listened too much to their users. Branding is really about differentiation, about standing out. User centeredness leads to the opposite, similarity.

2.17 Manufacturer-led Innovation

• This is also referred to as Business-led or company-led innovation. The manufacturer and employees are the source of innovation.

2.18 Collaborative Innovation

The term 'collaborative innovation' is used to describe innovation that is performed by individuals or teams from multiple organisations, such as companies, academic institutions or government bodies, as distinct from innovation performed within a single organisation.

2.17 Business Model Innovation

• Business Model Innovation refers to the creation or reinvention of a business itself. Whereas innovation is more typically seen in the form of a new product or service offering, a business model innovation results in an entirely different type of company that competes not only on the value proposition of its offerings, but aligns its provit formula, resources and processes to enhance that value proposition, capture ev neaket segments

- and alienate competitors.
 General Important Points about Implation
 According to de OECD, innovation is the implementation of a new or significantly indicated product, good of eacher or process a new marketing mathed. marketing method, or a new marketing method, or a new organizational method in business practices, workplace organization or external relations of a company.
 - A broad definition such as the OECD definition above, encompasses a wide range of innovation types, in narrower terms innovation can be related to one or more of its forms, for instance product and process innovations.
 - Innovation takes place not only when technologies are developed but also in business practice, workplace organization and companies' external relations. Innovation may originate in the R&D sector within or outside of company research centres.

The major features include that innovation:

 \checkmark Is associated with uncertainty over the outcome of innovation activities.

It is not known beforehand what the result of these activities will be, e.g. whether R&D will result in the successful development of a marketable product or how much time and resources will be needed to implement a new production process, marketing or organizational method, and how successful these will be.

Customer visit team

- \checkmark With this approach, visit teams (cross-functional, typically three people) visit your customers or users; they use in-depth interviews based on a carefully-crafted interview guide to uncover user problems, needs, and wants for new products.
- \checkmark The major advantages users claim are the ability to identify and focus on customer problems and unspoken needs during these interview sessions, a vital source of product ideas.
- \checkmark The main challenges are getting customers to cooperate -to agree to the session and to provide honest answers, finding the time to do this valuable study -in-depth interviews at multiple customer sites do take more effort than most of the methods, training the interviewers, and designing a robust interview guide with the right questions.
- \checkmark In spite of the challenges, however, this Voice of Customer (VOC) visit team method is definitely recommended.

Lead user analysis

eustomers, then innovative The theory is that if one works with inpove \checkmark product ideas are the result. The test if we fit entails assembling a group of or users (a group workshop) to identify particularly innovative casto h problems and potent a solutions

antage of lead of Panalysis is that innovative customers, who are ahead of the wave, an near differentiate likely to have your next new product idea; and this method is how you can uncover what it is.

 \checkmark The major challenges are identifying who the innovative customers are, getting them to participate in an off-site workshop, and then structuring and running the workshop session properly.

Partners and vendors

- \checkmark This method entails seeking ideas from outside partners and vendors
- \checkmark The advantages of this method are that vendors and partners bring to the table technical capabilities that may be beyond your scope of expertise. Buried within these capabilities are the seeds of your next great new product. The trouble is that vendors or partners may be equally as uncreative at ideation as you are hence you cannot expect a plethora of great ideas from this source. Nonetheless, because it is a tried-and-proven approach, is quite popular, and yields decent effectiveness ratings.
- **External Product designs**

According to Annamaria Wilis (2010) an innovation audit carried out by individuals or organisations before they embark on their innovation programmes should be in terms of the following;

- Knowledge
- Competencies
- Attitudes •
- Behaviours •
- Knowledge
 - ✓ Knowledge of industry and markets
 - \checkmark Deep knowledge of customers and competitors, who are the best and why.
 - ✓ Knowledge of different but related products and services including substitutes.
 - \checkmark Understanding of business environment including technologies, policies, legislation etc.
- Competencies
 - ✓ Creative thinking, able to challenge and identify new market opportunities
 - ✓ Analytical skills- how to design significant improvements

 - Project management- to define, plan, monitor and control change to indies
 Risk management- able to think ahead, identify, privatise and mitigate barriers to success.
 itudes
 ✓ Determine how people work
 ✓ Positine approach- operating in hope of success rather than fear of failure
- Attitudes

 - So king synerging on a collaboration. Be able to link with others
 - Inquisitive min set curosity about doing things differently and willing to change status quo.
 - \checkmark Breakthrough thinking- continually seeking to dramatically improve the way things are- never settling for the average or second best.

Behaviours •

- \checkmark They determine conduct
- \checkmark Determination- always sees things through, resilient in the face of failure.
- ✓ Visible and active support-making it clear you actively support others engaged in innovation.
- \checkmark Encouraging others- mentoring and coaching others, being the catalyst for the team. Being a visionary.
- ✓ Positive challenge- helping and supporting others to think differently.

An innovation audit might also consider the following;

- ✓ Strategy
- ✓ Resources
- ✓ Organisational culture
- ✓ Teams
- ✓ Leadership and management

An alternative is to adopt the McKinsey's 7S based on the following;

- \checkmark Strategy- This considers questions about strategic plans, innovation and change.
- ✓ Structure This considers questions of roles and responsibilities.
- \checkmark Systems This looks at the processes which govern the organisation's actions.
- \checkmark Skills This reviews the skills within the organisation as well as identifies what gaps exists within the skills set.
- \checkmark Staff –This considers personnel and team aspects.
- \checkmark Styles This touches on organisational culture and tools adopted.
- \checkmark Shared values- This touches on culture, vision, rewards and attitude of employees.

A summary of the benefits of an innovation audit is as follows:

- \checkmark \Box It enhances the company's innovation capability;
- \checkmark \Box It identifies opportunities for increasing innovation;
- \checkmark \Box It clarifies where the organisation needs to focus to maximize innovation success;
- \checkmark \Box It embeds innovation in the company's processes;
- \checkmark \Box It can build on individuals' creativity to be innovative;
- \checkmark \Box It can identify and control the barriers that stifle creativity and innovation;
- \checkmark \Box It fosters innovation in the organisation's culture.

3.8 Disciplines of Innovation

- Disciplines of Innovation
 Companies find it difficult to menage them innovation processes systematically. They rely on spontaneous or admic celetitivity and charismatic section professionals.
 Most clear to not come as acreate of inspiration to a location now people create contour and charismatic section like merities.
- tools, rules and disciplines.
- Innovation disciplines are guidelines and procedures that help entrepreneurs and organisations systematize their process of innovation.

Why systematize

- Because the need for innovation is becoming greater as the context is becoming greater for the creative industries is changing.
- New technological platforms
- More institutional change (regulatory requirements)
- New products for new markets.

3.8.1Innovation disciplines

- A systematized method
 - ✓ Coming up with new ideas that work requires a discipline. A systematized method applied from idea generation right through to implantation.
- Purpose
 - \checkmark The ideas have to have a purpose. The process asks the question- what is important not what interests us.
- Understand customer needs

- ✓ What is important is developed from understanding what the customer needs- that understanding comes from observation and engagement.
- Practical input
 - \checkmark The method requires practical input (how) all the way through from people who have that expertise.
- Review, reflect and develop
 - ✓ The method requires frequent reviews, reflection and development.
- Quantify results
 - \checkmark Results (what will happen if we do x) have to be quantifiable to be credible.
- Build on what is known
 - ✓ The process is knowledge compounding that is it builds on what is known rather than starting from scratch.

3.8.2 Principles of innovation according to Thomke

- Thomke outlines six principles companies can follow to unlock their innovative potential. These are;
 - ✓ Anticipate and exploit early information through front loaded innovation process.

Innovation must be continuous. Front loaded innovation processes in can that the organisation should have a culture of innovation long ation that is continuous and on-going. The innovation must not be achieved

Experiment frequently hat do not overload our organisation.

Research and development must be present to research. It must not be overemphasised ecause research and evelopment is expensive.

Integrate new Indexactional technologies to unlock performance.

We use existing technologies for example morphological technologies where we tear and dismantle a product to see what it is made of, how it is made and the opportunities for innovation.

We merge traditional technologies with new technologies.

✓ Organise for rapid experimentation.

Experiments should be done quickly but carefully. Ideas need to be experimented quickly. Try every word that comes on board. Feasibility studies need to be carried out.

✓ Fail early and often but avoid mistakes.

When organisations work on their innovation programmes they need to find out as early as possible problems that might affect the innovation out the programmes so that they can see that what they are doing is possible or not before they expend a lot of resources.

✓ Manage projects as experiments

When organisations work on their innovation projects they should do so scientifically.

patience and flexibility to establish a mass consumer market. Studies suggest that the success of product pioneers ranges between 25% for consumer products and 53% for higher technology products depending on technological and market conditions.

NB Factors that impede an organisation from realizing benefits from its innovation are not limited to the above factors. There are numerous factors, read widely.

4.4 Diffusion and Adoption of Innovations

The term "**diffusion**" term comes from the Latin word meaning "to spread out". Gases and vapors are the examples that fit the definition of the term. They slowly expand and spread through available space. "Diffusion" is a concept that is linked with the idea of innovation. The terms "**diffusion of innovations**" and "**spread of innovations**" can be used interchangeably.

The term "imitation" was used by some scientists instead of "diffusion". Many people also have used "technology transfer", but this term refers to spread of technology from one industry to another, or among different economies. In some contexts diffusion may be analogous to the spread of information, but our concern here is the spread of physical items or techniques and practices. Some use the term "innovativeness" as a characteristic of the organization that shows the degree to which an organisation wants to invent or adopt an innovation.

"Innovation Adoption" and "Innovation Diffusion" are been used interchangeably in the literature on innovation. It can be defined as a defined on process from the industry viewpoint, but from the organizational viewpoint from the term "innovation acopted." An be used. Diffusion process may also take place within the organizations.

Diffusion is effined by some of one of the production function or product range economic units which are not the originators. It is also viewed a phase of technical change. According to other scholars diffusion is the stage where the benefits of an innovation are generalized. From the innovator, the innovation passes through other users until it finally becomes a commonplace and accepted part of productive activity.

4.4.1 Categories of Innovation diffusion and adoption

Diffusion of innovation takes place in two forms. These are diffusion of the innovations in the industry or market and diffusion in the organisation. Diffusion of the innovation relates to early or late adopters and diffusion in the organisation is interested in the organisational characteristics.

4.4.1 Factors influencing innovation diffusion and adoption in the market

What factors affect the adoption and diffusion of innovation in the market?

A number of characteristics of an innovation have been found to affect diffusion (Rogers, 2003) These innovation attributes are related to adoption of the innovation. These characteristics were suggested to show how individuals' perceptions of innovations may be utilized in predicting the rate of adoption;

Complexity

It is the degree to which an innovation is perceived to be difficult to understand or use. In general, innovations that are simpler for potential users to understand will be adopted more rapidly than those which require the adopter to develop new skills and knowledge.

Trialability

It is the degree to which an innovation can be experimented with on a limited basis. An innovation that is trialable represents less uncertainty to potential adopters and allows for learning by doing.

Innovations that can be trialed will generally be adopted more quickly than those which cannot. The exception is where the undesirable consequences of an innovation appear to outweigh the desirable characteristics.

In general, adopters wish to benefit from the functional effects of an innovation, but avoid any dysfunctional effects. However, where it is difficult or impossible to separate the tencable from the undesirable consequences, trialability may reduce the rate of adoption U Notesale

Observability

It is the degree to which the certain of an innovation are visible to others. The easier it is for others to see the benefit of in innovation, the move likely it will be adopted. The simple epidemic model of actusion assumes the innovations spread as potential adopters come into contact with cutsting users of plant wat on.

4.5.0 Approaches to Innovation

There are two approaches to undertaking innovation in organisations. These are;

- ✓ Closed innovation
- \checkmark Open innovation

4.5.1 Closed innovation

It was used almost exclusively from the end of World War II (1945) until the middle 1980s. Its main tenet was best summarized as "Not Invented Here." In other words, ideas that came from outside the company were viewed skeptically.

Innovation occurs within the boundaries of an organization and is performed by the company's own employees within its internal R&D function.



Once open innovation is adopted, the organization's boundaries become permeable and that allows combining the company resources with the external co-operators.

The difference between open and closed innovation is that in the case of closed innovation the ideas, inventions, investigations and developments required to place a product in the market, are generated within the company. However, when applying the ten innovation system, the company can use external resources such as technology and a the same time make available their own innovations to other organizations.

Under the open innovation palacign there is an upper of flow of external knowledge into the organization which that into projects in composition with external partners and causes the purchase and incorporation of external technologies. At the same time, the innovations generated within the company can be sold as technology and/or industrial property to other organizations since either they are not applicable within their business model or because the company has no capacity or experience to develop the invention. The final result is that some products reach the market by using exclusively internal resources from the initial idea up to the commercialization of the final product. Other products are the result of incorporating external knowledge at different stages of their development.

Advantages of Open innovation

There are clear advantages of opening the innovation process to the flow of ideas and knowledge in both directions. They can be summed up as follows:

Reduction in the time and cost of innovation projects

Incorporation of solutions and innovations in the form of ideas, patents, products and technologies which would have never been generated by the company due to lack of time, knowledge and technological resources

Commercialization of inventions which are due to lack of ability or to strategic reasons cannot be placed in the market by the company owning them.

- ✓ This type of entrepreneurship only fits the original Schumpeterian definition if the transformation involves innovation, a new arrangement or combination of resources, and results in the creation of sustainable economic value.
- ✓ A middle manager at Sun Financial Group reorganized the internal value chain of his department in order to create a new and unique service proposition to their agents. As a result, the company's service delivery was given both a speed and cost advantage over their competitors. In fact, this manager wound up using fewer resources in developing his new business model.

Industry rule-breaking

- \checkmark It is a subset of transformation, but involves not only transformation of the enterprise but also the competitive environment of the industry into something significantly different than it was.
- ✓ Stopford and Baden-Fuller (1993) calls it "frame-breaking change".
- Toyota for example, in the automobile industry, charged the rules of the game by producing low cost automobiles with exceptionary dagn quality. US and European auto manufacturers were forced by Toyota and other Japanese automakers to follow suit. Thus, Toyota not only tastformed itself, but are helped to start a wholesale transformation of the influstry.
 Commendatives in the four Typologues

The four forms of Corporate entrepreneurship share common elements with each other and with external or start-up entrepreneurship. These common elements are;

- ✓ The creation of something new that did not exist before. This something "new" could be a new business-within-a-business, a product, a service, a delivery system, or a new value proposition to the customer.
- ✓ These "new things" require additional resources and or changes in the pattern of resource deployment within the organization.
- ✓ Learning takes place in both the creation of the "new thing" and its implementation which results in the development of new organizational competencies and capabilities.
- ✓ The new business, product or service is intended to result in long-term economic value and the creation of wealth, be it for the shareholders, owners, or society.
- ✓ The financial returns resulting from the "new thing" are predicted to be better than the returns resulting from the current deployment of resources.

sustainability (e.g. energy management) to simply make the existing business more environmentally friendly to take advantage of the benefits.

- \checkmark An ecopreneur is an environmental entrepreneur.
- ✓ A person who is determined not only by the possibility of making profits, but is also determined by environmental issues.
- ✓ He/She wants to make the world a better place by improving, or at least protect the environment.
- ✓ The terms environmental entrepreneurship, ecological entrepreneurship and ecopreneurship are used synonymously to mean innovative behavior of individuals and organizations operating in the private business sector, which see environmental issues as a central objective and competitive advantage.
- ✓ The ecopreneurs identify environmental innovations and their market opportunity and successfully transform these innovations into new products or services.
- ✓ Ecopreneurship is not only limited to singular actors, as founders of organizations focused on environmental medium or intrapreneurs to beting in an existing organization it also includes ecopreneurial organizations, organizations which act ecopreneurially and encourages the provioumental intrapreneurs and ecopreneurs within themselves. Hence, Grostate ecopreneurship.

7.1.7 Ecotechnopreneurship

- \checkmark It is technological teopheneurship.
- Ecoproputs in pathat embraces technology, nence ecotechnopreneurship.



(b) to connect science with industrial usage and other fields

(c) to develop regional economies by retaining and incorporating skilled workers as well as to create appealing and creative jobs.

(d) to provide consulting services and establish new technologies. The services offered by technological parks can vary. However, the most frequent ones are as follows

What services do technological parks offer?

The services offered by technological parks can vary. The most frequent ones are as follows.

✓ Co-financing of business premises

Because of funding provided by the government, other institutions and companies, the amount of rent for the business premises and other resources is lower than the market price for the companies included in the technological park, at least for the first few years. The duration and amount of financial help depend on the policies of each technological park; however, the funding usually decreases with each year. In this kanner the

✓ Prestige

companies can gradually adapt to the market conditions. comes to conducting business deals faising extra funding (creditworthiness with financial is in tions) and seek is a help at university centres.

Possibility of informal Phrasts

Owing to the concentration of high-tech companies, a technological park offers ideal conditions for establishing informal contacts (common areas for socializing) and cooperation with research institutions.

\checkmark General and administrative services

Companies within a park may use common administrative and secretarial services, courier service and photocopying. They may also rent the same conference and teleconference halls as well as telephones, fax machines, photocopiers and other similar equipment.

 \checkmark Consulting services

Different kinds of training and consulting are organized by the management of the park, external experts and sometimes even companies in the park. Consulting usually consists of the initial help with forming a business plan, preparing documentation necessary for the granting of funds, advising on legal and financial matters, insurance, marketing, human resources and so on.

- \checkmark Technopreneurs can acquire some of the required capital for establishing a new technology-based firm from friends, relatives or acquaintances, but that is not enough especially if they want to grow to a significant degree, they will need outside capital.
- \checkmark Most important sources of outside capital for technopreneurs are corporations (for their corporate spin-offs), venture capitalist, angels, public stocks, government grants and banks.
- \checkmark One of the most common ways of financing new technological companies is venture capital. A venture capitalist invests capital in certain companies on behalf of the investors. In return for the invested capital he receives ordinary shares, preference shares and fungible bonds.
- \checkmark The returns from the company's growth are realized with the sale of the equity share. The institutional investors, banks, pension funds, insurance companies and the government can all form funds. At the same time there can be independent funds which are managed by professional teams of venture capitalists.
- \checkmark Investors in a venture capital fund expect their investment to increase in the long term. The average life expectancy of a fund is approximately ten vers in that time the investors should get their stakes back along with the new zed returns. Good venture Notes capitalists should
 - (a) master different technologies
 - (b) be a successful marage
 - (c) assume responsibility for the company re
 - (d) assess the nanagerial and le verslip qualities of the entrepreneurs and employees, (c) be persistent
 - (f) have a good sense of judgement
 - (g) know how to deal with the changes in technology and markets
 - (h) have an expert knowledge of market conditions
- ✓ Besides equity financing, new technological companies can also apply for debt financing. However, this kind of financing is normally quite limited at first since the entrepreneurs of small companies usually do not have enough high-quality guarantees for the bank to grant them long-term loans, despite the fact that their projects are viewed positively.
- \checkmark In debt financing, the entrepreneur assumes the responsibility of paying off the principal and the corresponding interest. The advantage of debt financing is that the entrepreneur does not have to pay the whole sum at once, but postpones some payments for a future time. Also, the investor does not own a part of the company or have any control over it. The down side is that the entrepreneur must assume the responsibility of paying the debt off in the future – an obligation which does not hinge on the company's profits.

Market/customers

The main focus of all entrepreneurs should be the customer. Although technopreneurs are often focused on technological challenges and product development, they should also focus on market feedback, on how to be successful in commercialization and marketing of high-tech products, the high growth strategies, the internationalization issues, the environmental issues and many other market-related issues.

- Marketing of high-tech products
 - \checkmark The last two decades of the twentieth century witnessed a marked growth in the use of marketing techniques in high-tech industries Davis et al. (2001) and Easingwood and Koustelos (2000).
 - \checkmark Historically high-tech companies have relied on their unique technological advantage to remain competitive, the firms have found that it is becoming more and more difficult to maintain a competitive edge through technological advantage alone.
 - \checkmark The marketing efforts of high-tech firms are as important as, if not more important than, the reliance on state-of-the-art technology. Although all of the fundamental principles of marketing apply to the high-tech industry, there are industry and product-specific factors that affect the development and implementation of successful high-tech industry marketing strategies. These
- (a) The short life of high-tech product esale (c) to the high rate of chance in the product of t Owing to the high rate of change in technological development, the proliferation of innovative products and then arker demand for leading edge capability, most products in the high-tech industry have an extreme r shor product life. This has several significant product development and marketing consequences and puts pressure on reducing timeo-market and ensuring that has roduct will be backward compatible.
- \checkmark Short product life and the need to reach break-even within a compressed time frame has resulted in the need to sell in multiple markets, including international markets, almost simultaneously, and has resulted in the wide use of skimming strategies, rather than penetration strategies.

(b)The interdependence of high-tech products

 \checkmark There is no other industry where what one company does technologically can require so many other companies to change their products and where both product developers and product purchasers are preoccupied by interconnectability and interoperability concerns.

(c)Tech-support

 \checkmark There is probably no more important factor in high-tech product marketing than techsupport.

(d)Maintenance pricing

 \checkmark The pricing of maintenance agreements, service agreements and warranties in the hightech industry is complex, but of extreme importance.

- ✓ In order to reach a favourable ratio between the cost for the support and its effectiveness, the government must
 - (a) clearly state the goals of its policies,
 - (b) identify appropriate programmes which will help it realize its goals in a certain time frame and
 - (c) appoint effective mechanisms (support organizations) for conducting these programmes.
- ✓ It is advisable that the government organize types of support which provide the development of a business environment which stimulates
 - entrepreneurship

-simplification of procedures and tax cuts,

-development of new units,

-access to financial sources, information, consulting and guidance,

-help with technical and technological problems

-links between small, medium-sized and big firms, and the development of distribution networks and support with internationalization of business.

 The government may also offer support for firms at the national, regional and local levels by helping individual firms with

-favourable loans (subsidized interest rates, lesser guarantee conger repayment periods) -tax cuts

-favourable amortization costs -nonrefundable employment business space and quipment

- and also by developing business in Sastructure special financial institutions (funds), characters, technology out a simulators, business zones and the rest.

Advisors

✓ Research on the problems of small firms has shown that there are typical gaps in the abilities of small firms, where it is reasonable to help with various types of consulting and training. These gaps are.

Information gap

Entrepreneurs who have just recently established their own firm lack certain information necessary for the preparation of business plans and the making of sound business decisions. Advisors are therefore the people who offer entrepreneurs basic business information at the lowest level of services.

A gap in problem solving and technical capabilities

Individuals who are new at running their own business and are more used to the safety of the organizational environment of big firms where others make decisions, often never developed or tested their own analytical capabilities. They do not know how to recognize problems and solve them in a fast and efficient manner – advisors will help them in learning how to do just that.

Technopreneurship contribute to the economic development of a country through creation of new companies this eventually increase the productive capacity of the economy as more idle resources are brought into use.

Increased potential for value addition

Nearly all developing countries/economies including Zimbabwe are characterized as producers and exporters of natural resource based goods, whereas economic thinking dictates that these countries should change their strategy from being merely merchandise producers to technology developers in order to experience higher levels of development and producers of value added products

Increase economic competitiveness

Science, technology, innovation entrepreneurship has been proven, not only to be the impetus for growth and economic prosperity, but also serves as the foundation for the transformation of the new economy.

Sustainable Development



Sustainable Development Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable determinent in its essence means working together in order to create a future that will in least provide compare available the recovered vibrient create a future that will in least rosille camer exploit the resources, eliminate degrader on provoked by pollet of and waste accumulation, avoid any actions that provoke disturbance and discoption of the environment, build strategic, long-term dimensions and growth and solutions. Technopreneurship enhances the implementation of new and better technologies in different production in ways that minimise the effects of economic activity on the environment, so that the cost do impact and fall on future generation. Ecotechnopreneurship is therefore important and should be encouraged.

Significance of Technopreneurship to organisations

- \checkmark Reduce labor costs
- \checkmark Competitive advantage
- \checkmark Enterprise growth
- ✓ Business renewal
- ✓ Organisational survival
- ✓ Improve firm performance

Reduce labour costs

Technopreneurship reduce the labour costs of the organisation. This could be achieved by cutting on the number of employees or as productivity increase less labour hours are experienced. Reduced labour costs translate to low prices thereby making the company competitive.