## МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ ІМЕНІ СЕМЕНА КУЗНЕЦЯ

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# ДИПЛОМНА РОБОТА

на тему: «Удосконалення інноваційної діяльності на підприємстві»

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### **АНОТАЦІЯ**

### бакалаврської дипломної роботи на тему

### «Удосконалення інноваційної діяльності на підприємстві»

Робота містить 58 сторінок, 16 таблиць, 8 рисунків, список літератури з 43 найменувань (на 4 сторінках), 2 додатки (на 9 сторінках).

Дана бакалаврська робота присвячена розвитку у вдосконаленні інноваційної діяльності в Guinness Ghana Breweries Ltd. у відповідь на організаційні зміни підприємства. Адже ефективність та правильність прийнятих рішень напряму залежить від впровадження новітніх інноваційних стратегій.

У дипломній роботі були проаналізовані, узагальнені та здобули перспектив подальшого розвитку теоретико-методологічні основи інноваційної діяльності підприємства. Запропоновано практичні рекомендації для успішного проведення ефективної інноваційної діяльності на підприємстві та для досягнення гармонійної професійної діяльності працівників організації.

Провівши загальний аналіз Guinness Ghana Breweries Ltd., було надано загальну характеристику діяльності підприємства, динаміку основних техніко-економічних та фінансових показників підприємства та аналіз інноваційної діяльності підприємства. Окрім того, було сформулювано огляд того, як підприємство може впровадити зміни у своїй інноваційній діяльності відповідно до теми дослідження. Також були запропоновані рекомендації щодо здійснення нової інноваційної діяльності та економічної вигоди, яку вона принесе.

**Ключові слова:** інноваційний менеджмент, підприємство, розвиток організації, інновація, PERT-діаграма, розвиток бізнесу.

Рік виконання — 2022, рік захисту — 2022.

#### **ABSTRACT**

### bachelor thesis on topic

### "Improving of innovative activity at the enterprise"

The thesis consists of 58 pages, 16 tables, 8 figures, bibliography of 43 titles (on 4 pages), 2 appendices (on 9 pages).

This bachelor thesis work dedicated to the development of improving innovation activities in Guinness Ghana Breweries Ltd. in respond to organizational change. Effective and proper ways through the enterprise can successfully conduct and implement new innovational strategies.

In the thesis were analyzed, summarized and forward-thinking theoretical and methodological foundations of enterprise innovation activity. Practical recommendations was proposed for the successful carrying out an effective innovation activity in the enterprise to achieve a harmonious professional working quality of the employees in the organization.

After conducting the general analysis of Guinness Ghana Breweries Ltd., where you can find general characteristic of activities of the enterprise, dynamics of the main technical, economic and financial performance of the enterprise and the analysis of the innovative activity of the enterprise, I formulated review of how the organization can implement a change in its innovative activity according to topic of research. Recommendations were proposed for the organization as to how to carry out a new innovative activity and the economic benefit it will bring to them.

**Keywords:** innovation management, enterprise, organization development, innovation, PERT-chart, business development.

Year of performance -2022, year of defense -2022.

#### INTRODUCTION

Change takes place no matter what deters it. Today, innovation is the only constant and an organization's long term success is determined by its ability to manage and successfully implement change. Companies implore great effort in the opposition and improvement in the market by familiarizing innovations.

Innovations that manifest in products as defined are called "product innovation". Product innovations are required by firms to cope with competitive pressures, changing tastes and preferences, short product life cycles, technological advancement varying demand patterns, and specialized requirements of customers.

Reverse innovation of products is one emerging and high potential area that companies are actively trying to pursue to stay ahead and profitable in the global market. A company can't outgrow its competitors unless it can out-innovate them. Surely everyone knows that corporate growth, true growth, not just agglomeration springs from innovation.

Innovation is every business job, by focusing on it with programs. It may be better to focus deeply on those that raise their hands and want to be a part of the change and innovate. Most of innovators hear the buzz word "fail-fast" when discussing innovation. Naturally failure is difficult for people to bear, to change the narrative for individuals or companies, Organizations are doing a wide variety of things to encourage positive risk taking. In order to innovate an enterprise is to have a culture of understand what the nature of innovation is like, where it is ok to fail in pursuing of innovation and focusing on a goal in which to be achieve as an enterprise may fail here and raise to success.

Innovation change an organization needs to constantly innovate to succeed. Innovation is about making things better, faster, or cheaper than your competitors. It drives ongoing improvements and may help unleash a new idea that changes the rules. Innovation leading to increased productivity is the fundamental source of increasing

wealth in an economy, says Tim Mendham. Companies need to approach innovation and change effectively and proactively.

Product innovations are visible in the market and can be easily copied. Competitive advantage realized through process innovation stays within the company and competitors cannot repeat it easily. In literature, there are many researches that point out that investors prefer process innovations but this empirical material is very limited.

Organizations need to re-evaluate their methodology to innovation. Companies and administrative circles in both advanced and developing countries that wish to grow fast and to accomplish developmental objectives, have to put to first innovation research as: Birkinshaw et al., Blyznyuk T., Geets V., Ignacio Gabriel V., Ken V., Lazonik M., Lepeyko T., Milan S., Suna P., Yastremska O. and amongst others.

The goal of thesis is to study the theoretical issues and to suggest practical recommendations of the enterprise innovation activities management. In order to achieve this goal, the following tasks were considered:

- to discover theoretical foundations of an enterprise's innovation management;
- to provide a general overview of Guinness Ghana Breweries;
- to perform the economical, technical, and financial analysis of Guinness Ghana Breweries;
  - to analyze innovation activity of Guinness Ghana Breweries;
  - to develop recommendations for the company's innovative activities.

The object of the thesis is the process of innovation activity management at an enterprise including identification of innovation necessary for enterprise and management of their implementation.

The subject of the thesis is methods and tools used in innovation activity management at an enterprise.

The thesis consists of introduction, three chapters, conclusions, list of references and appendixes.

# 1. THEORETICAL AND METHODICAL BASICS OF ENTERPRISE INNOVATION ACTIVITY

### 1.1. The essence and importance of Innovation

The innovative activity of the enterprise is a constituent part of its overall activity, which is aimed on the improvement and production of new products at the specific stage of the innovative process life cycle, development of the existing products, works, services, techniques and technologies, as well as appearance of the additional results of activity related to it (unearthing, theoretical development, uniqueness, invention, innovation), their putting into practice at the market and/or the use for own needs, making an allowance for own possibilities and requirements of the external environment aimed at own capacity-building activity of the enterprise [16]. Thus, it is a driving force of the enterprise development, its main competitive advantage, which provides winning of the attractive position on the market.

Today industrial enterprises are functioning in dynamic, ever-changing and unpredictable environment, which is complicated by the stringent conditions of competition [35]. Enterprises need to re-evaluate their approach to innovation. Many are aware that they are suffering from inefficiencies in their innovation process due to disjointed processes and tools they have adopted over the years.

An innovation is an idea that must be replicable at an economical cost and must satisfy a specific need. Innovation consists of thoughtful application of information, imagination and resourcefulness in originating greater or different values from resources and includes all processes by which new ideas are generated and converted into useful products. In business, innovation often results when ideas are applied by the company in order to further satisfy the needs and expectations of the customers.

Innovation is defined as the speed, general research, and development consequence that incorporate a compact base of technological science, ability to create new technology that replaces the current one and power to apply it in satisfying the

developing and changing marketing market. Innovation has various phases that are evaluated in literature as discussed: management innovation, cultural innovation, market innovation, and technical innovation. The variable affecting a firms' innovation predisposition is mainly involves decision-making, senior leadership in a firm like Guinness, and the support accorded by top tier management towards any efforts involving innovation and product development.

Therefore, an effective strategic enterprise management that focuses on innovations is crucial for innovative companies in order to sustain the growth in tough conditions of competitive business environment. There are many studies encountered on the importance of innovation and its influences on companies' performance and outcome. Carmeli et al. [16] research the importance of innovation leadership for a firm and how it supports the firm to change and adapt its external environment as well as to improve its performance. Prajogo [40] research the effects of different business environment on various types of innovations that lead the business performance.

This is the most often cited reason for needing innovation. Innovation is the route to economic growth. Industries are maturing. Products are maturing. Innovation is the creation and transformation of new knowledge into new products, processes, or services that meet market needs. As such, innovation creates new businesses and is the fundamental source of growth in business and industry curiosity of a human always prompt for the advancement of innovation.

Innovation is viewed as a triumph factor for organizations and a component for getting what customers need and their fulfillment Reguia, 2014 [26]. Innovation is portrayed as a main impetus behind the present numerous fruitful organizations, Dereli, 2015 [17]. Over the long run, studies have shown that innovations assume critical parts in the improvement of new items. For example, it is having been contended for products improvement to endeavor in any unique business climate, advancements should assume a focal part as instigated by Chaochote, Chuang [4].

In this troublesome cutthroat business of today, many organizations handle the possibility of development as a fundamental instrument for get-together the benefit in competition. Given the explanation, numerous organizations give a lot of significance to the idea of innovation management. Organizations think about their customers, partners, complementarians, providers and different accomplices as wellspring of innovation.

They like to fabricate their development procedure in light of the information assembled from proposals, musings, offers and ideas from their inside and outside stakeholders. Preceding the choice on the necessities to start innovation, organizations find open doors in market and convey required materials and information that drives information creation. To be fruitful in making the innovation, enterprises or businesses expect to sort out and deal with these cycles actually and augment their innovation potential as Lendel says in [29]. Strategic management of innovation is the start of new framework, methodology, construction and applications inside an organization that straightforwardly influences the exhibition and intensity of organization, as Walker says in [32].

The effectiveness of the innovative activity of the enterprise substantially depends on the incorporated assessment of the preparatory stage, as long as it corresponds with the general present-day activity of the enterprise. Correspondingly, the preparatory stage evaluation results, by means of striking a balance between the internal possibilities and external needs, allow determining the successful commercial range of goods at the enterprise. Flexibility to be one step ahead of changes in customer requirements is crucial for any company to sustain competitiveness. Having high innovation capability and being innovative is a precondition for industrial organization to be flexible in order to meet the expectations of customers. However, innovation initiatives bring some substantial risk and challenges.

A table of definitions from different authors on the subject of innovation is as seen in tab. 1.1.

Table 1.1 Morphological analysis of the term "innovation"

Definition	Author	Vormonda
Innovation is any program, product or technique	Author	Keywords
which represents a significant departure from the state of the art of management at the time it first appears and which affects the nature, location, quality, or quantity of information that is available in the decision-making process.	Kimberly [39]	Program, product or technique
Innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practice. The innovation that is being developed or adopted may be new to the world or new to the company.	Kemp and Pearson [38]	Implementation of new product, process or method
Innovation is the creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in outcomes, efficiency, effectiveness or quality.	Mulgary.G. and Albury. D [25]	Efficiency, effectiveness and quality of outcome
The successful introduction of new services, products, processes, business models and ways of working.	The Economic and Social Research Council (ESRC) [27]	Business models
Creation and application of good ideas.	Australian National Audit Office (ANAO) [3]	Creation Good ideas
The successful exploitation of new ideas or ones that are adopted from other sectors or organizations'.	UK Government [30]	New ideas adopted from other sector
Innovation is the process by which new ideas turn into practical value in the world.	NESTA [15]	Practical application of ideas
Innovation in this context 'concerns the search for, and the discovery, experimentation, development, imitation, and adoption of new products, new production processes and new organizational set-ups.	Dosi[29,p. 222]	Experimentation of organizational production set-up
Innovation is the creation of a new offering a product, a service, a business model that customers find valuable.	Polat [4]	Creation of a new value in life
Innovation is adding something new to an existing product or process. The product or process has already been created from scratch and has worked reasonably well. When it is changed so that it works better or fulfills a different need, then there is innovation on what already exists.	Okpara [2]	Existing product or process which has been transformed

The word innovation has no a single description; all definitions of innovation can be agreed upon based on the individual's or the entity's point of view; as it can be clearly seen in the table above. However, I think and understand innovation in my opinion as a set of activities that is directed at creating new products process in order to acquire competitive advantage and possess market for sustainability of operations.

This is various definitions of innovations from scholars, international bodies, entrepreneurs, and academicians. However, there numerous definitions compiled in unfortunately there is no single accepted definition of the term "Innovation".

For some people it means a new idea, for others it means an invention (a materialized new idea), for some it means a new product (a developed invention), for some others it means the act of creating a new product or process, while for others it means to create a new business. One example of a definition that only covers the introduction of new ideas, service and practice on the market was the definition given by Kemp and Pearson [38].

The table above shows different definitions of innovation and identifies some core components that make up innovation. It also shows some coming together of ideas and thinking regarding innovation [36]. These core constituents are taken and put into a combined definition of innovation as "the creative process whereby new or improved ideas are successfully developed and applied to produce aftermaths that are practical and of value" [36].

Every innovative activity being carried out at the enterprise is for the sole aim of developing a product or adding better qualities to the service they provide or to a product that already exists in the catalogue of the organization's system. With that being established, it is important to consider the development of new product at the organization and how best the innovative activities being carried out in the organization will be helpful to this course.

Product development is described as the gathering of activities starting with both the discernment of a market opportunity and ending with the manufacture, sale, and delivery of a product [15]. New product development progression and innovations, therefore, include new manufacturing techniques in the approaches of processing.

Subsequently, in connecting innovations to product improvement, it is essential to distinguish the job innovation plays towards product improvement and the elements influencing mechanical developments. For instance, Bilgili [11] depicted the variables that influence the advancement of new products which incorporate fast development and innovative turn of events, further developed advertising climate, and contest. The three elements of new product development (NPD) and R&D programs are development (gradual revolutionary), innovation (low-high), and market (new existing). Recognizing the elements of new product advancement and innovative work will help the enterprises and organizations particularly Guinness Plc. to advance and foster new products or enhance existing product marks as this will assist their products with contending more in a changing business world. Various views on what a business is and what its operations are will be discussed below in the next analysis that I carried out, we will get to see how different scholars thought of the word "business" and its relation to this topic.

Society has created with the execution of thoughts that have met up to make new answers for issues or upgrades to existing frameworks, cycles, products or endeavored arrangements. Having thoughts, carrying out them, growing better approaches for getting things done and working on existing approaches to doing things have been important for humanity's set of experiences.

A table of definitions from different authors on the subject of strategic planning is as seen in tab. 1.2 below.

Table 1.2 Morphological analysis of the term "enterprise or business"

Definition	Author	Keywords
1	2	3
A business is nothing more than people of group of		Group of people
persons properly organize to produce or distribute	Keith & Gul Bellin	Goods and services
goods or services.	[43]	

### Continuation of tab. 1.2

1	2	3
Business comprises all profit seeking activities and enterprises that provided goods and services necessary to an economic system.	Boono & Krutz [43]	Profit seeking
Business may be defined as human activity directed towards producing or acquiring wealth through buying and selling goods.	Lewis H.Haney [43]	Human activity
Business may be defined as an activity in which different persons exchange something of value whether goods or services for mutual gain or profit.	Peterson and Plowman [43]	Exchange Value
Business is the sum total of those processes which are engaged in the removal of hindrances of persons (trade), place (transport and insurance) and time (warehousing) in the exchange (banking) of commodities.	James Stephenson [43]	Processes Trade Warehousing Banking
Business is a system created to satisfy society in needs and desires.	Buskirik Green & Robgers [43]	System Satisfaction of needs
Business represents the organized efforts of enterprises to supply consumer with goods and services.	Musselman & Hughes [43]	Efforts Supply

Based on the above definitions from the various authors, business refers to those economic activities, which are connected with production, purchase and sale of goods or supply of services with the main object of earning profit. People engaged in business earn income in the form of profit. Thus, business in a nut shell is all rewarding human activities, which aim to create exchange and possess wealth in the form of physical output and useful services.

There are, moreover, many organizations, both private and public, which do not aim at profit from their business, so in short, the definition of a business as a commercial activity to make a profit or an organization formed to make a profit is an arrow one. Yet, to a layman, business still means industry and commerce.

Innovation as important for business survival in highly competitive markets where it is progressively more challenging to differentiate between products and services, and we can see some of the importance of innovation in fig. 1.1 below.

### Importance of innovations

Innovation, introduce or commercialize new or improved product or service in the application of existing products and services

Introduce new production processes or improve existing business processes essentially

Opening doors for new market

Innovation allows businesses to expand their customer base by refreshing the market with new and improved products

Innovation supports the ability to charge a premium

Innovation provides incremental revenue and profit and also increases shareholder value.

Innovation is a key component of competitive advantage and helps companies stay ahead of competitors before rivals' innovations take market share

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Fig. 1.1. Importance of Innovation

There are four main key areas to consider in order to build a strategic framework for commercialized innovation as proposed by Planko [4], and these areas are; development and optimization of technology, creation of market; coordination; and socio-cultural changes. They are essential for commercializing innovation stability.

Cropley et al. [37] say that they prefer the usage of the term "value innovation" to more accurately describe the linked process involving creativity and innovation as it is more explicit and reflective of that operative environment. They see the connected

interaction among inventiveness and development as one by which a duality of approach is utilized. Klein and Tremblay talk about creation and innovation inside the setting of metropolitan, social and social improvement connecting them as a straight interaction by which "creation goes before development: and innovation relies upon the social acknowledgment of creation and the spread of its belongings and results" [38]. Inside this setting the business impulse is to a lesser extent a main impetus behind the cycles of creation and development.

Many scientists, thought that all together for any business or enterprise to foster new products or services, it should fathom its purchasers, markets, convey preferred an impetus over clients. In addition, it should do strong new-product organizing and set up an intentional new product improvement process for finding and growing new products.

The huge eight stages in new-products development are thought age; thought screening, thought improvement, and testing; advancing technique headway; business assessment, product progression; test exhibiting, furthermore commercialization.

#### 1.2. Classification of Innovation

Souder and Shrivastrava in [41] said "we can't start to settle on choices about innovation until we get it, and we can't start to truly comprehend it until we can gauge it". Garcia and Calantone [10] express that innovations are regularly.

Beside this, it can be said that innovations in business development place one of the most important roles, because if enterprises want to be competitive, modern and even get ahead of its rivals – they must follow the most modern technologies, processes and management.

Let consider tab.1.3. Arranged in scientific classifications to distinguish their innovation qualities and the level of inventiveness included.

Table 1.3

# Classified in taxonomies of innovation by object

	Classification
Level of novelty	criteria/innovation type
Process innovation alludes to oddity in an enterprises approach to	<b></b>
carrying on with work. It could an oddity inside its exercises (be it in	
advertising or deals of labor and products) or it very well may be in the	
linkages between its exercises. For instance, manufacturing plant to	Process vs. Product
client conveyance of specially constructed PCs by HP. While, product	Innovations
advancement is typified in the result of company's exercises for	
example labor and products. For instance, Tablets, MP3 player, Plasma	
shows, and so forth Notwithstanding, it should be noticed that	
interaction and product development are between related. A cycle	
innovation can empower product development as well as the other way	
around.	
Increase innovation includes a smaller difference to existing practices	
though an extreme advancement is a bigger jump in the practices. This	Increase vs. Extreme
point of view of ordering innovations is a general one and could	Innovations
change in light of the spectator. For instance, Digital photography is an	
extreme advancement for Sony however maybe not so much for	
Panasonic.	
This perspective of looking at innovation is very useful for companies.	
A competence enhancing innovation builds on company's existing	Competence enhancing vs.
knowledge base whereas a competence destroying innovation renders	Competence Destroying
current know-how obsolete and poses a threat it. A competence	Innovations
destroying innovation is often faced with resistance amongst firms.	
A component innovation results in modular changes within the system	
without altering the overall design of it. Whereas, an architectural innovation accompanies a modification in the overall system and/or	aamnanants of Company
linkages between different it. For example, electric vehicle is an	components of Component vs. Architectural
architectural innovation whereas a novel petrol filter is a modular	Innovations
innovation.	mnovations
Disruptive innovation alludes to a class of advancement which makes	
another worth organization and an entirely different market. It begins	
with apparently mediocre innovation that caters the need of a specialty	
market which isn't profoundly fascinating for existing players. Be that	
as it may, innovation improvement direction is more extreme than	Disruptive Innovations
existing innovation and it at last assumes control over the primary	
market. For instance, while gaming market was just centered around	
no-nonsense gamers and overwhelmed by Sony and Tencent, Nintendo	
presented for relaxed gamers with a substandard innovation and sooner	
had control over the market.	

Innovation as it is plays a fundamental part in the exceedingly competitive global market according to Badawy, 2011 [11]; it is interrelated with the accomplishment of the

organization in terms of sales and growth, and is seen as a feature of the competitive advantage strategy of the businesses Thornhill, 2006, Carbone, 2011 [30,19].

The thesis work study centers on product innovation that is a type of technological innovation as product innovation plays an essential role in making it pleasing to the eye the quality of life and enhancing the financial and marking efficiency of a business Hoonsopon and Ruenrom, 2012 [24]. "Extreme product innovation" and "incremental product innovation" are the most commonly used forms of product innovation Atuahene-Gima, 2005, Hoonsopon, and Ruenrom, 2012 [8, 24].

Radical innovation is generally characterized by two distinct perspectives: (1) the consumer perspective; and (2) the technical perspective. Radical product innovation's business perspective refers to the extent to which the influence of that innovation has on the consumer. Radical innovation has such an impact on the consumer that it makes the current goods redundant or unnecessary and may even threaten to kill the existing industry.

An organization needs to characterize the innovation to comprehend the danger and benefits implied. For instance, an organization with a disruptive innovation thought faces greater dangers and difficulties than the one with incremental. Contingent upon the danger craving of the organization, it can zero in on specific sorts of innovation and designate its assets accordingly, research by Vaibmu.

For example, existing and emerging competition from competitors such as Accra Breweries Limited, Allied Home Stores Ltd, and Atiaframa Ent. in the beer industry have radically challenged the industry and affected how NDP radically changed a market. The radical innovation has pushed some companies out of the market or being redundant for example Benya Distilleries Ltd.

Abu S. [3] research express that provider ruled firms have a particular and critical technological direction and can be similarly creative by getting hardware and capital materials. The different types of specialized change and recognize among others are been arranged beneath in tab. 1.4.

Table 1.4

Type of technical changes in innovation

Stages	Types of technical changes	Descriptions
1		A series of small improvements to an existing
	Incremental Innovations	product or product line that usually helps maintain
		or improve its competitive position over time.
2		These are discontinuous events and in recent times
	Radical Innovations	is usually the result of a deliberate research and
		development activity in enterprises and/or in
		university and government laboratories.
3	New Technological Systems	Keirstead [37], in his exposition of a Schumpeterian
		theory of economic development, introduced the
]		concept of "constellations" of innovations, which
		were technically and economically inter-related.
		These are far-reaching and pervasive changes in
		technology, affecting many (or even all) branches
4	Technological Revolutions	of the economy, as well as giving rise to entirely
		new sectors. Characteristic of this type of technical
		change is that it affects the input cost structure and
		the conditions of production and distribution for
		almost every branch of the economy [14].

These days, specialized change and advancement assume an ever increasing number of a major part in different fields. Specialized change can show in a few kinds of innovation which have different force. The orders and estimations of specialized change are significant pointers for the financial development, the customers' conduct, the examination of global exchange and the assessment of money related and monetary strategies. The estimation of innovation is the way in to the anticipating and the executives of item and interaction advancements. The financial writing on specialized change utilizes various names to demonstrate a similar sort of specialized change Archibugi [3], Freeman [34], Pavitt [39] Durand. This variety isn't considered a heterogenic (various components that make up the advancement) yet rather a heterophylly (contrasting types of development with normal beginning and qualities).

Consequently the new bearings to characterize the specialized change depend on shared factors, for example, the development force degree that depends on the impacts of advancement on the geo-monetary framework (subjects, like shoppers and firms; items, for example, method for correspondence, foundations, and so forth) Overall the estimation and orders of innovation is done after that the creative occasion has happened. This rationale has limits for mechanical anticipating and foreknowledge however to gauge advancement deduced — can be helpful, in comparative manner is valuable to measures and arranges the force of quakes (perhaps the most flighty occasion) after they have happened. Indeed, a nation can gain from past advancements and outfit itself with present day frameworks, method for correspondence, prepared HR, which is its solidarity in engrossing and tolerating the effect of future mechanical developments.

This clarifies why a country with countless PCs, current telecom organizations, colleges, and present day method for correspondence, science stops and prepared HR is advantaged in the ingestion of new mechanical developments and enjoys a cutthroat benefit in contrast with nations with less innovative foundations and assets. Also all scientific classifications present a level called upheaval, which shows a high effect of development. For example, inside the size of mechanical power of the seventh degree advancement by Coccia, [117, p.144] is totally restricted to those developments that change human correspondence and have mass dissemination. Seventh degree is like the mechanical upset of Freeman and Soete [34] and unrest advancement of Abernathy and Clark [17].

On the whole, the trouble presents to order and quantify the developments is because of a few factors of the specialized change work.

This is a significant issue for all financial specialists and researchers since the estimation and characterizations of specialized change and development can't be followed to a solitary discipline, however these hardships address a test still to be attached.

Let's consider various types of innovation activities by the object of the innovation and their key components (tab. 1.5).

Table 1.5

### Types of innovations activities

Types	Key Components
Product Innovation	Types of product innovation, technological advancement
	and competitive pressures
Process Innovation	Corporate growth, Redesign of Industry Value Chain
	Redesign Business, Redesign Process and small
	improvement.
Market Innovation	Marketing knowledge, powerful strategic, consumer
	information effectively and delivering value to customers
Organization innovation	New organizational method ,business practices and
	workplace organization or external relation

Let's consider innovation types deeply.

1. Product innovation implies various things to various individuals. Some, for instance, will quite often think as far as a product which is 'first of its sort in some bigger market. Normally, barely any little enterprises accomplish innovation of that degree. What's more such extreme advancement isn't really more significant than the consistent, steady upgrades to existing scopes of products, which undeniably more firms partake in. To be sure, since around 1970 there appears to have been a consistent swing towards product improvement rather than absolutely new product, all through the modern world at the end of the day, anything which is new to the business and its product range is considered development or innovation, regardless of whether comparable products are accessible somewhere else or then again in the event that the change is a gradual one.

A product is a combination of one or more of Ingredients;

- attributes;
- benefits;
- advantages;
- features:
- functionality;
- performance;
- business model;

- usage experience;
- consumption experience.

Innovations that manifest in products as defined are called "product innovation". Product innovations are expected by firms to adapt to serious tensions, changing preferences and inclinations, short product life cycles, mechanical headway fluctuating interest designs, and concentrated prerequisites of clients.

Invert development of products is one arising and high potential region that organizations are effectively attempting to seek after to remain ahead and beneficial in the worldwide market.

2. Process innovation: Different degree of Process Innovation can and ought to occur at different levels inside the association as no association can rely entirely on advancement happening at one level as it were. Effective enterprises and organizations have an innovation interaction managing all levels of the organization [78].

Many different models of the creative process have been developed by researchers, academics, practitioners and others, however, not all writers agree that the creative process can be shown through a model. Vinacke [41] said that creativity within the artistic process does not follow a model and Wertheimer [42] saw the process of creative thinking as an integrated one.

A company can't outgrow its competitors unless it can out-innovate them. Surely everyone knows that corporate growth, true growth, not just agglomeration springs from innovation.

Let's consider fig. 1.2. Adaptation of new process in a firm or business become difficult sometimes why because every business want to minimize risk in other to maximize profit, first of all start small improvement some sector of the business by going through the principles and stages and identify areas for improvement.

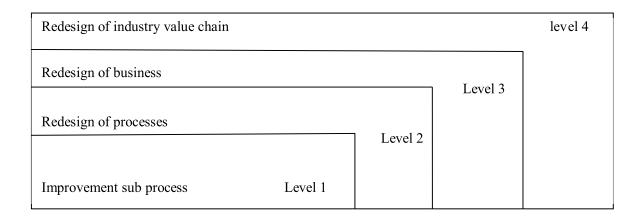


Fig. 1.2. Level of process innovations

Level 1 improvement of Sub processes. Try not to have one standard interaction for an assortment of circumstances cautiously concentrate on process in other to yield a decent outcomes in extra checking from the standard straight-through handling, which should be possible by a computerized arrangement.

Level 2 redesign of Processes. Identification of innovative way which is modest and afterward considers the utilization of continuous data gives not simply the current status, since interaction should endure over the extreme long haul, likewise the anticipated future status.

Level 3 redesign of business. Business processes are redesigned to accomplish explicit objectives like expanded profit from venture, administration upgrades, or cost decrease. Any business interaction, be it creation, deals, or monetary administration work processes can be modified to accomplish the ideal objective or objectives. Regularly, re-designing one cycle will have a thump on impact on different cycles inside the business.

Level 4 Process Innovation Redesign of Industry Value Chain, structure the chain which can be advantageous to clients with respect to the get criticism from Customers

who don't just trade thoughts, data, and sentiments; they are likewise ready to buy and sell labor and products.

Innovation is each business work, by zeroing in on it with programs. It could be smarter to zero in profoundly on those that lift their hands and need to be a piece of the change and develop. A large portion of trend-setters hear the popular expression "fall flat quick" while talking about development. Normally disappointment is challenging for individuals to bear, to change the account for people or organizations, Organizations are doing a wide assortment of things to empower positive gamble taking. To enhance a venture is to have a culture of get what the idea of development is like, where it is alright to fall flat in seeking after of advancement and zeroing in on an objective in which to be accomplish as an endeavor might bomb here and raise to progress.

A "plan thinking" attitude, this is like a hierarchical innovation process. It includes associating straightforwardly with client or client first. Utilizing a plan interaction to plan for the real issues they have and needs they have. The compelling method of undertakings approach improving cycle is to take thoughts and make them a "the truth" is to Launch when little way as could be expected (lean startup) so that learning can begin and repeating yet more critically venture need to make something a reality. Let's consider the key steps organizational innovation below (fig. 1.3).

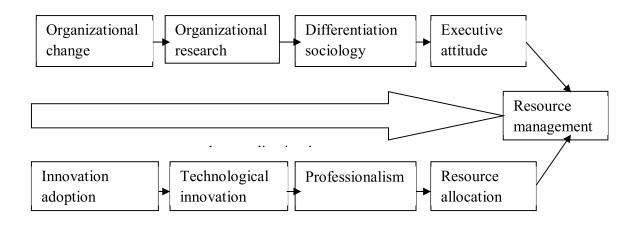


Fig. 1.3. Organizational innovation

Organizational change refers to a modification or transformation of the organization's structure, processing is a change that has an impact on the way work is performed and has significant effects on staff.

### 1.3. The essence and stages of innovation management in world experience

Innovation management is the process of managing innovations, that is, ideas, in organizations through the stages of the innovation. The innovation describes the activities involved in taking an innovative product or service to the marketplace. In essence, there are two aspects to this:

- developing the innovative product or service;
- building the business to market the product or service.

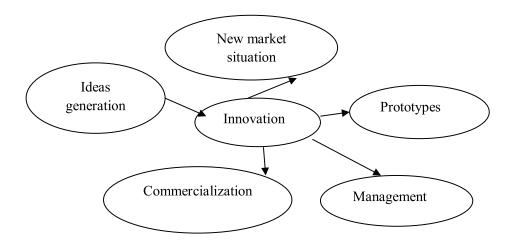


Fig. 1.4. An example of a typical innovation cycle

The primary stage in the innovation cycle is thoughts or idea gatherings. Thoughts will regularly emerge from perception of a current or future issue. They could be propelled by the enterprise's objectives or by another market circumstance that abruptly turns into an open door once the open door has been remembered, it should be assessed. A significant test for an idea is that it matches the objectives of the organization and accessible assets individuals, money and offices. On the off chance that

there is arrangement with the destinations of the association, the ideas moves to another stage where it tends to be researched and further created and improved.

The development stage might include further examination into the open door or the protecting of the idea. Models likely could be planned, created and tried at this stage. The choice to begin selling the innovation is a basic stage. This is when critical assets are frequently expected to help the sendoff.

Once in a while an organization could stand by toward the finish of the improvement stage for reasonable economic situations and the innovation cycle commercialization where the development is promoted and offered to the client. The innovation presently moves out of the association's control and under the control of the customers.

This is the most difficult phase of the innovation cycle for the organization to make due. It is essential that the association screens the innovation's presentation so any deficiencies are amended.

Creative organizations will regularly be chipping away at new developments that will ultimately supplant more seasoned ones. This is significant as product life cycles show decreased development for more seasoned products and services. Development might even start to decay in the end, hence affecting an organization's capacity to extend.

New incremental innovations or developments to the product countenance growth to carry on. Companies on the regular derive far more technical innovations than they can possibly hope to bring to market effectively. There is a need for well-thought-out management and processes to handle innovation from the ideas stage to commercialization.

Let's consider this below how individuals within organization should implement their innovation ideas and plans (fig. 1.5).

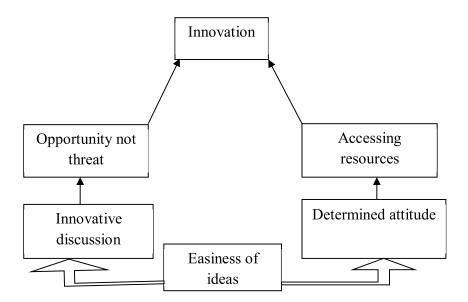


Fig. 1.5. Hierarchy of innovation process

First and foremost, easiness the of idea through the organization, why individual find themselves adhering to the principals of the organization while some instead try to find leak holes and what are the courses and these lapses can be put right in an innovative way.

Building innovative conversation with senior leaders to help their thoughts, establish a favorable climate between the organizer and high order of the organization and outlining development as an open door and not a danger to the association and disclose decisively to the senior executives to comprehend the vision and mission of the advancement thought and let the superior to know this innovation is reachable and keeping a for the most part tireless and steady disposition in the incredible skill way and the Accessing assets for the beginning of this development and with centering mind arrangement this innovation can come to light.

Top management who are focused on change management or are keen on innovation activities are often labeled change representatives. There are two types of change agents: internal and external. Internal change agents are people already in the organization who are familiar with the company's culture and operations. External

change agents are consultants from outside the organization who re-evaluate operations. To be effective, external change agents must first research the company's structure, culture, processes, finances and existing technology. Both internal and external change agents must be proactive about anticipating and initiating transformation within an organization.

Internal change agents when there is a need to work longer term with the outcomes of the change; when there is an internal driver to use or rely upon internal capacity or capability; when internal knowledge of the system now and into the future is required; when engagement with the wider groupings will be improved with internal change agents; and when there is a belief that ownership should clearly be internal.

External change agents when there is the need for a major organizational-wide change especially when there is high level senior management involvement or sponsorship; when the changes are of a complex nature with limited capacity or capability within; when there is a need for an external, more objective, perspective; and when the situation requires an intervention by people with no conflicts of interest, loyalty or prejudice.

With the base of the diploma work being innovation activities at the enterprise, it will be wise and important to consider the views of other authors concerning the technological innovation process and its effect on product development.

In a research study work by Eneji, Nnandy, Gukat, and Odey [52] estimated the effect of technology innovation on sustainable entrepreneurship development in Africa. A survey questionnaire was used in the analysis with sampled stakeholders in Central Nigeria as a base. This demonstrates that the adoption and mastering of technologies in Africa need more than importation. There has been an unavailability of remarkable attempts to inaugurate innovative technologies. The assessment of the results was carried out using a basic percentage statistical methodology. The degree of technological progression in Africa is small and entrepreneurship is high. This is attributed to fiscal,

financial, socio-cultural, and environmental factors as identified by the researchers. The multiple regression techniques are conducted using secondary evidence.

The result point toward that the dissemination of indigenous technology would have a prevalent, but distinct, effect on the country's entrepreneurship across the agriculture, manufacturing, and service sectors, including telecommunications. The education and private sectors in Ghana and Africa as a whole will play a leading role in the incubation, invention, introduction, and transition of home-grown technology. It is been established that innovation and entrepreneurship will improve jobs in Africa. Nonetheless, the structural environment and the capacity to promote creativity are poor. The organizations in the country require establishing a coherent national strategy for research, technology, and innovation through professional education and training.

In the same way, Nazila, Gholamhossein, Hamida, and Mina [55] examined the new product development in the pharmaceutical firms: Evidence from a conventional market. The research work done distinguishes basic achievement elements of new product development being dependent on the important writing and master conclusions in the Iranian pharmaceutical industry, at that point organizes them utilizing the procedure of numerous criteria basic leadership (MCDM) through investigating 50 filled polls organized dependent on the AHP (Analytical Hierarchy Process) approach.

In spite of the fact that the NPD achievement factors appear the equivalent in both conventional and bio-nonexclusive pharmaceutical ventures, the fundamental factors and related sub-factors show the distinctive significance in these two enterprises. In any case, this examination uncovers that the "company capabilities" is the most significant factor influencing new item advancement accomplishment in both the pharmaceutical nonexclusive and bio conventional industry.

From the various viewpoints on technological innovation and the development of new technologies remain technically as well as an empirically unresolved issue. The effect of the reviews is that there is no definitive agreement between researchers on the nature of the partnership between technological innovations and the development of new products; this could present a major challenge for decision-making among policymakers.

The "innovation funnel" is a framework for managing innovation:

- it provides structure and discipline, and facilitates the innovation process;
- it allows faster development of innovations that drive growth;
- it defines and tracks innovations according to predetermined criteria;
- it provides "gates" to control innovation resource decisions.

There are six normal proposals to upgrade innovation at the organization, notwithstanding regardless of whether government association or a non-benefit organization or in the private area functioning as a feature of a business, can empower an endeavor to enhance and make something new that improves the world.

Problems associated with innovation should be very clearly stated and defined. Most at times, not having a clear idea of the change makes it's harder to think about the solutions.

Enterprises toss out however many requirements to thinking as could be expected under the circumstances. Go into a protected region where less requirements are, the place where not being judged, an endeavor need to be with a gathering to be inventive, as frequently as a gathering can get an entirely familiar climate. For the mean time helpful analysis set the creator on the correct way to draw out a decent improvement, enterprises innovation productive analysis ought to be permit to place endeavors innovators on actually take a look at who profoundly enthusiastic with regards to taking care of the issue.

Ideate in little gatherings. When can join the best innovative masterminds with the space specialists in a climate that is set up to toss out requirements, astonishing arrangements can arise. During the conceptualizing stage, catch all thoughts paying little mind to how senseless they are and don't begin assessing or investigating thoughts until they finish the conceptualizing stage. Make an impetus rivalry that gives prizes to the

best development and pitch these all over the planet. Track down ways of making impetus rivalries.

Organizational context also plays an important role in facilitating or inhibiting the implementation of new ideas. Zbaracki [1] observed that the reaction of employees to implementing new management practices is generally negative: they are likely to be intimidated by innovations, particularly if the innovations have a significant technical component and the employees are mostly ignorant of their potential benefits. But the cultural perspective on management innovation suggests employees' reactions will also vary according to their personal circumstances and the immediate work environment in which they are placed [61]. The implementation process is therefore likely to involve careful maneuvering by internal change agents as they focus their efforts on those parts of the organization that are more amenable to change.

The possibility of introducing product innovation only is 58% for companies with modest competition, comparing to 48% in the case of high competition and 38% for small competition. However, for process innovations, the possibility of innovations is the highest in the group with the biggest number of competitors. Companies that are present in a highly competitive market introduce 12% more business process innovations comparing to the companies that are present in markets that are not very competitive. According to Baldwin and Sabourin [24], modest competition influences most on product innovations and combined product and process innovations while intensive competition influences process innovations.

In the case of a poor competition, innovative activities are the poorest for both types of innovations when introduced individually. Of course, much wider research evidence is needed in order to come to relevant conclusions. Returns on process innovations grow proportionally with company size while returns on product innovation remain constant.

That is why product number growth has to have bigger positive effect on process innovations than product innovations causing the organization to turn from product to process ones. Accordingly, as a company grows, it decides on business process innovations. In the case of product innovation, considering only a company size, it cannot be predicted whether smaller or bigger companies will be more innovative by Cohen and Klepper, Petsas and Giannikos and among others.

The idea of technological innovation and product improvement has been considered with differing definitions and examination of how the two relate. This part surveys advancement and new product improvement as a cross-utilitarian interaction. The examination made demonstrates that hierarchical techniques and goals can contrast or begin from numerous useful aspects of the enterprise.

The literature reviewed on product innovation, strategies, and product development process draws the following conclusions. The review and analysis suggest that product innovation is crucial to the performance of any firm more so the one in our study. Secondly, innovation strategies adopted by firms have improved and worked hand in hand with product development towards positive results and performance. Lastly, product development and innovation are integrated into overall organizational activities which facilitate new technology paradigms that have become part of the product development and innovative lifecycle management. The future stands bright for entities utilizing big product data and digital infrastructures.

It was established in this chapter of the diploma thesis, the essence of carrying out innovative activities at the enterprise, the various types of innovation an enterprise could consider implementing, the likelihood problems or benefits associated with such measures, different scholars or authors views on the concept of new product development and innovation as a whole and also the importance innovation brings to the organization.

Since the beverage industry is a monopolistic one in Africa and as such, it is important to consider the strategies some companies in the industry are implementing in making their journey a success and in our case we will be looking into the strategic management process in the Nigeria Brewery Plc since it is one of the dominant enterprise in Nigeria in the beverage industry.

The process of choosing a strategy is very complex and requires the inclusion of various criteria, and especially the value system recognized by management as particularly important to the company. In a properly functioning organization, the role, mission and goals of the company must be properly defined and a strategic plan drawn up.

Strategic management is also seen as a way of action and is based on the identification of critical (strategic) factors, as well as on the basis of studying and determining the interdependence and impact on the future of the company.

Strategic management is a complex process that is subject to evolution and is a major factor when it comes to the success of the company. Compliance is also an important function the concept of development to the forecast taking into account changing situations that create market conditions and the environment.

Nigeria Brewery Plc's overall strategic management system is managed by the company's management and includes strategy development and approval, management decision-making, adjustment of strategic goals and decisions related to global changes in the external and internal environment. Operational strategy management includes obtaining the necessary information about the strategies of functional subsystems of the enterprise, such as the strategy of cinemas, marketing, finance, personnel and measures to address current issues related to operational decisions, monitoring their implementation.

If at Nigeria Brewery Plc the planned indicators of one of the functional strategies do not correspond to the expected values, the appropriate process is immediately initiated to achieve the maximum values close to the initial plan. This procedure is provided by the presence of a system of interconnections between the management processes of functional subsystems. In the implementation of any In the process of

adjusting only the violated parts of the plan and, if necessary, related, because there is no need to change the entire plan of enterprise development.

At Nigeria Brewery Plc, strategic management uses a tool such as strategic planning, which is organized to ensure that effective plans are developed and maximized. The main task of the department of strategic planning and research of the enterprise is the formation of a unified economic policy of the enterprise based on the analysis of the state and trends of the industry, economic planning and analysis of the economic state of the enterprise. Work in the strategic planning unit involves research and analysis of consumer preferences. The data obtained allow us to confidently recommend the right strategies. The department plays a key role in the important decision-making process of the marketing department and the company as a whole. This is achieved through a combination of two activities:

- conducting various types of research to assess how effectively the company uses its capabilities in various fields;
- accumulation of a large amount of information, its in-depth analysis and provision of data for strategic decision-making.

The work in the strategic planning division of Nigeria Brewery Plc is aimed at the development and preparation of current functional plans, the adjustment of medium- and long-term plans for economic activity and enterprise development. An important element in planning is to take into account the results of activities and analysis of key indicators in the dynamics. Strategic management is also seen as a way of action and is based on the identification of critical (strategic) factors, as well as on the basis of studying and determining the interdependence and impact on the future of the company. Strategic management is a complex process that is subject to evolution and is a major factor when it comes to the success of the company. An important function is also to align the concept of development with the forecast, taking into account changing situations that create market conditions and environment.

# 2. COMPREHENSIVE ANALYSIS OF ACTIVITY OF GUINESS GHANA BREWERIES

# 2.1. Overview of the enterprise, analysis of management system and key indicators of the enterprise's activity

Guinness Ghana Breweries Limited is a Ghanaian company that is predominantly involved in brewing and is a market leader in the Ghanaian brewing industry. The Company was founded in 1960 as Ghana Breweries Limited and later became Guinness Ghana Breweries Limited in 1990. Guinness Ghana Breweries Limited is a subsidiary of Diageo PLC which has its headquarters in London.

Guinness Ghana has three locales, specifically Achimota, in Accra, Ahensan in Kumasi and Kaase also in Kumasi. Guinness Ghana Breweries Limited (GGBL) arose out of a consolidation of Guinness Ghana Limited (GGL) and Ghana Breweries Limited (GBL). To comprehend the historical backdrop of GGBL therefore it is important to give separate analysis on GGBL and GBL preceding 2004, the year in which the consolidation interaction initiated.

Guinness Ghana Limited was amalgamated as a private company in 1960 and was registered on the Ghana Stock Exchange in 1990. When it was incorporated, Guinness Ghana Limited was to bring about the importation and marketing of Guinness Foreign Extra Stout in Ghana. The stockholders were Guinness Overseas Limited (67.5%) and Atalanta, a Bermudan Company (32.5%). In 1971, a brewery was designed and constructed in Kaasi, Kumasi. Production commenced a year later on 11 November 1971 with an installed capacity of 100,000 hectoliters. By 1977, the brewery was producing at maximum capacity. In 1976 Government of Ghana by an Investment Policy Decree acquired 40% of the shareholding in the Company. Other shareholders were Guinness Overseas Limited (28.68%), Atalanta Limited (16.32%), Individuals (12.72%), Institutions (1.18%) and Employees (1.10%). The shareholding structure changed again when Government of Ghana divested its holding in the 1990s.

In May 1995, Guinness Ghana invested 18 billion cedis to increase its packaging capacity and commissioned in July 1999 a 40 billion cedis fully computerized brew house facility using a unique ultra-modern brewing and process control technology. This progression countenances product testing at every stage of the brewing process, thus conveying world-class purity and excellence throughout. In November 2003, Guinness Ghana commissioned a second state of the art packaging line at a budget of 165 billion cedis.

As at 30th October 2009, the range of Guinness Ghana Brand products covering: Mini Star(24x1), Gordon Spark (24x1), Star Large (12x1), Malta Guinness Quench (24x1), Amstel Malta(24x1), Malta Guinness can (24x1), Malta Guinness (24x1), Malta Guinness Quench can(24x1,Gulder Large (12x1), Heineken can/bottle (24x1), Guinness FES (24X1), Star Draft 30LKeg, Smirnoff Ice (24x1), Guinness FES can (24x1), Alvaro (24x1), Smirnoff/J& B/Gordon's ata). Guinness Ghana Breweries Limited is becoming a total beverage business by taking along the Diageo Spirit Brands into the GGBL portfolio. These branded products that is being introduced and traded on behalf of other companies are Johnny Walker (Red or Black), Baileys/J&B.

In June 2003, Ghana Breweries underwent a capital restructuring exercise. Consequently the stated capital of the Company increased from Cedi 74.4 billion to cedi 144 billion. Heineken Ghanaian Holdings held 75.59% while institutional and individual investors held 24.41% of the company's shares. Ghana Brewery's range of product covered beer (lager), malt drinks and soft drinks. As at 31<sup>st</sup> December 2003, the company had a volume share of 39.5% of the combined beer and ready-to-drink-market and 23.3% of malt drinks marker (according to AC Nielson data).

In order for Guinness Ghana to fulfil its strategies, it has to have the right organizational structure, culture and leadership. Coca Cola's organizational structure is set in a way that steers the company towards achieving its goals and objectives proficiently.

Guinness Ghana employs a divisional organizational structure; this means "its units or divisions have its own functional specialists who provide services and products or services different from those of other divisions. The divisions are based on the locality or region and this makes it easier to deal with specific regional issues that arise in the company. Divisional structure makes it easy for Guinness Ghana to be more effective and efficient with dealing with their overall organizational goals (fig. 2.1).

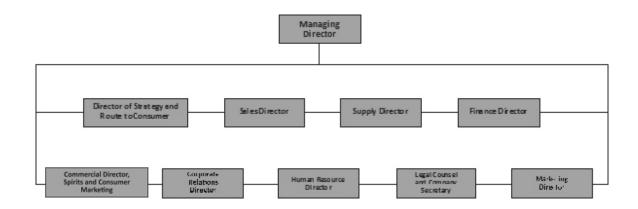


Fig. 2.1. Organizational Structure of Guinness Ghana Brewery

In 2004 Guinness Ghana Limited and Ghana Breweries Limited started a consolidation interaction. Up to 2007 the two organizations executed business together as two separate legitimate substances under the new name —Guinness Ghana Breweries Limited. The consolidation interaction finished when Guinness Ghana Breweries Limited procured every one of the resources of Ghana Breweries Limited in 2008.

With regards to the industry's production and manufacturing, the Kaase site functions at an installed and target capacity of eleven million hectoliters per annum. The site operates an ultra-modern brewing department, a contemporary and highly automated packaging unit and distribution operations. To have the option to take down the opposition and gain piece of the pie, Guinness Ghana Breweries infused capital into its

tasks by contributing present day hardware. These incorporate tanks, Gas handling plant, refrigeration plant, another blend house and a ultra-present day bundling plant.

The It is profoundly robotized to package plant. This venture is in accordance with the organization's unbiased of accomplishing One million, 100,000 hectoliters of lager for every annum. The bundling plant is all around upheld with back up extras and top notch upkeep rehearses. Despite the industry well-knowed for the production of beers and stouts, there is a well knowed soft drink which is highly patronized in the entire country and beyond called the Malta Guinness.

Malta, youthful brew or wheat soft drink is a sort of soda. It is carbonated beer, meaning it is blended from grain, bounces and water similar as brew; corn and caramel tone may likewise beaded. Nonetheless, Malta is non-alcoholic and is polished off in the manner as pop or cola in its unique carbonated structure, and somewhat, chilled tea in non-carbonated structure. In other words, Malta is actually a beer that has not been fermented. Most scholars and historians believe that Malta is the direct forefather of all soft drinks. It is similar in color to stout (dark brown) but is very sweet, commonly labelled as tasting like molasses. Unlike beer, ice is often added to Malta when consumed. A prevalent way Latin Americans sometimes drink Malta is by mixing it with condensed or evaporated milk.

Malta is likewise infrequently called — champagne cola by certain brands. Notwithstanding, there is a different sort of drink with this name, having a flavour and consistency more similar to cream soda. Despite this moniker, neither one of the beverages is champagne or a cola. Because of its unmistakable variety, Malta is at times known as dark fermented lager. Malta is high in nutrients B. A few breweries, as Albania Brewery of Denmark, invigorate their non-alcoholic Malta refreshments with Vitamin B complex. Albania Brewery claims on their site to have been the main bottling works to make non-alcoholic beer in 1859.

Regarding the storage and safe keeping of the company' raw materials, semifinished goods and already produced are kept at the warehouse at Ahensan and Kaase store House while some of the low-loaders like Maesk have their own storeroom where they keep raw materials on behalf of the Guinness Ghana Brewery Company (GGBL). The merchandises are held in Maesk warehouse till request from GBBL to deliver goods for further production.

Completed products are sold straightforwardly to enrolled merchants. The wholesalers are the primary specialist who offers to retailers. The act of select circulation where just uncommonly enlisted or approved merchants (commonly somewhere around 5 wholesalers for every a district) is the thing to take care of. These merchants go about as wholesalers that offer registry to general society thus called —Beer Bars.

The dissemination of unrefined components, semi-finished and the completion products is moved to outsider workers for hire. In this way GGBL work in 3 party coordinated operations, which guarantees materials, and completed products are conveyed brilliantly to the perfect locations as per the arranging plan and at any rate cost. There not many enrolled carriers that are liable for stacking, pressing, offloading and development of natural substance from port to stockroom, development of completed items from Production stockroom to wholesalers.

#### 2.2. Technical and economic analysis of Guinness Ghana Brewery Company

Guinness Ghana Limited was amalgamated as a private company in 1960 and was registered on the Ghana Stock Exchange in 1990. When it was incorporated, Guinness Ghana Limited was to bring about the importation and marketing of Guinness Foreign Extra Stout in Ghana. The stockholders were Guinness Overseas Limited (67.5%) and Atalanta, a Bermudan Company (32.5%). In 1971, a brewery was designed and constructed in Kaasi, Kumasi. Production commenced a year later on 11 November 1971 with an installed capacity of 100,000 hectoliters. By 1977, the brewery was producing at maximum capacity. In tab. 2.1 mentioned indicators for output and sale.

**Table 2.1** 

General Performance Indicator of Output & sales									
Indicators20202021AbsoluteRelativeIncrease rate									
Revenue, GH¢'000	840,349	1,104,436	264,087	131.43%	31.43%				

The general performance of a company is one of the financial indicators of a company and shows the company's revenues, commercial product, gross output, cost of goods sold, value addition and finally net output.

It indicates how the revenues (money received from the sale of products and services before expenses are taken out, also known as the "top line") are transformed into the net income (the result after all revenues and expenses have been accounted for, also known as "net profit" or the "bottom line").

The purpose of the general performance indictor is to show investors whether the company made or lost money during the period being reported.

From the first indicator which is revenue ( $GH\phi'000$ ) as can be seen by 264,087  $GH\phi'000$  rise between the end of 2020 and 2021 fiscal year respectively. Thereby bringing an increase of 31.43%.

At the beginning of 2020 we can not a plummet in terms of revenue at Guinness Ghana Brewery Limited which was estimated to be at 840,349 GH¢'000 but rose up to 1,104,436 GH¢'000.

This is also an attribution in the increase noted in terms of value addition, thereby also amplifying the increase in terms of net output in 2021.

Let's bring into being with GGBL by performing horizontal analysis of Balance Sheet which consist values in Ghana cedis and actually changes, percentage changes and growth rate of financial fiscal year 2020 and 2021 across time (tab. 2.2).

Table 2.2 Horizontal analysis of Guinness Ghana Brewery assets in 2020-2021 years

Items	2020, GH¢'000	2021, GH¢'000	Differences GH¢'000	Growth Rate %	
Assets					
Cash and balances	39,563	46,424	6,861	17.342	
Inventories	117,966	187,973	70,007	59.345	
Right-of-use assets	47,641	42,987	-4,654	-9.769	
Trade receivables	25,237	51,305	26,068	103.293	
Amounts due from related parties	4,472	2,932	-1,540	-34.436	
Other financial assets at amortised cost	820	505	-315	-38.415	
Current income tax assets	4,753	5,971	1,218	25.626	
Other assets	2,413	3,525	1,112	46.084	
Intangible assets	1,611	915	-696	-43.203	
Property and equipment	476,247	540,698	64,451	13.533	
Total assets	720,723	883,235	162,512	22.548	

The tab.2.2 above shows the performance of GGBL assets, as there are changes in assets (Cash and balances increased by 6,861 GH¢'000, or by 17.34%, Inventories increased by 70,007 GH¢'000, or by 59.35%.

Trade receivables has experience increment by 103.3%, other assets increased by 46%.

Property and equipment increased by 13.5% and the total asset increased by  $162,512~\mathrm{GH}$ ¢'000 or grew by 22.55%.

This is a very good indicator for the company as it has shown a tremendous increase in the value of its assets for the financial year ending comparing 2020 and 2021.

In tab. 2.3 we can see horizontal analysis of Guinness Ghana Brewery liabilities and equities in 2020-2021 years.

Analysing of liabilities can help to identify all sources of enterprise's income forming, so everything that helped to earn activities.

Table 2.3
Horizontal analysis of Guinness Ghana Brewery liabilities and equities in 2020-2021 years

Items	2020, GH¢'000	2021, GH¢'000	Differences GH¢'000	Growth Rate %
Liabilities				
Deferred tax liabilities	29,146	30,203	1,057	3.627
Lease liabilities	29,871	29,571	-300	-1.004
Borrowings	109,253	108,825	-428	-0.392
Employee benefit obligations	3,423	3,931	508	14.841
Bank overdrafts	47,772	28,942	-18,830	-39.416
Lease liabilities	6,138	9,870	3,732	60.802
Trade and other payables	171,451	275,952	104,501	60.951
Amounts due to related parties	19,031	24,107	5,076	26.672
Total liabilities	416,085	511,401	95,316	22.908
Equity				
Share capital and premium	272,879	272,879	0	0.000
Retained earnings and reserves	31,759	98,955	67,196	211.581
Total equity	304,638	371,834	67,196	-0.359
Total liability and equity	720,723	883,235	162,512	22.548

Note that the base in this analysis is total liabilities and equities. The analysis indicates that the employee benefit obligations increased by 14.84%, lease liabilities increased by 60.80%, while bank overdrafts also fell or decreased by 39.42%. In general the company's borrowing is not encouraging between fiscal 2020 and fiscal 2021 years as it showed a decreased but relatively low.

Guinness Ghana Brewery Limited balance sheet vertical analysis (also called common size analysis) consists of analyzing financial statement amounts in comparison to a base amount (total assets when analyzing the balance sheet and total liabilities and shareholder's equities when analyzing the balance sheet).

Let's think through GGBL assets in tab. 2.4, where these changes relate to receivables, stock inventory, land, buildings, furniture and fixtures, construction in progress, accumulated depreciation (all of which have increased) and in other liabilities.

Table 2.4
Vertical analysis of Guinness Ghana Brewery assets in 2020-2021 years

Items	2020 GH¢'000	% Total	2021 GH¢'000	% Total
Assets				
Cash and balances with central bank	39,563	5.489	46,424	5.256
Inventories	117,966	16.368	187,973	21.282
Right-of-use assets	47,641	6.610	42,987	4.867
Trade receivables	25,237	3.502	51,305	5.809
Amounts due from related parties	4,472	0.620	2,932	0.332
Other financial assets at amortised cost	820	0.114	505	0.057
Current income tax assets	4,753	0.659	5,971	0.676
Other assets	2,413	0.335	3,525	0.399
Intangible assets	1,611	0.224	915	0.104
Property and equipment	476,247	66.079	540,698	61.218
Total assets	720,723	100	883,235	100

From the above calculations made, despite the fact that cash and balances grew in comparison with the two years, its share in the total asset dropped slightly by 0.2% which isn't bad for the company. The examination also point out that the primary asset with the highest shares is; property, plant and equipment with a decrease in share of assets of 4.86%, inventories increased in its share of the assets by 4.91%.

The Company changed its accounting policy on revenue recognition during the year in respect of accounting for excise duty. Excise duty is now accounted for as a production cost rather than a deduction from gross sales to enhance management reporting.

As a result of this change, net sales value and cost of sales are higher by GH¢129.7 million (2020: GH¢107.8 million). There is no impact on basic and diluted earnings per share as a result of this change. Let's consider the company's revenue from contracts with contractors, where we can see that the net sales value in comparing 2020

and 2021, grew significantly, indicating the positive dynamics of the operations of the company (tab. 2.5).

Table 2.5 Revenue from contracts with customers

Itomo	2020,	2021,
Items	GH¢'000	GH¢'000
Revenue recognized: At a point in time	840,349	1,104,436
Gross sales	1,041,234	1,388,812
Taxes collected for government (Value Added Tax)	(161,399)	(217,107)
Volume discounts	(39,486)	(67,269)
Net sales value	840,349	1,104,436

Let's consider tab. 2.6 which shows the general performance of individual items within 2021 and 2020, percentages of items in each year and the changes during a time period and the growth rate in each.

Table 2.6
Vertical analysis of Guinness Ghana Brewery liabilities and equity

Items	2020 GH¢'000	% Total	2021 GH¢'000	% Total
1	2	3	4	5
Liabilities				
Deferred tax liabilities	29,146	4.044	30,203	3.420
Lease liabilities	29,871	4.145	29,571	3.348
Borrowings	109,253	15.159	108,825	12.321
Employee benefit obligations	3,423	0.475	3,931	0.445
Bank overdrafts	47,772	6.628	28,942	3.277
Lease liabilities	6,138	0.852	9,870	1.117
Trade and other payables	171,451	23.789	275,952	31.243
Amounts due to related parties	19,031	2.641	24,107	2.729
Total liabilities	416,085	58	511,401	58
Equity				
Share capital and premium	272,879	37.862	272,879	30.895

#### Continuation of tab. 2.6

1	2	3	4	5
Retained earnings and reserves	31,759	4.407	98,955	11.204
Total equity	304,638	42	371,834	42
Total liabilities and equity	720,723	100	883,235	100

The table above shows liabilities and equity of the company where, trade and other payables increased by 7.45%, borrowings decreased by 2.84%, total liabilities increased slightly by 0.2% which is a negative sign for the company, stated capital decreased by 6.9% while retained earnings increased by 6.8%. Total equity decreased proportionally by 0.17%.

In conclusion, looking and examining the financial report of the company, it could be seen clearly that, the company keeps on putting measures in place to increase its assets to further the production and generating more revenue but it should also try to consider ways to reduce or minimize its payables whether to its suppliers or to its creditors and probably think of investing more into its operations to widen production scale and generate more income.

### 3. IMPROVEMENT OF GUINNESS GHANA BREWERIES'S INNOVATION ACTIVIES

## 3.1. Measures of improvement of the process of innovation activity on Guinness Ghana Brewery Ltd

Guinness Ghana Breweries Limited is a Ghanaian company that is predominantly involved in brewing and is a market leader in the Ghanaian brewing industry. The Company was founded in 1960 as Ghana Breweries Limited and later became Guinness Ghana Breweries Limited in 1990. Guinness Ghana Breweries Limited is a subsidiary of Diageo PLC which has its headquarters in London.

In 1971, a brewery was designed and constructed in Kaasi, Kumasi. Production commenced a year later on 11 November 1971 with an installed capacity of 100,000 hectoliters. By 1977, the brewery was producing at maximum capacity. In 1976 Government of Ghana by an Investment Policy Decree acquired 40% of the shareholding in the Company. Other shareholders were Guinness Overseas Limited (28.68%), Atalanta Limited (16.32%), Individuals (12.72%), Institutions (1.18%) and Employees (1.10%). The shareholding structure changed again when Government of Ghana divested its holding in the 1990s.

During the analysis, it is noticed that the company is faced with both favourable and unfavourable conditions that can ponder on the rendering of proper and the best implementation of innovation activity for the company. There are many laws and policies in relationship with trade and protection or even getting properties that can lead to fewer amounts of branches the brewery can have, which will lead to customers not satisfied because they need to go through some challenges to gain access to some of the service of the company.

Due to the present economic circumstances that almost all the enterprises globally are undergoing, companies are putting measures in place to implement an operative change management system to meet the current trend and to also stabilize its returns.

In order to put measures in place the range of various problems as well as group and simplify them slightly, a problem map was drawn, where all of the problems discovered were placed, bringing into being the interrelated map of causes and consequences, as well the ultimate need of the enterprise at its current state (fig. 3.1).

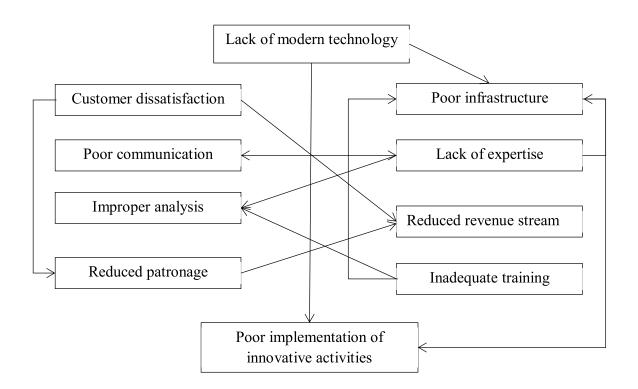


Fig. 3.1. Problem map of Guinness Ghana Brewery Ltd

From the above observations made into the company's activities, we can see that the company lack modern technologies or machines to effectively carry out its activities which directly have impact or influence on the implementation of innovative strategies or activities.

With everything happening it leads to customer dissatisfaction, which in turns affect the patronage of the goods and services of the company, which at the long run will affect revenue of the business, as a result of good customer service technology, time will come when customer service agents will no longer have to go to the office to work; they will do everything that is required of them at the comfort of their homes. For customers

to just be confined in call centers, they will want to work remotely and still do the same services.

Excessive fear have been in the company as well as lack of technology concern as in as much as it can be a problem but when technology is done to the level to which it will replace human activities, it will be another problem, the company will totally depend on only one person that will be in charge of everything and if anything goes wrong with that person, the whole system will be on hold.

Many manufacturing organizations, especially breweries in Ghana, find it difficult to survive today. Some manufacturing organizations have moved from Ghana to other countries due to unstable and unhealthy environmental variables such as electricity, government policies (poor exchange rates and poor inflation management).

These environmental, economic and poor governance tend to affect effective strategic planning and implementation in manufacturing sectors. Thus, the government needs to define a policy that is favorable enough to force companies to stay and work unhindered, providing employment opportunities for young people in the country.

Also, many manufacturing organizations seem to lack the necessary knowledge and experience to develop and implement innovative ideas and strategies that will stand the test of time to overcome this turbulent time, including Ghana's current economic recession. The company can either train or equip employees with the necessary skills, or probably try to hire people with the necessary skills and stop favoritism and communication in the hiring process.

This problem also includes the unsatisfactory amount and quality of manufacturing equipment, which is very important, as this company has its own production line and is highly dependent on the equipment they have and it's level of innovation. So it is of uttermost importance that the company considers getting some ultramodern technologies or equipment's in its production and manufacturing processes to further improve upon the quality of goods it'll produce as well the services it will be rendering to its prospect customers.

At first glance, the company looks extremely concerned about involving its stakeholders in strategy planning.

Main recommendations of improvement of the process of innovative activity on Guinness Ghana Breweries Ltd is shown in tab. 3.1.

Table 3.1

Recommendations of improvement of the process of strategic management on

Guinness Ghana Brewery Ltd

Problem	Measure	Description
	Introduction of mobile	Virtually every business has jumped on
Lack of modern	application systems	the mobile application trend. To provide
technology		customers with easy access and support
		issues.
	Trainings on communication,	
Poor communication	creation of groups, creation of	Will help in improving interactions
	suggestion box	between workers, employees and
		customers.
Improper business		Saves time and will help to understand
analysis	PERT, SWOT, PESTLE	when a business will be completed.
Poor implementation of	Develop a clear mission, work	Will aid in helping achieving the urgent
strategy	the plan	needs of the company
Poor infrastructure	Overhauling of infrastructure	Invest in infrastructural activities to help
		the company in its long term goals
		Help to understand the external
External problems	Portal Five forces	problems in the company and find the
		wonderful ways of solving them

And so, this analysis shows that all of these problems pile up to cause one big issue in the center of it all – the falling or reduction of company's profit levels, missed opportunities on the market, and not-so-leading position when it comes to innovation. All of these stated problems create a strong need for change in order to strengthen the increase of profit levels for the company and increase its competitiveness as a byproduct of improving the company's strategy.

## 3.2. PERT-chart for an implementation of a new innovation activity of the enterprise

In agreement with the recommendations that have been proposed in the previous subsection, in order to introduce a new service at the enterprise it is essential to implement a variety of activities. In order to plan the complicated set of interconnected activities the project evaluation and review technique (PERT) is widely used.

Project evaluation and review technique allows to: identify the list of works of the project; visualize order of works; determine the duration of each work and the whole project; identify the critical works of the project and its critical path; determine the reserves of time for each work.

It is necessary to plan duration and scope of work. For planning in PERT different types of required time are used, such as optimistic, pessimistic, more likely and expected.

Optimistic time (O) is the minimum possible time required to accomplish a task, assuming everything proceeds better than is normally expected. Pessimistic time (P) is the maximum possible time required to accomplish a task, assuming everything goes wrong (but excluding major catastrophes). Most likely time (M) is the best estimate of the time required to accomplish a task, assuming everything proceeds as normal.

And expected time (TE) is the best estimate of the time required to accomplish a task, accounting for the fact that things don't always proceed as normal (the implication being that the expected time is the average time the task would require if the task were repeated on a number of occasions over an extended period of time).

In order to implement an innovation project of providing a new service LLC "Smooth stout" have to perform a set of activities (fig. 3.2):

- 1. generating the idea of an innovation project;
- 2. developing an innovation project;
- 3. generating the idea of an innovation project;
- 4. developing an innovation project;
- 5. researching the market;

- 6. developing project documents;
- 7. protecting the intellectual property;
- 8. searching for equipment;
- 9. searching for suppliers;
- 10. ordering equipment;
- 11. installing equipment;
- 12. hiring a staff;
- 13. developing job descriptions;
- 14. training a staff;
- 15. starting to provide a new service.

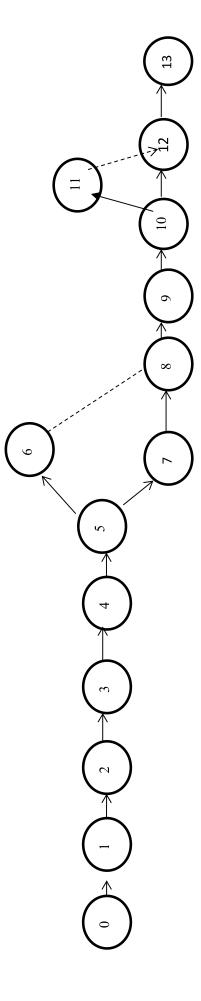


Fig. 3.2. PERT chart for an innovation project

**Table 3.2** 

#### List of works for a PERT chart

Work index	Work content
0 - 1	Generating the idea of an innovation project
1 - 2	Developing an innovation project
2 - 3	Researching the market
3 - 4	Developing project documents
4 - 5	Protecting the intellectual property
5 – 6	Searching for equipment
5 – 7	Searching for suppliers
6 - 8	-
7 - 8	Ordering equipment
8 - 9	Installing equipment
9 – 10	Hiring a staff
10 - 11	Developing job descriptions
10 - 12	Training a staff
11 – 12	-
12 – 13	Starting to provide a new service

For calculation of expected time the following formula is used:

$$TE = \frac{O + 4M + P}{6},\tag{3.1}$$

where, TE – expected work duration;

O – optimistic work duration;

M – most likely work duration;

P – pessimistic work duration.

In tab. 3.3 planning of work duration is presented with optimistic, most likely, pessimistic and expected one.

Table 3.3 Planning of work duration and work scope

		Du	Scope			
Work index	Work content	Optimistic	Most likely	Pessimistic	Expected	of work, person
0 – 1	Generating the idea of an innovation project	7	10	20	11	1
1 – 2	Developing an innovation project	4	7	10	7	2
2 - 3	Researching the market	6	8	14	7	1
3 – 4	Developing project documents	17	22	26	22	2
4 – 5	Protecting the intellectual property	5	6	9	6	1
5 – 6	Searching for equipment	80	90	110	92	10
5 – 7	Searching for suppliers	10	13	22	14	2
6 – 8	-	0	0	0	0	0
7 – 8	Ordering equipment	8	11	15	11	1
8 – 9	Installing equipment	8	9	12	9	3
9 – 10	Hiring a staff	5	9	6	10	2
10 – 11	Developing job descriptions	3	6	8	6	1
10 – 12	Training a staff	4	5	7	5	1
11 – 12	-	0	0	0	0	0
12 – 13	Starting to provide a new service	1	1	1	1	4

So the most hard-wearing work is searching for equipment because choice of equipment defines a technology of service providing which is critical for quality.

Calculation of the time characteristics of events is presented in the next table which is tab. 3.4. It gives a possibility to define earliest and latest start and finish for activities within all the project, and float that is a measure of the excess time and resources available to complete a task.

Table 3.4

#### Calculation of the time characteristics of events

i							J								$T_i^1$
1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	ı <sub>i</sub>
0		11													11-11=0
1			7												18-7=11
2				7											25-7=18
3					22										47- 22=25
4						6									53-6=47
5							92	14							134- 14=120 145- 92= <b>53</b>
6									0						145- 0=145
7									11						145- 11=134
8										9					154- 9=145
9											10				160- 10=154
10												6	5		170- 5=165 170- 6= <b>164</b>
11													0		170- 0=170
12														1	171=1=1 70
13															171
$T_j^e$	0	0+11 11	11+7 18	18+7 25	25+22 47	47+6 53	53+92= 145	53+14 67	145+0 = <b>145</b> 67+11	145+9 154	154+10 164	164+6 170	164+5 =169 170+0	170+1 171	-
		11 - 11	18-18	25-25	47-47	53-53	145-145	134-67	78 145-145	154-154	164-164	170-170	170 170-170	171-171	
R	0	0	0	0	0	0	0	67	0	0	0	0	0	0	-

Floats for each event (R) is calculated by a formula:

$$R = T^{I} - T^{e} \tag{3.2}$$

where,  $T_j^l$  – latest term for event j;

 $T_j^e$  – earliest term for event j.

For calculation a total float (TF) it is necessary to use following formula:

$$TF = T_{i}^{1} - t_{ij} - T_{i}^{e}, (3.3)$$

where,  $T_i^1$  – the latest finish of activity i-j;

 $t_{ij}$  – duration of activity i-j;

T<sub>i</sub><sup>e</sup> – the earliest beginning of the activity i-j.

For calculation an early float (EF) it is necessary to use following formula:

$$EF = T_{i}^{e} - t_{ii} - T_{i}^{e}, (3.4)$$

where,  $T_i^e$  – the earliest finish of the activity i-j.

For calculation a late float (LF) it is necessary to use following formula:

$$LF = T_{j}^{1} - t_{ij} - T_{i}^{1}, (3.5)$$

where,  $T_i{}^l$  – the latest beginning of the activity i-j.

For calculation a free float (FF) it is necessary to use following formula:

$$FF = T_j - t_{ij} - T_i$$
 (3.6)

Calculation of the floats for the innovation project is presented in the tab. 3.5

**Table 3.5** 

#### **Calculation of floats**

Wor	Beginning of the activity			End of the activity		Floats			
k index	$T_i^e$	$T_i^1$	$t_{ij}$	$T_j^e$	$T_j{}^1$	Full float	Early float	Late float	Free floa t
1	2	3	4	5	6	7	8	9	10
0 – 1	0	0	11	11	11	0	0	0	0
1 - 2	11	11	7	18	18	0	0	0	0
2 - 3	18	18	7	25	25	0	0	0	0
3 – 4	25	25	22	47	47	0	0	0	0
4 – 5	47	47	6	53	53	0	0	0	0
5 – 6	53	53	92	145	145	0	0	0	0
5 – 7	53	53	14	67	134	67	0	67	0
6 – 8	145	145	0	145	145	0	0	0	0
7 – 8	67	134	11	145	145	67	67	0	0
8 – 9	145	145	9	154	154	0	0	0	0
9 – 10	154	154	10	164	164	0	0	0	0
10 – 11	164	164	6	170	170	0	0	0	0
10 – 12	164	164	5	170	170	1	1	1	1
11 – 12	170	170	0	170	170	0	0	0	0
12 – 13	170	170	1	171	171	0	0	0	0

So it can be seen from the above calculations made that, only three of the activities the company will be performing in relation to its new innovation process have floats. It causes quite high level of risk, so for successful implementation this project needs strict control of time to complete tasks.

According to our calculations, work 5-7 has a full and late float of 67 days and work 7-8 has a full and early float of 67 days and work 10-12 has a float of 1 day. That means, that company can delay working out a business plan by 25 days, buying special software can be delayed by 8 days and so can acquisition of specific equipment or testing this hardware and software.

To conclude, the PERT-chart shows that for widening the range of services provided by Guinness Ghana Brewery Ltd, the 171 days are needed concerning the overall planning and executing of the innovation activity of the company.

The PERT-chart analysis improves planning and decision making by integrating the presentation of data across various departments. The data collected from the various sources can also help improve coordination of project activities and effective communication between various departments.

In conclusion, this chapter tackled various ways the company or enterprise can come up with strategies or methods in dealing with the current problems it faces in its operational activities. And in coming up with a new innovative project to see to the growth and expansion of the business's activities, we used the PERT-chart analysis and more explanations on that have been given or detailed prior to the beginning of the sub chapter 3.2. And as we all can agree to the fact that innovation is the cornerstone of sustained economic growth and prosperity and that every business entity that want to make it big in this new generation needs to be very innovative and creative in adapting to changes and trends in the economy.

Innovation means using new technology and using new ways of thinking to add value to an existing idea or product and to make substantial changes in society. And people every day, whether in business or not, have bright ideas and make initial discoveries about new or improved products, services or processes. Generating ideas and being innovative are important contributors to success in business. It is very important to evaluate innovative activities because innovation brings about creative development, ensures continuous improvement, reinforce the company's brand, responds to competition and trends in the industry and guarantee a unique selling point to attract more customers and generate more revenue for the company.

#### **CONCLUSION**

The intention behind this exposition was to investigate the management of innovation activities at the Guinness Ghana Brewery Ltd in order to discover the current innovation activities and solving the queues problem and to make vibrate point of sales system in Ghana through the initiative of Guinness Ghana Brewery Ltd.

Ghanaian beverage industry still encourage more effective innovation activities so that they will be able serve their customers well, with Guinness Ghana Brewery Ltd as the regulator have capacity to initiate more innovation programs to facilitates the enterprise's activities boosting its revenue streams.

In the first chapter we discovered the theoretical foundations of the organization's innovation management and activities where we got to see different views of several authors and their thoughts and ideas about the subject area.

In the second chapter too, we laid down a general overview of Guinness Ghana Brewery Ltd, where the organizational structure and the activities of the organization was detailed and also performed the economical, technical, and financial analysis of Guinness Ghana Brewery Ltd.

The final and the third chapter examined the current innovative activity of Guinness Ghana Brewery Ltd, suggested a new approach to innovative activity of the enterprise and developed recommendations of improvement for Guinness Ghana Brewery Ltd.'s innovative plans and strategies in the near future.

Various recommendations were suggested for the company to implement in reducing or tackling the problems it is facing currently and some of those are; Introduction of mobile application systems, Trainings on communication, creation of groups, creation of suggestion box, Develop a clear mission, work the plan, etc.

#### LIST OF REFERENCES

- 1. Abernathy W. J. Technological revolution / W. J. Abernathy, K.B. Clark publishing translucence maps. –2001, P. 16 –17.
- 2. Abor, J. Technological Innovations and Banking in Ghana / J. Abor. Ife Psychologia. Vol.1 3 (1). Publishing, P. 170–187.
- 3. Abu S. Adoption the financial solutions (Internet Banking and Mobile Banking) / S. Abu.—African Finance and Economics Consult African Review of Economics and Finance. Vol. 6, No. 2, Publishing, December 2014,. P. 88–114.
- 4. Amanfo, G. O. A Study on the Role of E-Banking and its Relation to Customer Satisfaction in the Banking Industry of Ghana / G.O. Amanfo. Ashesi University College, Publishing, 2010 24 p.
- 5. Argyris C. Information Technology and Managing Quality Education / C. Argyris. Schon publishing, 2006. 26 p.
- 6. Arrow, K. Economic welfare and the allocation of resources for inventions.
  Princeton University Press, Princeton, NJ. -1962. 2 p.
- 7. Astebro T., Dahlin K. Opportunity Knocks. Research Policy, 2005. [Electronic source]. Access mode: www.rotman.utoronto.ca/bicpapers/pdf/03-04.pdf
- 8. B. Hall, N. Rosenberg. Handbook of the Economics of Innovation. Vol. 2, Amsterdam: Elsevier North Holland, 2010. 761 p.
- 9. Baldwin and Sabourin. Modest competition influences most on product innovations and combined product, 1999. 24 p.
  - 10. Baldwin and Sabourin. Research of Canadian food industry, 1999. 32 p.
- 11. Baldwin, J. R., Sabourin D. Innovative activity in Canadian food processing establishments: the importance of engineering practices&quot. International Journal of Technology Management, Vol. 20, No. 5/6/7/8, 2011. 527 p.

- 12. Bartzokas, A. Portuguese SMEs and innovation financing: financial markets, industrial restructuring and technological investment in Southern Europe: 2000. 12p.
- 13. Becker O. S., Egger H. P. Endogenous Product versus Process Innovation and a Firm. Propensity to Export&quot. Working Paper No.1906 [Electronic resource]. Access mode: www.cesifo-group.de/~DocCIDL/cesifo1 wp1906.pdf
- 14. Betz F. Wiley. Managing Technological Innovation: Competitive Advantage .- Wiley, New York, 2003. 26 p.
- 15. Bonanno, G., Haworth B. Intensity of competition and the choice between product and process innovation / International Journal of Industrial Organization, Vol 16, No. 4, 2008 510 p.
- 16. Carmeli. Importance of innovation leadership for a firm and how it supports the firm,  $2016. 206 \, \text{p}$ .
- 17. Caron, F., Erker, P., Fischer, W. Innovations in the European Economy between the Wars. Berlin, New York: de Gruyter, pages. vol. 50, 1995, P. 28 35.
- 18. Caron, J., Jarvenpaa, S., Stoddard, D. Business reengineering at CIGNA corporation: experiences and lessons learned from the first five years, MIS Quarterly. Vol. 18, No. 3, 1994. 250 p.
- 19. Caves, R. E. Multinational enterprise and economic analysis: Cambridge University Press, Cambridge, 1996 15 p.
- 20. Christensen, C. M. The innovator dilemma: HarperCollins, New York,  $2003-245~\mathrm{p}.$
- 21. Cohen, W., Klepper S. Firm size and the nature of innovation within industries: the case of process and product. Review of Economics and Statistics, Vol. 78, No. 2, 1996. 243 p.
- 22. Crossan A. Exploitation of a value-added novelty in economic and social spheres, 2010. 1155 p.

- 23. D. Austin; J Essinger; R. Proctor, A. Nilson. The impact of electronic technology on banking and financial services., Volume 1, 2013. 414 p.
- 24. Damanpour E. Theories of organizational structure and innovation adoption: the role of environmental change / Journal of Engineering and Technology Management, vol. 15.-409 p.
  - 25. Daniele A. Information-intensive strategies / A. Daniele. –97 p.
- 26. David Knights. Organization and Innovation Darren McCabe, 2003. 207p.
- 27. Davila, T., Epstein, M. J., Shelton. Making innovation / Warton School Publishing, New Jersey, 2006. 105 p.
- 28. Dosi G., Soete L. Some Explorations on the Determinants of International Competitiveness / Metroeconomica, Vol. 35, 1983 –222 p.
- 29. Dosi, G. The nature of the innovation process / G. Dosi, C. Freeman, R. Nelson, G. Silverberg, L. Soete // Technical Change and Economic Theory, Pinter, London, 2012. 24 p.
- 30. Dr. Friday O. Okpara. The value of creativity and innovation in entrepreneurship / University of gondar, Ethiopia, 2007. 2 p.
- 31. Dr. Suna Polat and Enterprise Innovation Management Solutions Landscape / Connecting the Dots, 2015. 4 p.
- 32. Emery and Trist. Lewin Innovation for Adaptability and Competitiveness, Leixlip, 2004. 6 p.
- 33. Everett M. Rogers Adoption of financial innovation in the Ghanaian banking industry, 1995. 225 p.
- 34. Feldman and Kogler. International Journal of Asian Social Science, 2017, 7(1): 97. 109 p.
- 35. Feldman, M., Desrochers, P. The evolving role of research universities, 2003. 206 p.

- 36. Feldman, M., Kogler, D. Stylized facts in the geography of innovation,  $2010.-95~\rm p.$
- 37. Keirstead, Freeman. Categorize various types of technical change and distinguish among others. –223 p.
- 38. Kemp R. Peter Pearson Strategies for Sustainable Technologies and Innovations. MEI project about Measuring EcoInnovation, 2008.–50 p.
  - 39. Kimberly. Organizational adaptability,1981. 429 p.
- 40. Prajogo research the effects of different business environment on various types of innovations that lead the business performance, 2016. –108 p.
- 41. Souder and Shrivastrava. Garcia and CalantoneUtterback, specialization and localized competetion, European Economic Review. 429 p.
- 42. The Guinness Ghana Brewery [Electronic resource] / Reuters website. Access mode: https://africanfinancials.com/document/gh-ggbl-2021-ar-00/
- 43. What is a business? [Electronic resource] / Indeed website. Access mode: https://www.businessmanagementideas.com/business/business-definition/20329

#### **APPENDICES**

# Appendix A Financial statement of Guinness Ghana Brewery

Table A.1
Balance sheet of Guinness Ghana Brewery

~.	Year		
Items	2020, GH¢'000.	2021, GH¢'000.	
Assets	•		
Cash and balances	39,563	46,424	
Inventories	117,966	187,973	
Right-of-use assets	47,641	42,987	
Trade receivables	25,237	51,305	
Amounts due from related parties	4,472	2,932	
Other financial assets at amortised cost	820	505	
Current income tax assets	4,753	5,971	
Other assets	2,413	3,525	
Intangible assets	1,611	915	
Property and equipment	476,247	540,698	
Total assets	720,723	883,235	
Liabilities			
Deferred tax liabilities	29,146	30,203	
Lease liabilities	29,871	29,571	
Borrowings	109,253	108,825	
Employee benefit obligations	3,423	3,931	
Bank overdrafts	47,772	28,942	
Lease liabilities	6,138	9,870	
Trade and other payables	171,451	275,952	
Amounts due to related parties	19,031	24,107	
Total liabilities	416,085	511,401	
Equity			
Share capital and premium	272,879	272,879	
Retained earnings and reserves	31,759	98,955	
Total equity	304,638	371,834	
Total liability and equity	720,723	883,235	

The income statement of Guinness Ghana Brewery

Items	2021, GH¢'000	2020, GH¢'000	
Revenue	1,104,436	337 006 267	
Cost of sales	(786,876)	(652,520)	
Gross profit	317,560	187,829	
Expenses	195,459	144,619	
Profit from operating activities	122,101	43,210	
Finance income	610	285	
Finance costs	(21,743)	(23,345)	
Profit before tax	100,968	20,150	
Income tax expense	(24,393)	(6,985)	
Profit after tax	71,527	12,157	

Appendix B
Article

#### Theoretical basics of enterprise innovative activity

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In the article was given definition of term "innovation", presented theoretical concepts concerning importance of innovations in general. Beside this were shown types of technical changes in innovation which help to understand background of different manifestation in this sphere.

У статті дано визначення поняттю «інновація», представлено теоретичні уявлення щодо значення інновацій в цілому. Крім того, були представлені види технічних інноваційних змін, які допомагають зрозуміти передумови різного прояву даної сфери діяльності.

В статье дано определение термина «инновация», представлены теоретические представления о значении инноваций в целом. Кроме того, показаны виды технических изменений в инновациях, которые помогают понять предпосылки различных проявлений в этой сфере деятельности.

Key words: innovation, innovation activity, management, planning, strategy.

Ключові слова: інновація, інноваційна діяльність, управління, планування, стратегія.

Ключевые слова: инновация, инновационная деятельность, управление, планирование, стратегия.

Change takes place no matter what deters it. Today, innovation is the only constant and an organization's long term success is determined by its ability to manage and successfully implement change. Companies implore great effort in the opposition and improvement in the market by familiarizing innovations.

Organizations need to re-evaluate their methodology to innovation. Companies and administrative circles in both advanced and developing countries that wish to grow fast and to accomplish developmental objectives, have to put to first innovation research as: Birkinshaw et al., Blyznyuk T., Geets V., Ignacio Gabriel V., Ken V., Lazonik M., Lepeyko T., .Milan S., Suna P., Yastremska O. and amongst others.

Innovation is defined as the speed, general research, and development consequence that incorporate a compact base of technological science, ability to create new technology that replaces the current one and power to apply it in

satisfying the developing and changing marketing market. Innovation has various phases that are evaluated in literature as discussed: management innovation, cultural innovation, market innovation, and technical innovation. The variable affecting a firms' innovation predisposition is mainly involves decision-making, senior leadership in a firm like Guinness, and the support accorded by top tier management towards any efforts involving innovation and product development.

For some people it means a new idea, for others it means an invention (a materialized new idea), for some it means a new product (a developed invention), for some others it means the act of creating a new product or process, while for others it means to create a new business. One example of a definition that only covers the introduction of new ideas, service and practice on the market was the definition given by Kemp and Pearson [1]: "Innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practice. The innovation that is being developed or adopted may be new to the world or new to the company".

Production potential determines the prospects and horizons of industrial development of the enterprise. Most Ukrainian companies with outdated material and technical base do not have the opportunity to implement innovation processes, upgrade fixed assets, improve the process, increase production capacity, and all this due to lack of sufficient funds. The consequence of these circumstances is the low quality of their products and reduced demand for it. Therefore, it should be noted that companies that do not have the opportunity to update the process are inefficient, often the growth rate of costs exceeds the growth rate of revenue. The market value of such enterprises can be reduced in a short period of time by a significant amount. A new technological breakthrough can significantly affect the competitive environment of the organization. If an organization has developed a new technology, it can be considered their new competitive advantage. Therefore, practitioners must conduct an effective analysis of the macroenvironment to identify and monitor the pace of technological change within its own industry. Aspects such as product and technological innovation, marketing methods, attracting human resources are characteristic features of modern technological changes in the environment. Variable factors influencing this process are influenced by long-term strategic decisions made by management. These factors are called the "innovation strategy" of the firm [2].

Abu S. [3] research express that provider ruled firms have a particular and critical technological direction and can be similarly creative by getting hardware and capital materials. The different types of specialized change and recognize among others are been arranged beneath in table 1.

Table 1

Type of technical changes in innovation [4]

Stages	Types of technical changes	Descriptions
1	Incremental Innovations	A series of small improvements to an existing product or product line that usually helps maintain or improve its competitive position over time.
2	Radical Innovations	These are discontinuous events and in recent times is usually the result of a deliberate research and development activity in enterprises and/or in university and government laboratories.
3	New Technological Systems	Keirstead, in his exposition of a Schumpeterian theory of economic development, introduced the concept of "constellations" of innovations, which were technically and economically interrelated.
4	Technological Revolutions	These are far-reaching and pervasive changes in technology, affecting many (or even all) branches of the economy, as well as giving rise to entirely new sectors. Characteristic of this type of technical change is that it affects the input cost structure and the conditions of production and distribution for almost every branch of the economy.

These days, specialized change and advancement assume an ever increasing number of a major part in different fields. Specialized change can show in a few kinds of innovation which have different force. The orders and estimations of specialized change are significant pointers for the financial development, the customers' conduct, the examination of global exchange and the assessment of money related and monetary strategies. The estimation of innovation is the way in to the anticipating and the executives of item and interaction advancements.

In the process of analysis and evaluation of innovation it is important to identify not only stimulating factors but also deterrents. Researchers' research suggests that the main internal factors constraining the innovative activity of enterprises are: lack of financial resources, low potential of the enterprise to develop and implement novelty and lack of qualified personnel. Among the general problems with the scientific sphere are: low motivation of researchers; high cost of research; low level of development completion. Therefore, innovation in the context of scientific research is a continuous improvement of existing characteristics of economic categories in order to achieve goals based on external and internal factors.

#### References

- Pearson Power School. [Electronic resource]. Access mode: https://support.kemptechnologies.com/hc/en-us/articles/115001273386-Pearson-PowerSchool
- Dosi G. The nature of the innovation process / G. Dosi, C. Freeman, R. Nelson, G. Silverberg and L. Soete (eds), Technical Change and Economic Theory, Pinter, London: 2012, 24p.
- 3. What is a business? [Electronic resource] / Indeed website. Access mode: https://www.businessmanagementideas.com/business/business-definition/20329
- 4. Betz F., Wiley. Managing Technological Innovation: Competitive Advantage. Wiley New York: 2003, P. 15 26.

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