, tested and, if necessary, modified or improved. (Krell,2006:6-7).



Krell, Eric (2006), Management accounting guideline business continuity management, Copyright © 2006 by the Society of Management Accountants of Canada (CMA-Canada). pp: 7

The Main Drivers of Business Continuity Management

Business continuity management system as a comprehensive management process that identifies potential impacts that threaten an organization and provides a framework for building resilience and effective response capacity that protects key stakeholder interests, reputation, brand, and value creation activities. The concept has also received the attention of governments, as many countries in the developed world have developed methodologies and standards for business continuity in the public sector, such as the British BS-25999 methodology and the NFPA 1600 methodology issued by the Federal Emergency Management Agency of the Department of Homeland Security in the United States of America (Alghamdi,2022:18). As a result, the International Organization for Standards developed the international standard for business continuity ISO 22301, which, as indicated by the British Standard Institute, allows organizations to prioritize and understand the threats they face. As this standard identifies the requirements necessary to reduce the possibility of exposure to crises and limit their negative effects, and contributes to the development of methods and plans to recover from them (British Standard Institute, 2021:8).

Based on the above facts, global trends show that compliance with business continuity requirements is essential. It also shows that organizations are committed to protecting their business and functions and ensuring their ability to survive in the face of crises and catastrophic risks. and protect its critical assets such as people, processes and technology. It also results in a lack of support by management for mandatory legislation or standards. To motivate market forces such as reputation and competitive market, in accepting business continuity practices. Currently, interest is growing worldwide, regarding the best practices of business continuity management with appropriate support from governments. And the issue of compliance with international requirements and standards has become important in enhancing the ability of institutions to ensure the continuity of goods and services for vital business functions(Abu Bakar et al.;2019:20-21).

Practical

The actual performance will be evaluated by measuring and analyzing the implementation process and documenting the requirements of the business continuity management system in the study sample (the General Company for Vegetable Oils) compared to the international standard. (ISO 22301:2019) in its second edition, using gap analysis checklists that will be answered by actual observations and personal interviews of those responsible for the business continuity management system in the study sample. Non-conformances will be indicated and their reasons explained. For the purpose of converting the answers into quantitative expressions and ensuring the accuracy of the answers, the five-point Likert scale shown in Table (1) was used, and gap analysis lists will be prepared based on the international standard (ISO 22301: 2019), starting with (Requirement No. (4):

The Company's Business Environment

which includes a group of factors related to the threats and risks facing BCMS, and determining the appropriate strategy for dealing with (concerned parties) in the internal and external environment and related parties. or (stakeholders), and must also prepare for the risks facing the company, and identify relevant legal and regulatory requirements. The development, implementation and improvement of the BCMS system requires the commitment of

the research sample (the General Company for Vegetable Oils) to distinguish between all aspects related to the BCMS system, according to the requirements in Table (2).

Table 2: Requirements (The Company's Business Environment) According to the ISO 22301:2019

no	4. the company's business environment	Performance maturity levels				
4.1: Understand the company's business environment						
a-	The company (study sample) must identify internal and external issues in work, which could affect its ability to achieve the intended results of (Business Continuity Management Systems - BCMS).			✓		
4.2: Understanding the needs and expectations of interested parties						
4.2.1: General: The company (study sample) when developing (Business Continuity Management Systems - BCMS), must specify the following:						
a-	Stakeholders related to (Business Continuity Management Systems - BCMS).		✓			
b	All issues related to the parties concerned.		✓			
4.2.2 2 Regulatory and legal legislation: The company/ study sample must:						
a-	Determine current legal and regulatory requirements, and how to access, maintain and evaluate them when needed, in relation to their activities and resources.			✓		
b-	When implementing and maintaining a BCMS, be sure to take into account these legal and regulatory requirements.			✓		
c-	The company must document and update information relevant to legal and regulatory requirements on a regular basis.		✓			
4.3 Determining the scope of the (BCMS)						
4.3.1 General: The company (study sample) must define the domain and scope of (BCMS), and when documenting the information, the following must be taken into account:						
a-	:issues related to external and internal parties to the Company, referred to in 4.1.		✓			
b-	the requirements, legislation and instructions referred to in 4.2.			✓		
c-	The company's mission, objectives and all its obligations with the relevant internal and external parties.			✓		
4.3.2 Scope of the (BCMS)						
a-	The company must identify the parts to be included in the business continuity management system, taking into account the nature, size, location and complexity of these parts within the company.			✓		
b-	The company must identify all its products (goods and services).				✓	
c-	The company must document and clarify all exceptions. Including risk assessment or business impact analysis, and regulatory or legal requirements.		✓			
4.4 Business continuity management system (BCMS)						
a-	The company (study sample) must develop and improve all necessary processes (BCMS), according to the (ISO 22301:2019).		✓			
weights (xi)		1	2	3	4	5
Frequency (fi)		0	6	6	1	0
Σ xi * fi		0	12	18	4	0
Weighted average		2.615				
Percentage (%)		52.3%				

ISO. (2019). ISO 22301:2019 Security and resilience — Business continuity management systems — Requirements, (2nd edition), International Organization for Standardization, Switzerland, (2019), pp:7-8.

$$\text{The Weighted average of all checklist requirements} = \frac{\sum \text{weights (xi)} * \text{frequency(fi)}}{\sum \text{frequency(fi)}}$$

$$= \frac{34}{13} = 2.615$$

$$\text{Percentage (\%)} \text{ of all checklist requirements} = \frac{\sum \text{weights (xi)} * \text{frequency(fi)}}{\sum \text{total frequency (fi)} * \text{highest on the scale}}$$

$$= \frac{34}{13 * 5} = 52.3\%$$

Table No. (2) shows the levels of performance evaluation in the study sample compared to the requirements of the company's business environment according to (ISO 22301: 2019). The average was (2.615) out of (5) degrees, which

is the highest score in the scale and a matching percentage of (52.3%), which indicates There is an average non-conformity gap of (47.7%) due to poor implementation of some requirements, according to the following:

1. Poor documentation of information related to stakeholders, external and internal parties that are related to the company's objectives.
2. Weak implementation and documentation of some of the requirements of (BCMS) in the study sample is carried out in accordance with the requirements of (ISO 22301: 2019).
3. Weak procedures in the company regarding documentation and updating of information related to legal and regulatory requirements on a regular basis, and issues related to external and internal parties to the company, referred to in 4.1;
4. Not all exceptions have been documented and clarified. Including risk assessment or business impact analysis and regulatory or legal requirements.
5. Weak procedures followed in the company regarding the development, implementation, maintenance and improvement of (BCMS), including all necessary processes and their interactions, in accordance with the requirements of this International Standard (ISO 22301: 2019).

Leadership

This paragraph focuses on the role of senior management, first, by ensuring that the (BCMS) matches the current and future strategic directions of the organization. Second, senior management must demonstrate how to integrate (BCMS), requirements into company operations, and finally by conveying the importance of an effective compliant with the requirements of ISO 22301: 2019. In the study, senior management must ensure the development, implementation and maintenance of leadership requirements under which objectives are set Work goals, as they are the basis for the process of implementing and improving performance in line with the level of commitment and responsibility towards business improvement. The successful implementation of (BCMS), It depends on the commitment of all employees of the company, and includes all other areas, such as managing production processes and the functions that support them. For her, BCMS implementation depends on defining resources, roles, responsibility and authority according to Table (3)

Table 3: Requirements for (Leadership) According to the ISO 22301:2019

no	5 - Leadership	Performance maturity levels				
5.1: Commitment and Leadership: The senior management of the company/study sample must follow recent trends with regard to (BCMS), through the following:						
a-	Is the business continuity policy and objectives of the company/study sample consistent with the current and future strategic directions and plans of the company?			✓		
b-	Integrate BCMS requirements into the company's business operations;				✓	
c-	Ensuring that the company has the necessary resources to implement the (BCMS);				✓	
d-	Demonstrate the importance of effective business continuity and compliance with the requirements of the International Standard for Business Continuity Management System (ISO 22301:2019);			✓		
e-	ensuring that the (BCMS), implemented in the company achieves the intended results;		✓			
f-	Encouraging all employees to contribute to the implementation of the BCMS;				✓	
g-	Follow continuous improvement activities in all company operations.				✓	
h-	Supporting the relevant administrative and technical roles and granting them the necessary administrative powers within the scope of their competence.					✓
5.2: Policy						
5.2.1 Establishing the business continuity policy: The company's senior management (research sample) must develop a business continuity policy that includes the following:						
a	suitable for the purpose, activities and products of the company;				✓	
b-	provides a framework for setting the objectives necessary to achieve business continuity in the company;			✓		
c-	includes a commitment to meet applicable regulatory and legal requirements within the Company;				✓	
d-	The company's policy / study sample includes commitment to continuous improvement of all company operations (BCMS).			✓		

5.2.2 Communicating the business continuity policy: The policy of the business continuity management system should include:						
a-	Policy document information should be available to all employees;		✓			
b-	ensure communication of all activities within the company;			✓		
c-	It shall be documented and available to all concerned parties related to the company's business.		✓			
5.3: roles, responsibilities and authorities: Top management shall assign the responsibility and authority for:						
a	Ensuring that the senior management of the company must define the responsibilities the (BCMS), complies with the requirements of the International Standard (ISO 22301: 2019);			✓		
b	Submitting reports on the performance of the (BCMS), to senior management.		✓			
weights (xi)		1	2	3	4	5
Frequency (fi)		0	4	6	6	1
$\sum xi * fi$		0	6	18	24	5
Weighted average		3.117				
Percentage (%)		62.3%				

Table (3) shows the extent to which leadership requirements are implemented in the study sample, compared to ISO 22301: 2019, with an average score of (3.117). out of (5), which is the highest score on the scale, and a percentage of conformity (62.3%), which indicates a non-conformity gap of (37.7%) As a result of poor implementation of some requirements as a result of the following:

1. Poor implementation of some of the requirements necessary to implement the business improvement policy, which includes workers specialized in business improvement affairs, and the devices and equipment necessary to complete the work and the appropriate training programs.
2. The company's existing business improvement policy does not provide for defining and reviewing the primary goals and objectives for business improvement, due to the fact that not all department managers are involved in the process of developing, reviewing and documenting the policy or educating their subordinates to work on its full implementation.
3. Partial implementation of how the business improvement policy is communicated to individuals working in the company or how it is made available to the public, as a result of not documenting and ratifying the policy, or asking suppliers and contractors to abide by it, as the business improvement policy is limited to some individuals working in the operational departments through directives Oral guidance
4. Weakness of specialized staff, lack of accurate analysis and description of the business, especially affecting business improvement, with no documentation of the qualifications required for its occupants according to the matrix of responsibilities of the BCMS.
5. Partial implementation and partial documentation to define, document and communicate roles, responsibilities and powers to facilitate effective business improvement, because the delegation of powers that is not fundamentally consistent with the responsibilities required by the work is not documented, with most duties not being defined and described as they are performed depending on the diligence of the employee in implementing the activity in which he works.
6. The discretion of some officials in exercising the authority, and the reason for this is the lack of evidence officially certified by the senior management documenting the responsibilities of the BCMS and informing them to all working individuals.

Planning

This paragraph sets out important strategic guidelines and objectives for all requirements, and also requires the Company to consider the risks arising from failure to successfully implement BCMS. The products and services that will be acceptable to the company, along with who will be responsible for achieving the objectives, must be determined by understanding the internal culture and external environment in which the company operates and identifying potential barriers that may prevent effective implementation of BCMS. For them, BCMS implementation depends on defining business continuity goals, planning to achieve them, and defining actions to address risks and opportunities, while planning for changes in BCMS based on the requirements in Table (4)

Table 4: Requirements for (Planning) According to the ISO 22301:2019

no	6 - planning	Performance maturity levels
6.1: Procedures for dealing with threats and opportunities		

6.1.1: Identify threats and opportunities: In properly planning a BCMS, the company should consider the issues referred to in Clause 4.1 and the requirements referred to in Clause 4.2 and identify the threats and opportunities to be addressed to:					
a-	Confirm that the BCMS can achieve the desired results;		✓		
b-	prevent or limit the effects of unwanted activities in the company;			✓	
c-	Achieving continuous improvement of all the company's activities.			✓	
6.1.2: Addressing Threats and Opportunities: The company (study sample) must take the following:					
a-	develop and define actions to address these risks and opportunities;			✓	
b-	integrating and implementing the procedures in the operations of the BCMS, in accordance with clause (see 8.1);		✓		
c-	Evaluate the effectiveness of these measures according to clause (9.1).		✓		
6.2: Business continuity goals					
6.2.1: Determine business continuity goals: The company must define the objectives of the BCMS, at the relevant functions and levels. Business continuity objectives must include the following:					
a-	The objectives must be consistent with the stated policy of the company's business continuity system;			✓	
b-	Objectives should be measurable and evaluable (if applicable);			✓	
c-	observing the basic requirements of the international standard (ISO 22301: 2019); applicable (see 4.1 and 4.2);		✓		
d-	is constantly monitored closely;			✓	
e-	All employees of the company are informed;			✓	
f-	updated as needed;			✓	
g-	The company shall maintain information systems and documented data on the objectives of the BCMS,		✓		
6.2.2: Set business continuity goals: For the purpose of achieving BCMS objectives, the company shall:					
a-	what will be done in the company;			✓	
b-	what are the necessary resources required in the company;			✓	
c-	who will be responsible for carrying out the company's activities;			✓	
d-	When will the BCMS implementation be fully completed;			✓	
e-	How will the desired good results be evaluated in the company.		✓		
6.3: Planning changes to the BCMS: When changes need to be made to the BCMS, the Company shall:					
a-	the possible causes and consequences of these changes;		✓		
b-	the integrity of the procedures for implementing the BCMS;		✓		
c-	Ensuring that the basic resources required for implementation are available;			✓	
d-	Allocating or redistributing roles in the company, responsibilities and authorities.			✓	
weights (xi)		1	2	3	4 5
Frequency (fi)		0	8	14	0 0
$\sum xi * fi$		0	16	42	0 0
Weighted average		2.636			
Percentage (%)		53%			

Table (4) shows the company's implementation of the planning requirements in the study sample compared to ISO 22301: 2019, where it recorded an arithmetic average of (2.636) score out of (5) and the percentage of implementation and conformity that was reached. (53%), which indicates a non-conformity gap of (47%), due to the following:

1. Weak planning procedures followed in the company to take into account the issues referred to in Paragraph 4.1 and the requirements referred to in Paragraph 4.2 and to identify risks and opportunities that must be addressed in order to ensure that the BCMS, can achieve the desired results.
2. Weakness of the company's procedures to prevent or reduce the effects of undesirable activities, for the purpose of achieving continuous improvement in all of the company's activities.
3. The current business continuity objectives in the company are not consistent in the relevant functions and levels with the business continuity policy in accordance with the (ISO 22301: 2019); And according to paragraphs (see 4.1 and 4.2).
4. Weakness of the company's procedures related to keeping documented information about the objectives of the BCMS, constantly monitoring the objectives and updating them as needed, and informing them to all the company's employees.

5. Limited availability of resources for implementation and evaluation of the desired results, allocating or redistributing roles in the company, responsibilities and powers, in order to ensure the integrity of the procedures for implementing the BCMS, in the company.

Support

The company should select qualified working individuals to accomplish the work related to the basic effects, with the necessity of determining their necessary training needs to develop their skills, and the senior management of the company should educate the working individuals and urge them towards commitment to help implement the policy, goals and objectives to perform the work according to what is required. Successful implementation of BCMS requirements requires the availability of an effective and efficient communications system that provides accurate information on business activities, in order to write internal and external reports and communicate them to stakeholders concerned with business performance checks of the company. The successful implementation of the standard (ISO 22301:2019), is based on an integrated documentation of BCMS requirements, to enable the company to evaluate performance in order to diagnose and address areas of weakness, identify strengths and enhance them. Good implementation of BCMS requirements depends on full compliance with document control according to the requirements shown in Table (5).

Table 5: Requirements for (Support) According to the ISO 22301:2019

no	7 - Support	Performance maturity levels			
7.1: Resources					
a-	The company shall identify and provide the necessary resources to develop, implement, maintain and improve the business continuity management system (BCMS).			✓	
7.2: efficiency: The company must:					
a-	Determine the skills and competence required for employees performing businesses whose work affects business continuity performance;			✓	
b-	ensure that such personnel are qualified on the basis of specialization or experience;				✓
c-	take appropriate measures to gain the necessary competence and, when necessary, evaluate the effectiveness of the necessary measures taken;			✓	
d-	Copies of appropriate transaction and documentation records must be kept as evidence of competence.			✓	
7.3: Awareness: Persons working under the control of the company should be fully aware of the following:					
a-	Business Continuity Management System (BCMS), Policy;			✓	
b-	Actively contribute to the implementation and improvement of BCMS;			✓	
c-	Consequences of non-compliance with BCMS requirements,			✓	
d-	Define the roles and responsibilities of staff before, during and after BCMS implementation,		✓		
7.4: Communication: The organization must identify the internal and external communications related to the BCMS, which includes the following:					
a-	what topics you will communicate on; when to schedule communication; identifying who to contact; How the communication mechanisms are determined; Determining who will carry out the communication operations.			✓	
7.5: The documented information:					
7.5.1: General: The company's BCMS, should include the following:					
a-	Document the necessary information in accordance with the international standard (ISO 22301: 2019);		✓		
b-	Documented information that the company identifies as necessary for its activities and operations.				✓
7.5.2: Creating and updating: When developing and updating documented information, the Company shall ensure that:					
a-	description and definitions (eg title, reference number, author or date);				✓
b-	format (such as the language used for documentation, software release, graphics, and electronic and paper media);				✓
c-	Entities responsible for reviewing and approving documents and their suitability and adequacy.				✓

7.5.3: Control of documented information: The company must control the information documented to ensure that:					
a-	That the information is available and in a timely manner for use and when needed;			✓	
b-	Ensure adequate protection of documents (for example, to prevent improper use or loss of confidentiality);			✓	
c-	retrieval, use, distribution and access when needed;		✓		
d-	storage, preservation and retrieval, including maintaining complete clarity;		✓		
e-	control changes to documents (eg version control);		✓		
weights (xi)		1	2	3	4
Frequency (fi)		0	5	10	3
$\sum xi * fi$		0	10	30	12
Weighted average		3.1			
Percentage (%)		62 %			

Table No. (2) shows the levels of performance evaluation in the study sample compared to the requirements of Support according to (ISO 22301: 2019). The average was (3.1) out of (5) degrees, which is the highest score in the scale and a matching percentage of (62%), which indicates There is an average non-conformity gap of (38%) due to poor implementation of some requirements, according to the following:

1. The company's BCMS does not include all the documented information required by this International Standard (ISO 22301: 2019);
2. There is no correct study in the company describing the education, skills and experience required for each work that is likely to cause a fundamental impact to improve business, as well as the company's failure to document all information and evidence proving the efficiency of employees, as well as the weakness of the procedures followed that show employees negative results in the case of limited application of the requirements of the BCMS;
3. Weakness of comprehensive awareness programs at the company level, to educate working individuals in proportion to the nature of the activities and services they perform for the purpose of achieving conformity with the international standard (ISO 22301: 2019);
4. The company's training programs do not take into account the technical capabilities and intellectual and cultural skills of all employees of all levels.
5. Limited delivery of all information related to the BCMS to the different levels of organizational functions in the company;

Operation

In this paragraph, you must explain the methods developed by the company to properly manage and implement the operations and risks to which BCMS is exposed. This includes setting an acceptable minimum level for the following activities: Operational planning and control; Business impact analysis and risk assessment; Business impact analysis; Risk assessment; Business continuity strategies and solutions; Identification and Selection of strategies and solutions; Resource requirements; Evaluation of business continuity documentation and capabilities. The company will need to promote the continuous improvement of BCMS, based on the requirements in Table (6)

Table 6: Requirements for (Operation) According to the ISO 22301:2019

no	8 - Operation	Performance maturity levels			
8.1: Plan and Control Operations: The Company shall plan and control operations for the BCMS, and for carrying out the actions specified in Clause 6.1, by:					
a-	establishing appropriate standards for operations;			✓	
b-	Effective implementation and oversight of operational processes in compliance with the Standards Manual;			✓	
c-	Maintain documentation, information and data showing that operations were carried out as planned.		✓		
8.2: Business impact analysis and risk assessment					
8.2.1 General: The company must:					
a-	maintain systematic business impact analysis and risk assessment processes;		✓		
b-	Assess risks and review business impact analysis at planned intervals and as and when needed.		✓		
8.2.2 Analysis of the impact of business operations: The company should use the Analysis of the impact of business operations: according to the following:					
a-	Define types, standards and activities relevant to the company context and its products;			✓	

b-	Determine the time frame for assessing the risks and problems resulting from the disruption of these unacceptable activities in the company;			✓		
c-	Use business process impact analysis to identify necessary priority activities, and the resources needed to support these activities;					✓
d-	Determining the interdependence of priority activities, partners and suppliers.				✓	
8.2.3: Risk assessment: The company must maintain the process of implementing the risk assessment according to the following:						
a-	identifying the risks of disrupting the company's priority activities and operations and the required resources;			✓		
b-	analysis, identification and evaluation of specific risks requiring treatment;		✓			
8.3 Strategies and appropriate solutions for business continuity						
8.3.1 General						
a-	Based on the outputs of the analysis and assessment of risk and business impact, the company must select and define business continuity strategies that have more than one solution.		✓			
8.3.2 Identification of strategies and solutions: The company must rely on the range of strategies and solutions according to the following:						
a-	meet the requirements to continue to protect the company's activities and restore priority activities within the specified time;		✓			
b-	provide adequate resources, shorten the outage period, and reduce its impact on the company's products and services;		✓			
8.3.3 Choosing appropriate strategies and solutions: The company must determine the range of strategies and solutions according to the following:						
a-	the amount and type of risks that the company may or may not be exposed to;		✓			
b-	the costs and benefits incurred by the company.		✓			
8.3.4 Resource requirements: To implement business continuity solutions, the company must determine the requirements of the selected resources according to the following:						
a-	the company's existing information and data systems, and information and communication technology (ICT) systems;			✓		
b-	physical infrastructure, workplaces, equipment, consumables, or other facilities;				✓	
c-	transport, finance, logistics, partners and suppliers;				✓	
8.4: Business continuity plans and procedures: Procedures must:						
a-	Immediate flexible steps to respond to changing conditions and risks inside and outside the company;		✓			
b-	be effective in minimizing impact by assigning roles and responsibilities to tasks and implementing appropriate solutions;			✓		
8.5: training program: The company shall implement a training and testing program to verify the effectiveness of the BCMS, strategies, according to the following:						
a-	consistent with BCMS objectives;		✓			
b-	are based on good plans, and have clearly defined goals and objectives;			✓		
c-	contribute to the development of teamwork, competence, confidence and knowledge of employees;			✓		
d-	contribute to the validation of their BCMS, strategies and solutions;			✓		
e-	Training programs should include formal reports containing practical findings and recommendations, and include actions to implement continuous improvements;				✓	
f-	Reviewing training programs at specified intervals for the purpose of continuous improvement;			✓		
g-	Training programs are implemented at planned intervals and when needed.					✓
8.6: Evaluation of business continuity documentation and capabilities: The company should make these assessments at planned intervals, and when significant changes occur:						
a-	assess the appropriateness, adequacy and effectiveness of strategies, solutions, plans and procedures, business impact analysis and risk assessment;		✓			
b-	perform performance appraisals by means of reviews, analyses, tests and reports of results;			✓		
c-	conducting business continuity management capabilities assessments for business partners such as suppliers;			✓		
d-	Evaluate compliance with legal and regulatory legislation, and alignment with BCMS policy and objectives;		✓			
e-	Update records, documents, and procedures in a timely manner.			✓		
weights (xi)		1	2	3	4	5
Frequency (fi)		0	13	14	4	2
$\sum xi * fi$		0	26	42	16	10
Weighted average		2.848				
Percentage (%)		56.96%				

Table (6) shows the extent to which the company implemented the Operation requirements in the study sample compared to the ISO 22301: 2019 standard, as it recorded an arithmetic average of (2.848) score out of (5) and the percentage of implementation and compliance that was reached. (56.96%), indicating a non-conformity gap of (43.04%) for the following reasons:

1. The failure to establish, develop and document standard operating procedures for the activities that are related to aspects of business performance mainly with the failure to adopt a specific and documented operational standard to be implemented in the company.
2. Not documenting and informing the suppliers of the requirements that must be approved when processing, while not allocating the responsibility of setting procedures for communicating the company's business improvement policy, goals and objectives, to suppliers and contractors and documenting them.
3. The weakness of the emergency plan at the level of all departments and the failure to review and review its procedures periodically according to emergency developments with the aim of taking preventive measures before potential accidents occur.
4. Failure to integrate the contingency plan to achieve the full response due to the failure to secure communication and coordination with the relevant external parties.
5. Weak applicable periodic information for the insufficiency of training programs that are limited to courses, lectures and oral instructions, with the training programs and practical practices tests for actual response to emergencies being restricted to the owners of the Safety and Fire Department only.

Performance Evaluation

This section covers the maintenance and review of the BCMS against established standards to ensure effective management of the BCMS and continuous improvement. The compliance assessment differs from, but is complementary to, the assessment used in internal audit to represent the most important key inputs into the management audit. After the internal audit, the company must ensure that any specific corrections or corrective actions are implemented without delay. This section also covers management review by monitoring, measuring, analyzing and evaluating; internal audit; audit programs; Management review of inputs and outputs. The company will need to provide information based on the requirements in Table (7).

Table 7: Requirements for (Performance Evaluation) According to the ISO 22301:2019

no	9 - Performance evaluation	Performance maturity levels				
9.1: Analysis, evaluation, monitoring and measurement: The company must specify the following:						
a-	identifying the activities and processes that need to be analyzed and measured;			✓		
b-	the methods used by the company for the purpose of monitoring, measuring, analyzing and evaluating, to ensure correct results;			✓		
c-	determining when monitoring and measurement will be carried out, as well as identifying the responsible parties;			✓		
d-	The Company shall maintain appropriate records and documented information for the purpose of being used as evidence when required to conform to results;		✓			
e-	The company shall conduct assessments of all core activities, to measure the performance and effectiveness of the BCMS.		✓			
9.2: Internal audit						
9.2.1: General						
a-	The company shall carry out internal audits and reviews at planned intervals of the requirements of the BCMS;		✓			
b-	the company's specific requirements for a BCMS.		✓			
c-	the requirements (ISO 22301: 2019);		✓			
d-	The company effectively implement and maintain a BCMS.		✓			
9.2.2: Audit programme(s): The company must:						
a-	plan and implement the audit programme, assigning responsibilities planning and reporting;			✓		
b-	the company must take into account the results of previous audits and the importance of the operations concerned;			✓		
c-	the company must define the criteria and scope of each review;			✓		

d-	Selecting qualified auditors, and ensuring that audits are conducted objectively and impartially;		✓			
e-	Ensure that the results of the audits are communicated to all stakeholders in the company;			✓		
f-	maintain records and documented information for the purpose of using them as evidence of the implementation of the audit program and results;		✓			
g-	The company must take the necessary corrective actions and address the detected non-conformities and their causes;			✓		
h-	Ensure that the audit procedures are followed up, verify the corrective actions taken, and report the results of the verification to the concerned managers.			✓		
9.3: Management review						
9.3.1: General						
a-	The company's senior management should review the BCMS, within planned periods, for the purpose of ensuring its continued adequacy, effectiveness and suitability.			✓		
9.3.2 Management review input: include the following:						
a-	previous management reviews, status of actions taken;			✓		
b-	changes in internal and external issues related to the BCMS.			✓		
c-	information on the performance of the BCMS, actions taken on cases of non-conformities and corrective actions, results of previous audits, monitoring and measurement reports;			✓		
d-	all reactions from parties related to the company's business;			✓		
e-	Make changes in current and future company policies and objectives, consistent with BCMS implementation;		✓			
f-	Define procedures and resources that can be used in the company to implement BCMS;		✓			
g-	Document the necessary information about the analysis and assessment of risks and crises in the company;			✓		
h-	the results of previous evaluations of business continuity documents in accordance with clause (see 8.6);		✓			
i-	previous risks or crises, or which have not been adequately addressed in previous assessments;			✓		
j	Possible opportunities for continuous improvement.		✓			
9.3.3: Management review outputs: Management review outputs should include any need to make changes to the BCMS, and decisions regarding opportunities for continuous improvement, According to the following:						
a-	Differences in the field of BCMS.	✓				
b-	risk assessment, business impact analysis, business continuity plans, strategies and solutions;		✓			
c-	Modify procedures and controls for the purpose of achieving an effective response to issues that may affect BCMS;		✓			
d-	Determine how to measure the effectiveness of controls applied to the BCMS audit.	✓				
weights (xi)		1	2	3	4	5
Frequency (fi)		2	13	15	0	0
$\sum xi * fi$		2	26	45	0	0
Weighted average		2.433				
Percentage (%)		48.66%				

Table (7) shows the company's implementation of the Performance evaluation requirements in the study sample compared to ISO 22301: 2019, where it recorded an arithmetic average of (2.433) score out of (5) and the percentage of implementation and conformity that was reached. (48.66%), which indicates a non-conformity gap of (51.34%), due to the following:

1. Weak planning and performance control procedures for operational processes, due to the inability of production machines to achieve the required accuracy, with the lack of clear and documented instructions regarding situations that lead to deviation from operating procedures;
2. The internal performance measures are determined by the specifications and quality of the products in line with the market requirements, even though these measures are outdated;
3. Unavailability of records documenting the results of periodic evaluations of other requirements, with the company not conducting any periodic evaluations to comply with the BCMS; (ISO 22301: 2019);

4. The company did not implement any internal audit process to verify the compliance of the BCMS, with the planned arrangements to the standard specification (ISO 22301: 2019);
5. There is no administrative review related to BCMS requirements, to ensure its efficiency and effectiveness compared to the requirements of (ISO 22301: 2019).

Improvement

Implementation of the requirements of this clause requires that the company prove its ability to continuously improve performance, and to face potential internal and external threats and risks related to the implementation of BCMS, so the senior management should allocate the responsibility and authority to investigate and investigate to detect cases and causes of non-conformance, for the purpose of taking preventive measures in this regard before they occur And take corrective measures to address it with the aim of mitigating its effects on business improvement and recording its results in line with the effective and efficient implementation of BCMS. In the examination list table (26).

Table 8: Requirements for (Improvement) According to the ISO 22301:2019

No	10 - improvement	Performance maturity levels				
10.1: Non-conformity and corrective action						
a-	Identify appropriate improvement opportunities and design the necessary actions to achieve the desired results of the BCMS.			✓		
b-	When non-conformities occur, the company must: respond to cases of non-conformity, and clarify the consequences thereof;			✓		
c-	take corrective action to control and correct cases of non-conformity;			✓		
d-	The company shall review cases of non-conformities to prevent their recurrence;			✓		
e-	The company must identify the reasons for the non-conformity.			✓		
f-	The Company shall review the effectiveness of any corrective action taken;			✓		
g-	The company must make changes to the BCMS, if it is necessary.		✓			
h-	Corrective actions should be appropriate to the effects of non-conformities existing in the company.		✓			
i-	The Company shall retain documented information as evidence of the results of any corrective action taken by the Company.		✓			
g-	the nature of the non-conformities detected in the company and any subsequent actions taken;		✓			
10.2: Continual improvement						
a-	The company should improve the BCMS, and ensure the appropriateness, adequacy and effectiveness of both qualitative and quantitative measures.		✓			
b-	The company shall take into account the outputs of the management review, and the results of the analysis and evaluation, for the purpose of continuous improvement, BCMS;			✓		
c-	The company can use and related processes, such as performance appraisal and leadership to achieve continuous improvement BCMS.			✓		
weights (xi)		1	2	3	4	5
Frequency (fi)		0	5	8	0	0
Σ xi * fi		0	10	24	0	0
Weighted average		2.615				
Percentage (%)		52.30%				

Table (8) shows the extent to which the company implemented the improvement requirements in the study sample compared to the ISO 22301: 2019 standard, as it recorded an arithmetic average of (2.615) score out of (5) and the percentage of implementation and compliance that was reached. (52.30%), indicating a non-conformity gap of (47.70%) for the following reasons:

1. The Company does not reserve the right to identify and implement necessary actions, and to select improvement opportunities, from BCMS;
2. Corrective actions in the company are not reviewed periodically, documented information on deviations in performance is not kept, and there is no evidence that can be used for continuous improvement;
3. The company does not share with employees, the results of the continuous improvement process, and the implementation of the necessary measures of the BCMS;
4. D- The lack of an effective examination system to detect cases of non-conformity, as well as the lack of defining and documenting the responsibilities of all employees and the powers granted to them to follow up on these procedures;

5. Implementation and partial documentation of recording the results of the corrective and preventive measures taken, as a result of poor record keeping that shows the efficiency of implementing corrective and preventive measures, and limiting them to reports submitted to senior management regarding corrective measures.

Conclusions

1. Not identifying external and internal problems related to the risks and crises that the company/study sample might face, and not reviewing information related to the strategic goals and directions (BCMS) of the company and its stakeholders, in accordance with the requirements of (ISO 22301: 2019).
2. The company's current business improvement policy does not provide an integrated framework for defining and reviewing the primary goals and objectives for business improvement, due to the fact that not all department managers are involved in the process of developing, reviewing and documenting the policy or educating their subordinates to work on its full implementation.
3. Weakness of the planning procedures followed in the company to take into account the issues referred to in Paragraph 4.1 and the requirements referred to in Paragraph 4.2 and to identify the risks and opportunities that must be addressed in order to ensure that BCMS can achieve the required results, in accordance with the basic requirements (ISO 22301: 2019).
4. There is no valid study in the company that describes the education, skills and experience required for each work that is likely to have a fundamental impact in improving the business, as well as the company's failure to document all information and evidence that proves the competence of employees. As well as the weak procedures that show negative results for employees in the case of limited application of BCMS requirements.
5. Partial implementation and partial documentation of defining, documenting and communicating roles, responsibilities and authorities to facilitate effective business improvement, because delegation of authorities that is not fundamentally in line with the responsibilities required by the work is not documented.
6. The weakness of the emergency plan at the level of all departments and the failure to review its procedures periodically according to emergency developments, as well as the failure to secure communication and coordination with the relevant external parties in order to take preventive measures before the occurrence of potential accidents and try to reduce the resulting damages.
7. The absence of records documenting the results of periodic assessments of other requirements, with the company not conducting any periodic assessments of compliance with BCMS requirements; According to international standards (ISO 22301: 2019).
8. The company did not carry out any internal audit process to verify BCMS's compliance with the planned arrangements for standard specifications (ISO 22301: 2019).
9. The absence of an effective examination system to detect cases of non-conformity, as well as the lack of defining and documenting the responsibilities and powers necessary to follow up on these procedures.
10. Implementation and partial documentation of recording the results of the corrective and preventive measures taken as a result of poor record-keeping, which indicates the efficiency of implementing the corrective and preventive measures and limiting them to the reports submitted to the senior management regarding the corrective measures.

Recommendations

1. Document and clarify all exceptions. Affecting the Company's ability and responsibility to provide business continuity, including risk assessment or business impact analysis, regulatory or legal requirements, including all necessary processes and their interactions, in accordance with the requirements of this International Standard (ISO 22301: 2019).
2. Communicating the business improvement policy to the individuals working in the company, making it available to the public and approving it, and asking suppliers and contractors to abide by it. As it should, analyze and accurately describe the work, to define and document roles, responsibilities and authorities, for the purpose of improving the work, in accordance with the BCMS responsibilities matrix.
3. The company must establish procedures related to maintaining documented information on the objectives of the BCMS, continuous monitoring of the objectives, updating them as needed, and informing them to all employees of the company. Roles in the company, responsibilities and powers must be allocated or redistributed, in order to ensure the integrity of BCMS implementation procedures, in accordance with the basic requirements (ISO 22301: 2019).
4. Design comprehensive awareness programs at the company level to educate employees. Training programs must include the basic capabilities and skills of workers at all levels, commensurate with the nature of the

activities and services they practice in order to achieve compliance with the international standard (ISO 22301: 2019).

5. Establishing, developing and documenting standard operating procedures for activities related to aspects of business performance mainly in adopting a specific and documented operating standard to be implemented in the company.
6. Designing training programs that include courses, lectures, oral instructions, and practical tests for actual emergency response.
7. The company must implement administrative reviews related to BCMS requirements according to periodic intervals to ensure the continuity of activities in an efficient and effective manner, in comparison with the requirements of (ISO 22301: 2019).
8. The company shall establish records that document the results of periodic assessments of other requirements, and implement any internal audit process to verify the implementation of BCMS requirements; According to international standards (ISO 22301: 2019).
9. The company must share with employees, regarding the results of the improvement process, with the development and implementation of the necessary measures and the selection of opportunities for continuous improvement (BCMS), to achieve positive results.
10. Corrective actions should be reviewed at regular intervals, and the company should document information about deviations from performance, and use the results of the review as a guide for continuous improvement of basic activities (BCMS).

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