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DESIGNING THE OUTPUTS ACCORDING TO THE STRATEGIES THAT SUPPORT THE DEVELOPMENT OF PRODUCTS (A CASE STUDY AT THE LIGHT INDUSTRIES COMPANY)

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Abstract:

The study aims to know the role of strategies supporting product development in designing the outputs of the light industries company, as well as highlighting the size of the gap between what is planned and what is achieved for the variables and dimensions of the current research, as a checklist was designed to know the gap between what is achieved and what is planned for the company according to two variables Two chiefs (strategies for supporting product development and designing outputs) and through living and field viewing, as well as researchers in personal interviews of a sample of managers and engineers in the company's departments, the most important results were reached, as it was found that there is a variation in the size of the gap for each of the dimensions of The independent and dependent change, as the results show that the highest gap size in the strategies supporting the development of products was after the creativity of the green product, which reached (40%). As for the highest gap size for the dependent variable, the dimension was a strategy of creative process and added service strategy, as well as a strategy of creative presentations that reached the size of the gap to dimensions more Of (40%), this indicates the weakness of the company's strategy.

Keywords: strategies supporting product development, designing outputs, green product creativity, creative presentations, initiation point, process creativity

Scientific methodology for research:

Preface:

The scientific methodology is the road map for researchers to draw the scientific boundaries of the current research, which will include a problem, goals and importance, and the hypothesis of the research as well as the measurement tool and the specific hypotheses of the research, which we will address**.**

First: research problem

There are real challenges for companies, especially industrial companies, because of the competitive environment's characteristic of rapid and excessive change in the business world in various fields, for example (the competitive, technological, economic, environmental, financial, social… etc), so Iraqi companies, especially the Light Industries Company, suffer from major challenges in changing products continuously due to the multiplicity of origins of companies that design many products similar to their products, as well as marketing and commercial companies in the Iraqi market that are an obstacle to their market share .. From this standpoint the research problem can be formulated with the following question :

((Can the outputs be designed according to supportive strategies for product development))

- Does the public company have an interest in developing its products continuously and keeping pace with change?

- What is the size of the gap to diminish the variables and what is the most gap in designing its outputs?

-Does the design of the outputs have an effect on the external customer's satisfaction?

Second: The importance of research

Companies seek out from the Red Ocean (the intensity of competition) to the Red Ocean (uniqueness and differentiation) and because of the multiplicity of alternatives of products and the

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presence of current and potential competitors who engage in the same activity we can determine the importance of the topic to the research sample:

1- Directing the attention of senior management in the company, the research sample, to pay attention to the subject of strategies that support product development.

2- The importance of the topic to Iraqi companies and to the Light Industries Company in particular, the most important dimensions and strategies supporting product development were highlighted.

3- The design of the outputs is the key to the company's success in the research sample and anything less than a distinctive product development strategy that leads the company to decay and fade away in the competitive environment.

Third: Research objectives

The research aims to:

1- Highlighting the gaps in strategies supporting the development of new products.

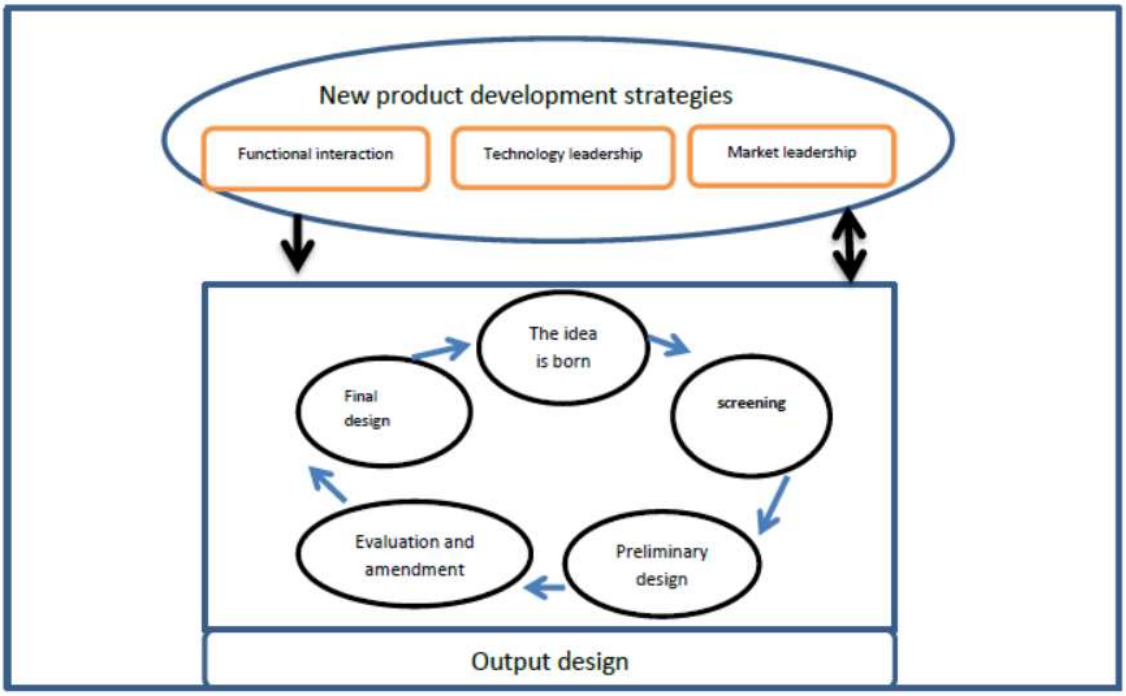
2- Knowing the level of gaps for the strategies that support the development of new products and the size of the output design gap.

3- Highlighting more gaps in supportive strategies in product design.

4- Knowing the strategies used and the product design implications?

5- Knowing the real gap between the strategies and dimensions used for designing the company's outputs and what was identified by the research.

Fourth: The hypothetical outline of the research



The figure(1) of the research hypothesis

Fifth: research assumptions
((There is a very big role to design products according to product development strategies))

Sixth: The scale building tool

By looking at most of the research that dealt with topics on product design according to product development strategies and literature on the topic of research we can determine the dimensions of the two main variables, namely product design and product development strategies according to the cage list as shown in the table below:

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Table (1) the scale of the study

name of researcher and year	Variable paragraphs number	Sub variable	The main variable
	6		Product development strategies
Mahdi and Hedawi: 2017	8	Focus strategy from a specific project point	
	9	Creative Presentation Strategy	
	6	Added Service Strategy	
		Process creativity strategy	
Al-Musawi, 2009. Al-Tamimi: 2017	7	Product design	Output design
	5	Designing environmentally friendly products	
	5	Process creativity strategy	

Seventh: Research community and sample

The Light Industries Company Capital: (16,800,000,000) Sixteen billion and eight hundred million dinars, located in Baghdad / Za`faraniya / the industrial area, launches many products such as (a vertical refrigerator of all sizes, as well as freezers of all sizes, saloon cookers As well as all greenhouses, oil and oil, in addition to many durable electrical products, and several managers of production lines in the company were interviewed for the purpose of collecting information and extracting results.

Eighth: Research Methodology

The researchers relied on the method of a case study, as the importance of the study lies in diagnosing and interpreting existing phenomena and forecasting their results in the future according to the size of the gap that the researcher will recognize, and is based on careful analysis and revealing the relationship between the study variables and their dimensions in order to reach realistic results**.**

Theoretical framing

Supporting strategies for planning and product development

The business environment is characterized by the existence of markets for highly competitive commodities, and in order to survive in the business climate, organizations must provide the market with new products of high quality and acceptable prices, and because of the high costs of developing new products, most of the company's efforts must be placed in the direction of using new and advanced technologies Graduated in order to fulfill its pledges and expected results in order to achieve the company's business strategy.

The new product development process includes many risks related to technology, design and market in addition to other risks represented in employing human, financial and material resources towards achieving them economically in order to reduce the cost of risk by rationalizing the requirements required in product development.

First: The concept of planning and developing the new product

Modernity in new product development is the result of choosing a design strategy and is represented by different types of product development methods. This explains the choice of product development methods is a critical issue for the new product strategy (Hen Hus, 2004: 60), and new products gain in this fact a special importance that stems from From two main facts:

The first of them: the need for institutions to maintain their position, market share, and resilience to competition, and even to achieve a comparison previously, through technical development, by exploiting the continuous technological development.

The second is that the vast majority of institutions embrace the development process, but not to bring in an original product for the first time, but that the development process relates to the modification and improvement of a product that already exists in order to satisfy the new changes in the tastes of consumers or target users (Obeidat, 2005,127) :

1- New product development strategy

This strategy is represented by the institution adding a new product to its product range in a way that differs from its existing products or is related to the current product line, but it has not produced it before. Among the most important reasons for adding a new product, the following can be mentioned: (Sumaida`i, 205: 2000), citing (Filali, 2008: 83).

a- Real demand from the institution's customers, including distributors, to introduce a new product.

B. Correlation in terms of costs, that is, the existence of common costs that enable the institution to add new products without incurring significant financial burdens.

c. Keep up with the competition and withstand it.

2- Dimensions of new product development

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strategies

a- Market Driven Strategy

This strategy is based on the production base of what the organization can sell ((Make What You Can Sell). According to this strategy, the consumer needs are determined through market research or through direct contact with consumers. That is, the market is the basis on which the organization relies on providing new products. The role of the Operations Department is limited to preparing all the necessary supplies to implement what has been identified by the Marketing Department. This strategy is appropriate in the case of products known to the consumer and competition is intense between the two manufacturers**.**

b- Technology Driven Strategy

This strategy is based on Sell What You Can Make. The introduction of new products under this strategy depends primarily on the type of technology already available and the production capacity available, with little regard for the market. This strategy requires the existence of flexible production divisions that contribute to the development and creation of new products. As for the role of the Marketing Department, it is to create new markets or expand them to spend what will be produced. This strategy is appropriate in the case of companies that adopt precedence of creativity as a competitive advantage in operations strategy and operate in light of relatively weak competition in the markets.

c- Inter-Functional Strategy

This strategy is based on the combination of the two strategies above, considering that the introduction of new products is a functional intertwined in their nature and requires cooperation, interaction and complementarily between the marketing function, operations,
engineering design and other functions of the organization. The consumer and the nature of the market on the one hand, and the requirements of production processes and technology currently used and planned for future use on the other hand at the same time.

Second: the concept of designing the outputs

Output design is an important activity in organizations because it has an important impact on their production processes, in the light of which many activities and other processes are identified that enable organizations to achieve a distinctive competitive position for their products, and explains (Buffa, 1987: p490) that designing the output is a key The success of organizations and anything less than the distinctive product strategy leads the organization to decay, and many writers have expressed the concept of designing outputs in different forms and some have focused on specific aspects while others have dealt with other variables, that product design activity takes place in two directions, the first is the impact of product design In theory Or the production, and the second is when designing the product, consideration must be given to taking advantage of the capabilities (available resources) to achieve the optimal use of available resources and operations while taking into account the relationships of overlap and integration between the different production elements, and this requires setting strategies for product design as it provides a point of contact between product design and process design to give The ability to accomplish the goals of the organization. And product design today is being different from what it was in the past, represented in the performance of design events in a sequential or sequential manner during the stages of design and the exchange of information and ideas between individuals specializing in design ((Russell & Tayler, 1995: 213).

(Slack, et. Al., 1998: 108) defines product design as "a conceptual treatment in which a number of functional requirements of customers are satisfied individually or collectively through the use of a product, or a system derived from the physical translation of that concept." (Al-Bakri, 2000: 175) explains product design as "placing the characteristics, functions and forms of a particular product (a good or service) in a form that enables the organization to meet the requirements of consumers in the market" and that the goal of most industrial companies is to provide the products that customers need, and this confirms that Product design decisions must determine the shape, components, and benefits of these products (Russell & Taylor, 2000: 187) (Chase, et. Al., 2001: 145) show that designing a product and bringing it to market in a short time is one of the major challenges facing manufacturers. Products in industrial companies, because product design is linked to the need for information from the external environment about opportunities Marketing and activities of competitors, technical capabilities and requirements of production processes, and then that information is standardized, organized and utilized in creating the initial designs images of the products.

1- The goal of designing the outputs

The output design activity aims to provide products that satisfy the needs of customers and meet their desires, as product designers work to develop innovative designs that meet or exceed customer expectations, and they also try to design products that perform their function well and are reliable throughout his life, as well as their product design in a manner in which its manufacture (Baxtra, 1995: p 22-23) (Herrman & Schmidt, 2002: 1) notes that product design decisions are usually taken by design engineers and designers in companies, so these decisions determine the processes that go through the

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design stages and the sequence precedence for them. For final product designs, also specify a Form and specifications of products. (Daft, 2003: 716) indicates that if industrial companies want to provide new products, they must take into account when designing these needs for customers in addition to their cost, because customers often want to obtain products that are appropriate and responsive to their needs.

2- The stages of product design

Each new product begins with an idea and passes through several stages from the birth of the idea until the stage of introducing the new product, as designing the product / service is one of the important strategic decisions that involve within the operational decisions of operations managers as it necessitates the necessities of survival and competition and rapid technological changes and many other factors from managing operations to keep pace Continuous course of affairs related to the product that it offers and what competitors offer in particular and the market in general to explore and identify opportunities available to it to provide new products and services according to the necessities of the situation and to achieve the opportunity to have a competitive advantage It has the uniqueness and gives it the ability to continue, compete and achieve organizational success in the least (Tamimi, 2006: 48).

(Hiezer & Render, 2000: 137) shows that a successful and efficient product strategy links overall product decisions with cash flow, market dynamics, and corporate capabilities, as companies must have sufficient cash for product design and understanding of the ongoing changes that occur in the markets, as well as This must possess the individual talents necessary for this, since the design process as a whole not only determines the success of the products, but also charts the future of companies. He adds (Obaidat, 2004: 25, 26) that the product design process in all its stages includes a set of interrelated and constantly changing environmental factors or variables, so those in charge of the design process must develop plans and programs that can be implemented, based on information about the customer needs that must be provided Marketing departments in advanced companies, the fact that this information is the basis for the initiative of the companies concerned to provide everything that is new and useful to customers, and it can be said that the stages of product design are similar to each other to some extent when most writers and researchers in this field, so it will be approved Model (Slack, 1998: 142) in these stages of eating, and illustrated in Figure () these stages.

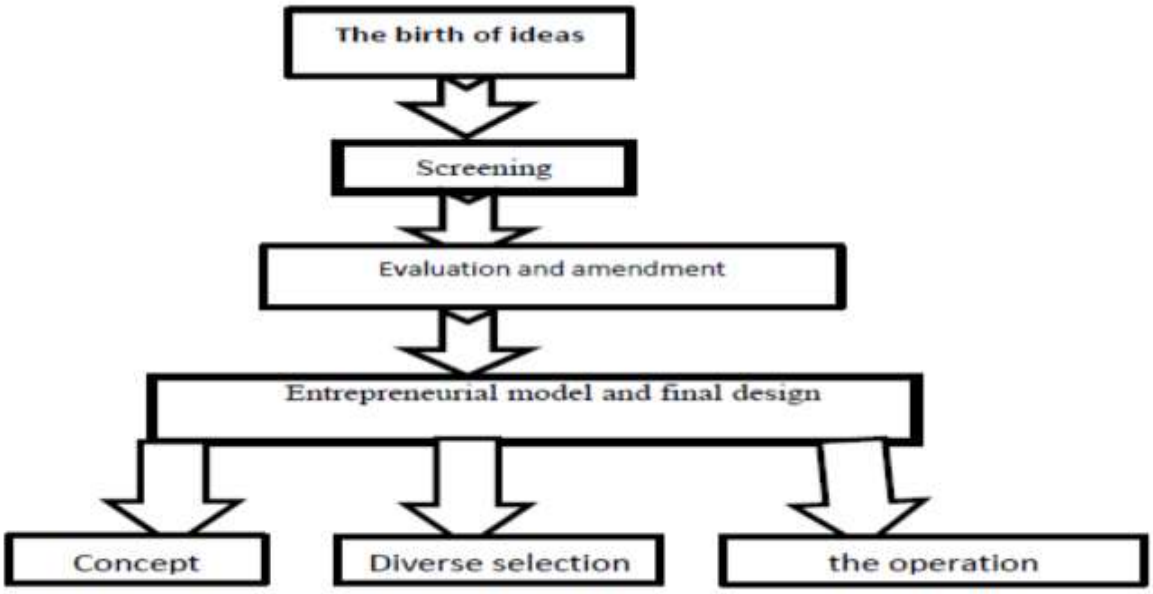

Figure (2): Product design phases

Source: Nigle Slack stuart chmber , charistine Harland Alan Harrison &Robert Jonston**"Operations Management"**2nd ed London, tman,1998.p142.

a- The concept is born

It is the first and basic stage of product design phases through which ideas arise, and these ideas often come from within the company, whether from its managers or users or from research and development laboratories, and may come from outside the company from distributors and inventors (Slack, 1998: 143). He adds (Adam & Ebert, 1996: 126) that this stage is considered one of the important stages in product design and must be taken care of, as it is through

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which ideas of new products that meet the needs of customers and which are not met by existing products are identified, and this is also called "the stage of needs determination" ". (Slack, et. Al., 1998: 144) indicates that the outcome of ideas collected from its multiple internal and external sources leads to the emergence of multiple concepts related to new products, through which product specifications are determined that meet the actual and expected needs of customers, and the benefits that will occur Customers upon them because they own these products. He explains (Obeidat, 2004: 54) that ideas can be viewed as "that which we want new and in the form of material or non-material, and includes a benefit required or desired by customers", and there are multiple sources for obtaining new ideas from them internally, such as workers at various levels Administrative, marketing and financial reports, production processes, human resources, and other external matters such as customers, suppliers, and competitors, and companies have to conduct personal interviews with their current and potential customers in order to provide them with the required information about all their required needs, which is that they obtain new products from the Companies, so the direct contact factor between companies and customers is very important for companies to obtain the required ideas for new products, and this requires the existence of major communication channels with companies that introduce these ideas from their multiple sources to them (Russell & Taylor, 2000: 189).

b- Screening

That the design teams study the ideas that were obtained and then are placed under market tests by clarifying each of these ideas for multiple groups of customers and then observing the extent to which each group responds to these ideas and recording data and information that will be obtained from these customers and related With those ideas, then design teams should analyze that data and information and exclude ideas that are not appropriate for designs (Cohen & Apte, 1997: 64). (Evans, 1997: 180) adds that ideas need to be studied, so most companies prefer to perform preliminary screening and economic analyzes of these ideas, in order to determine the market position of new products as well as to exclude unsuccessful ideas, and this avoids companies additional costs to implement these ideas, so most of those Ideas are excluded either because of their technical and economic inefficiency or because they are difficult to convert into physical products. He adds (Krajweski & Ritizman, 1993: 35) that not all ideas are appropriate, as some of them are consistent with the organization's mission and others are not consistent with the marketing, operational and financial standards. (Obaidat,2004: 65, 66) confirms that screening ideas is the second and important step in the process of designing new products for companies, as it aims to determine the need for the amount of technical knowledge needed by the authorities involved in the design process to search for an idea and implement it by converting it into new products, as it helps Screening The companies concerned are excluding the technical and legal ideas that are difficult to implement. In short, the screening aims to establish specific administrative convictions about the economic viability of ideas before proceeding with the implementation procedures.

c- Initial designs

After the screening stage, the initial designs for the products are started, which gives a visualization of the shape of the product, its benefits and the production costs necessary to obtain that product. For the pioneering model (Russell & Render, 1995: 217). (Vondermbse & White, 1991: 118) confirms that the initial designs for products are reached through the processes of analysis and grouping of these products, as each part of the products is analyzed and their nature, functions, share of each part and the relationship of these parts to each other are analyzed. Assembly through which parts are assembled to obtain complete products and the purpose of these two processes is to reach optimal decisions about the overall performance of the products. (Hiezer & Render, 1996: 217) notes that product performance specifications show how they will work, and product properties indicate how products will be made. He adds (Slack, et. Al., 1998: 149-150) that this stage is one of the important stages in the design process, as the purpose of the initial designs is to form initial impressions about the components of the products against which a variety of information regarding the constituent parts is determined. Product technology structures and structural lists of their materials.

d. Evaluation and amendment

The prototypes of products are subject to several tests in order to know the extent of the products' tolerance to the normal working conditions during which they will work, and among these are environmental and reliability tests (Evans, 1997: 184). (Shafer & Meredith, 1998: 154) shows that product design professionals in industrial companies form prototypes of products using wood or pottery to test and modify them. And that in the event of any defect in the test results, the design specialists correct this defect before moving to the next stage, despite the high costs of the test borne by the companies but they are not compared if the failure to take the test led to serious errors that expose the companies to great losses (Kotler & Armstrong , 1999: 282).

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E- Entrepreneurial model and final designs

At this stage, the final forms of product designs are determined to meet the needs of customers and suit the requirements of production operations. Also, the final specifications of products are achieved, which achieve the expected performance levels of customers, sizes and sizes (Kalwani & Kovenock, 1993: 255). (Al-Bakry 2001,192) adds that at this stage, the proposals crystallize in the form of a final model that is tested to ensure the validity of the design from an engineering point of view. Therefore, the final outputs of the final design stage include the complete specifications of the product and its components and the engineering drawing of the main parts and components which provides the basis for implementing the full production processes .

The third topic

The practical side

A detailed explanation of the main and sub-variables of the research will be made, the focus of the research has been in presenting the results of the answers to the questions of the checklist, and analyzing the data to reach the results of the research by relying on a statistical method (descriptive analysis) by extracting iterations, arithmetic media and percentages of the extent of matching of the sub-variables with the reality of companies The light industries in question, and the size of the gap, through the answers to the triple-scale checklist (fully achieved, verified, unfulfilled) and the corresponding weights (1,2,3), respectively, thus the average approved scale for comparison is equal to (2) Partially realized, as indicated Later, through field coexistence and personal interviews with most of the departments, divisions, and units in the company in question, and access to the nature of the business of each of them, I took an intentional sample that was represented by the directors of bodies, divisions, divisions, and engineers with experience in production lines and design, and from them The Department of Environment and Studies, Storage and Receipt and the Section of Cost Accounts, for the purpose of obtaining realistic answers to fill out the checklist, where the contents of the questions on the examination list were explained to clarify its paragraphs, as I meant those contents again after about a month to direct indirect questions and inquiries related to the same list Du N Refer to it to verify the authenticity of the answers, until the checklist came out with the final answers that correspond to reality, and here is an analysis of the results of the checklist:

The calculations were performed in the following way: (Al-Khatib, 2008: 349), (Al-Shammari, 2013: 173)

Weighted arithmetic mean = ((repetition x weight) sum) / (total iterations) = ((0 * 1) + (6 * 2) + (0 * 3)) / (0 + 6 + 0) = 12/6 = 2
Matching percentage = (mean arithmetic weighted) / (scale in higher score) = 2/3 = 66.6 = 67%
Gap size = 1) - percentage of matching score) = (1–67%) = 33%

First: Supportive strategies to develop products
1-Concentration strategy from a specific project point: The results of the table (2) show that the criterion of "focus strategy from the starting point" has got a rate of (2) partially achieved and that the percentage of matching extent is (67%) and the size of the gap (33%) which is a high percentage For the company, shortcomings must be addressed.

Table (2) shows the checklist for the focus strategy from a specific starting point

unrealized	Partially	Partially achieved	Focus strategy from the starting point defined:	n
	*		The company is trying to reduce the number of parts involved in product design.	1
	*		The company seeks to provide product design inputs within the required technical specifications.	2
	*		The company is trying to compete with its products through the quality of design.	3
	*		The company's quality engineering is concerned with procedures for designing and evaluating quality	4
	*		The company uses a high level of automation in its operations	5
	*		The production process in the company is very flexible	6
1	2	3	Weights	
0	6	0	Frequency	

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0	12	0	The result
		2	Weighted mean
		58.3	Match percentage
		0.33	size of the gap

2-Creative bidding strategy: The results of table (3) show that the criterion of "creative bidding strategy" got a rate of (1.75), i.e. close to partially realized, and that the percentage of matching extent is (58.3%) and the gap size (41.7%) which is very high and needs to A review by the company of the creative offers strategy to support and develop products.

Table (3) shows the checklist for the creative presentation strategy

unrealized	Partially	Partially achieved	Creative Presentation Strategy	n
	*		The company has the tools and techniques to develop the new product.	1
	*		The company seeks to provide specialized capabilities in research and development.	2
*			The company is interested in providing new offers of products in accordance with the speed of changing market demands.	3
	*		The company always encourages creative ideas in relation to product development.	4
	*		The price has a great influence on the choice of our products	5
*			The company communicates with customers and identifies their needs through a survey of their opinions	6
		*	Centers are available for the company to display its services and products	7
*			Company employees contribute to creating a good impression of the company in the minds of customers	8
1	2	3	Weights	
3	4	1	Frequency	
3	8	3	The result	
		1.75	Weighted mean	
		58.3	Match percentage	
		41.7	size of the gap	

3- Added Service Strategy: The results of Table (4) show that the criterion of "added service strategy" obtained a rate of (1.666), i.e. close to partially realized, and that the percentage of matching extent is (55.5%) and the size of the gap (44.5%) which is very high and close to yet The creative offers strategy, so it needs attention from the company to bridge the gap, especially as the Iraqi market is open to all foreign products.

Table (4) showing the checklist for the added service strategy

unrealized	Partially	Partially achieved	Added Service Strategy	n
			Customers have a preference for the company's products more than the foreign one	1
			The company provides post-sale services to customers	2

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			The company seeks to provide advice to its customers	3
	*		The company is interested in owning a database of its highly loyal customers to respond to their proposals	4
	*		The company is interested in responding to customer complaints about the services it provides.	5
*			The company is committed to delivering the products according to specific dates	6
		*	The prices of the company's services and products are lower than those of competitors	7
*			The company is committed to high quality and urges the continuous improvement of all activities	8
			The company provides many additional services such as maintenance and others	
1	2	3	Weights	
4	4	1	Frequency	
4	8	3	The result	
		1.666	Weighted mean	
		55.55	Match percentage	
		44.5	size of the gap	

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4-The process creativity strategy: It means the application of creative ideas that lead to the adoption of production processes and / or management practices that create minimal or no negative impacts on the environment, human health, society, culture and economics, as it became clear that the results of Table (5) that the criterion of "creativity strategy" The process "obtained a rate of (1.666), that is, close to partially realized, and the percentage of conformity is (55.5%) and the size of the gap (44.5%), which is a high gap for the company that needs to be reviewed in its work and products for the purpose of keeping pace with the surrounding developments.

Table (5) shows the checklist for the creative process of the production process

unrealized	Partially	Partially achieved	The strategy of creating a productive process	n
	*		The company is keen on adopting low cost production processes	1
	*		The company is keen on adopting high-quality production processes.	2
	*		Workers contribute to a better design of production processes to reduce emissions and losses.	3
	*		The company seeks to increase the efficiency of the production process through its commitment to environmental and social standards set by international treaties on the industrial sector	4
*			The company is keen on adopting highly flexible production processes in dealing with variables	5
*			The company is keen on adopting agile production processes.	6
1	2	3	Weights	
2	4	0	Frequency	
2	8	0	The result	
		1.666	Weighted mean	
		55.55	Match percentage	
		44.5	size of the gap	

Second: designing the outputs

1- Product design: The results of table (6) show that the criterion of "product design" obtained a rate of (1.857), i.e. close to partially realized, and that the percentage of conformity extent is (61.9%) and the size of the gap (38.1%).

Table (6) Showing the product design checklist

unrealized	Partially	Partially achieved	Product design	n
	*		The company depends on the design of the product on the suppliers and customers	1
	*		The company pays attention to producing a distinctive product that raises controversy and attention	2
	*		The company identifies critical processes during the design process	3
	*		The company focuses on ISO standard designs when designing a product	4
*			The company relies on computer-aided product design using CAD system	5
	*		The company implements quality improvement plans scientifically and practically when designing the product	6

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	*		The company works on the possibility of very inefficient product design	7
1	2	3	Weights	
1	6	0	Frequency	
1	12	0	The result	
		1.857	Weighted mean	
		61.9	Match percentage	
		38.1	size of the gap	

2- Designing environmentally friendly products: Table (7) results show that the criterion of "designing environmentally friendly products" obtained a rate of (2.2), which is higher than partially achieved, and that the percentage of the extent of conformity is (73.3%) and the gap size (26.67%).

Table (7) showing the checklist for designing environmentally friendly products

unrealized	Partially	Partially achieved	Designing environmentally friendly products	n
	*		Manufacture of recyclable products	1
	*		Dispose of the product to reduce its environmental impact	2
	*		Use of components less hazardous to the environment	3
	*		Reducing the need for raw materials and energy used in manufacturing	4
*			The company worked to find solutions to design problems	5
1	2	3	Weights	
1	2	2	Frequency	
1	4	6	The result	
		2.2	Weighted mean	
		73.33	Match percentage	
		26.67	size of the gap	

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3-Green Product Creativity: The results of Table (8) show that the criterion of "designing environmentally friendly products" obtained a rate of (1.8), that is, less than partially achieved, and that the percentage of conformity extent is (60%) and the size of the gap (40%). It refers to the application of some creative ideas that lead to the design, manufacture, and marketing of new products, which are of modernity and greenery, "more environmentally friendly", with a marked superiority from traditional and competitive products.

Table (8) shows the checklist for designing green product creativity

n				
unrealized	Partially	Partially achieved	Creating a green product	
	*		The company is looking for alternative materials to some of the materials currently used that are not environmentally friendly	1
	*		The company is studying the possibility of improving the properties of the product to raise its operational specifications	2
	*		The company intends to reuse some materials in the new production	3
	*		The company selects some materials that supplement or improve production, which consume the least amount of energy and resources and have less impact on the environment.	4
*			The company develops the product by choosing some of the materials required for production that generate the least amount of pollution compared to the available ones	5
1	2	3	Weights	
1	4	0	Frequency	
1	8	0	The result	
		1.8	Weighted mean	
		60.0	Match percentage	
		0.40	size of the gap	

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The fourth topic
Conclusions and recommendations
First: the conclusions

1 - It is clear that the company seeks to reduce the parts involved in the design of products that do not cause any distortion or impairment in the performance of the product.
2- The company is expanding its production capacity due to the increasing demand for its products because it designs the product according to the required technical specifications and this allows it to be competitive in the Iraqi market with foreign products.
3- The company uses a high and flexible automation in its production processes, which allows it to develop its products according to the needs and desires of the customer.
4- It turned out that the Iraqi market does not have sufficient preference for the company's products more than the foreign product because most customers do not have sufficient information about the product or the company's products. For example, most customers do not have a computer knowledge of the harp that the company produces and this indicates weakness in promoting the products.
5- The company does not depend on the design of the computer-assisted product using the CAD system.
6- There is a weakness in the company's development of the product by choosing some of the materials that production requires and that generate the least amount of pollution compared to the available ones.

Second: Recommendations

1- The necessity of adopting agile production systems and modern manufacturing systems, because it is a feature of developed and strong companies in the market.
2- Employing the largest possible number of alternative resources that are low pollution or environmentally friendly due to developments and changes in customer tastes and desires.
3- As the company applies product design standards according to international designs, it must develop its products according to the customer's wishes.
4- The necessity of employing the department of promotion and marketing efficiently and effectively for the purpose of promoting products.

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