



IMAGINATION



PRESENTS

EXPLORE INNOVATIONS

FUTURE
TECH



From invention to innovations...

INTELLECTUAL PROPERTY GUIDE

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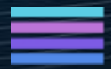


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“Education is what remains after one has forgotten what one has learned in school.”

“Imagination is more important than knowledge.”

Albert Einstein

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What is Intellectual Property

World Intellectual Property Organization (2009) defines “Intellectual property (IP) as creations of the **human capital mind**:



Human Capital

The collective amount of creativity, skills, and productivity of an organization's employees.

One of the two major elements comprising intellectual capital, the other of which is intellectual assets.

Innovation Capital

The capacity of an entity to produce valuable change in the transition from a knowledge-based economy to an innovation economy utilizing new forms of human capital such as imagination, entrepreneurial, and relationships.

Intellectual Capital

***Knowledge that can be converted into profit.
This capital comprises two major elements:
human capital and intellectual assets.
Also known as knowledge capital.***

Intellectual Assets

The codified, tangible, or physical descriptions of specific knowledge to which an organization may assert ownership rights. Intellectual assets are one of the two major elements comprising intellectual capital, the other of which is human capital.

Knowledge Capital

The sum of human capital, customer capital (customer attachment to/involvement business), and structural capital.

Knowledge Companies

Companies that make their profits by converting knowledge into value. Those companies whose profits come predominantly from commercializing innovations through value creation and value extraction.

Knowledge Management

Companies that develop and follow a system to extract value from information.

Intangible Asset

Something of value that cannot be physically touched, such as a Brand, Franchise, Trademark, Copyright, Trade secret, or Patent. The opposite of a tangible asset.

*Intangible business assets =
Intellectual Property + Trade Secrets*

Goodwill

An intangible asset that puts a value on the goods reputation associated with a trademark or service mark.

Trade Secret

A trade secret is a formula, practice, process, design, instrument, pattern, or compilation of information which is not generally known or reasonably ascertainable, by which a business can obtain an economic advantage over competitors or customers.

Confidential Information

Confidential Information. A person who receives valuable or sensitive secret information in confidence (confidential information) owes a duty known as “a duty of confidence” neither to disclose nor make use of that information for any purpose other than that for which the disclosure was made without the consent.

Know-how

Unpatented technical or commercial information.

It can be part of what are considered to be Trade Secrets.

Trade Secrets and Confidential Information are both legal tools for protecting both intellectual property and confidential information. Judicious use of these legal tools is necessary as any unwarranted usage can result in great losses.

Design

Realization of a concept or idea into a configuration, drawing, model, mold, pattern, plan or specification (on which the actual or commercial production of an item is based) and which helps achieve the item's designated objective(s).

Design Development

A product development phase wherein the product's composition, dimensions, attributes and/or specifications are determined.



Research and Experimental Design

Research is the systematic investigation into and study of materials, sources, etc., in order to establish facts and reach new conclusions.

Experimental Design ensures that what you are doing is genuinely (and solely) responsible for the results.



Testing

Examination, evaluation, observation, or trial used (under actual or simulated environmental or operating conditions) to determine and document (1) capabilities, characteristics, effectiveness, reliability, and/or suitability of a material, product, or system, or the (2) ability, aptitude, behavior, skill level, knowledge, or performance of a person.

Design Development Phase

Transitional phase of an architect/engineer (A/E) services in which the design moves from the schematic phase to the contract document phase. In this phase, the A/E prepares drawings and other presentation documents to crystallize the design concept and describe it in terms of architectural, electrical, mechanical, and structural systems. In addition, the A/E also prepares a statement of the probable project cost.

Product Developer

Someone who develops a product usually including visualizing what that product should be and assembling the resources needed to design and develop the product in contrast to an entrepreneur.

A product developer may be an inventor.

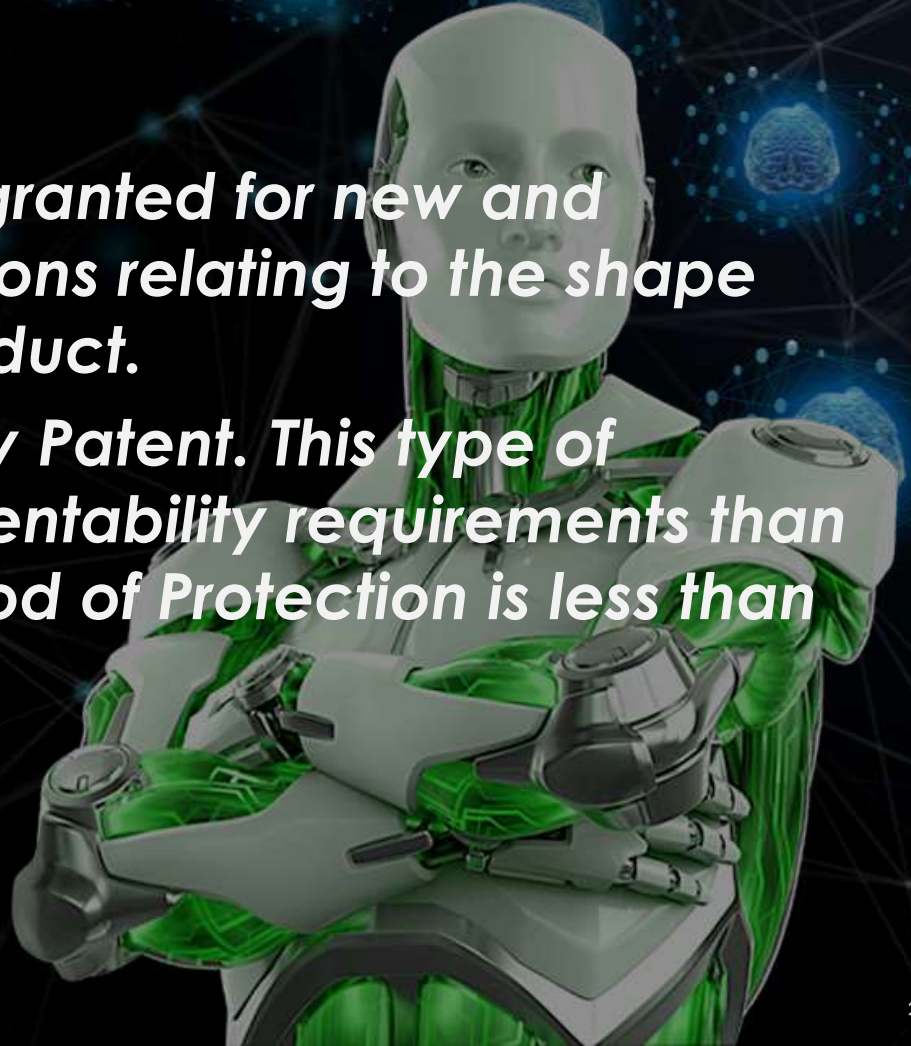
Rapid Prototype

Computer-generated three-dimensional model created rapidly from a CAD drawing. Creating a rapid prototype involves a number of steps that must be accomplished before the three-dimensional model can be formed. Each portion of the model is built one layer at a time with stereolithography, solid ground curing, fused deposition modeling, and selective laser sintering.

Utility Model

A utility model patent is granted for new and practical technical solutions relating to the shape and/or structure of a product.

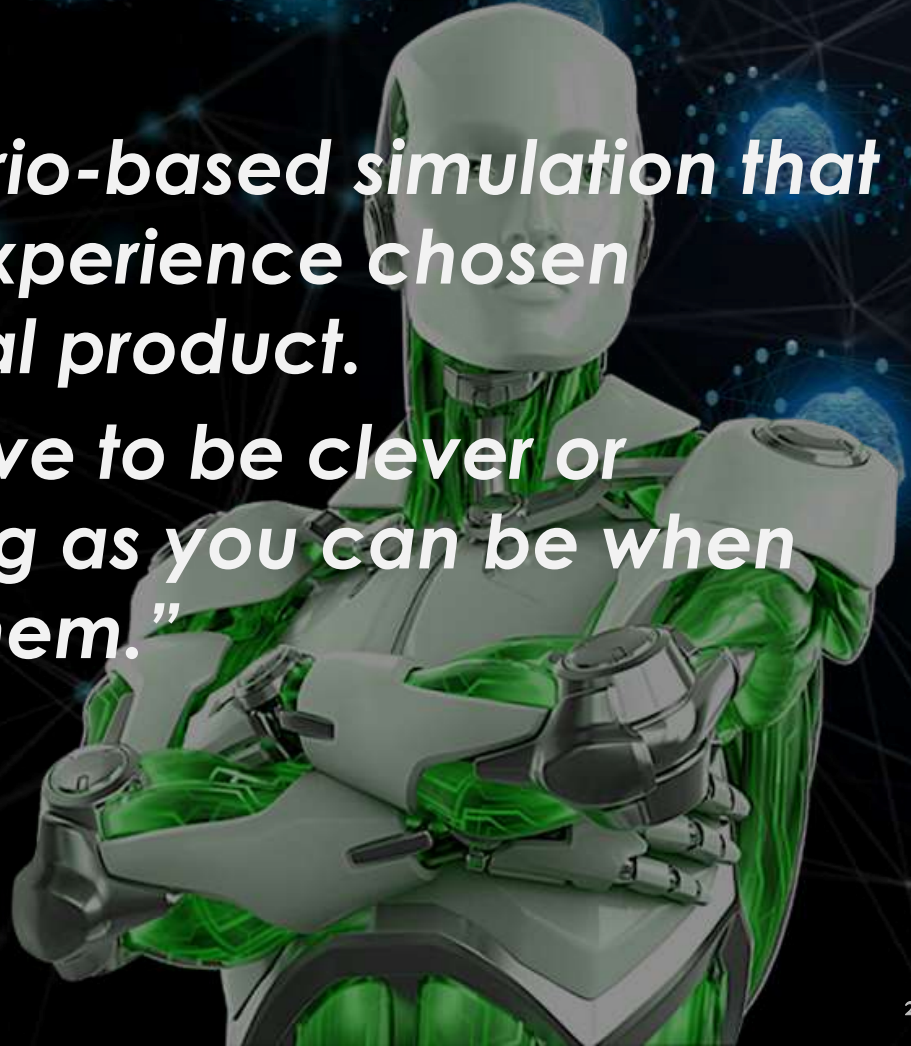
Sometimes called a petty Patent. This type of protection has lower patentability requirements than for a Full Patent. The period of Protection is less than for a Full Patent.



Prototyping

Prototype is a scenario-based simulation that allows a person to experience chosen aspects of a potential product.

“Prototypes don’t have to be clever or sophisticated, so long as you can be when you present or test them.”

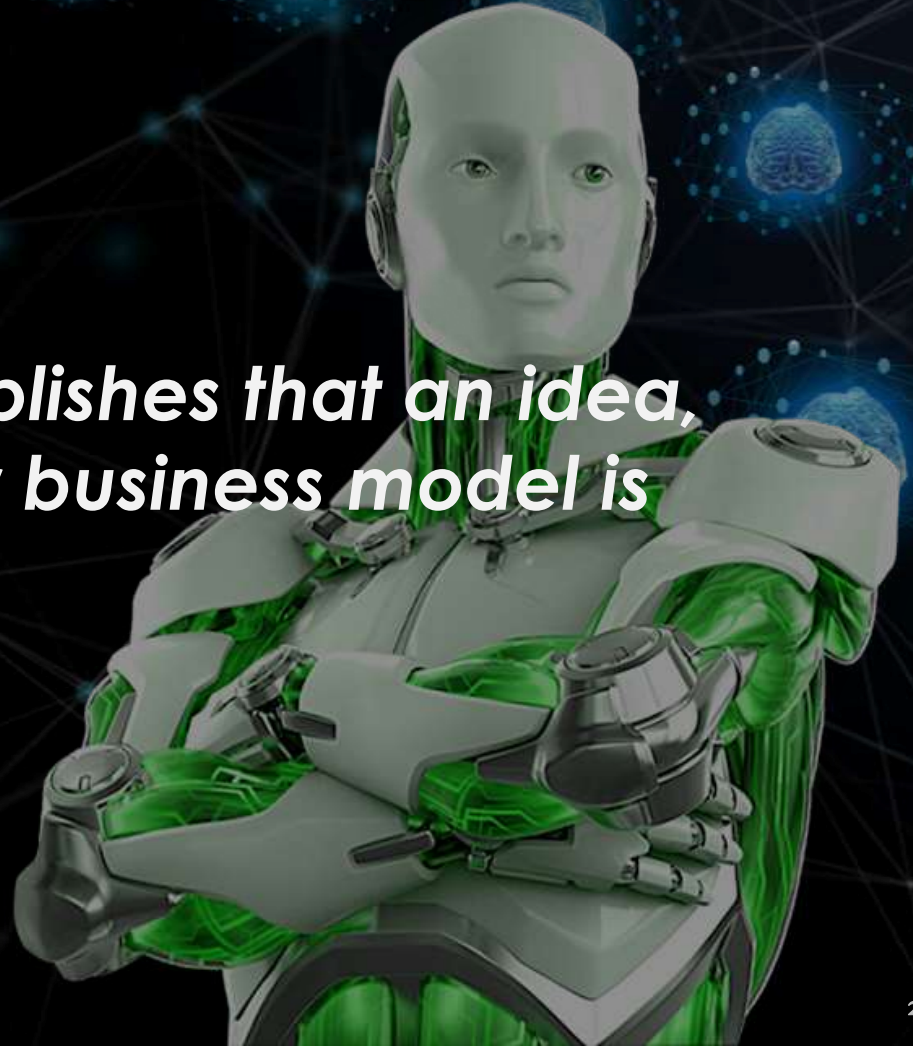


Prototype

Pre-production model of a product, engineered for full service test. Changes based on test results are incorporated into the prototype which undergoes the same tests again. On achieving the desired results, the product is approved for volume production.

Proof of Concept

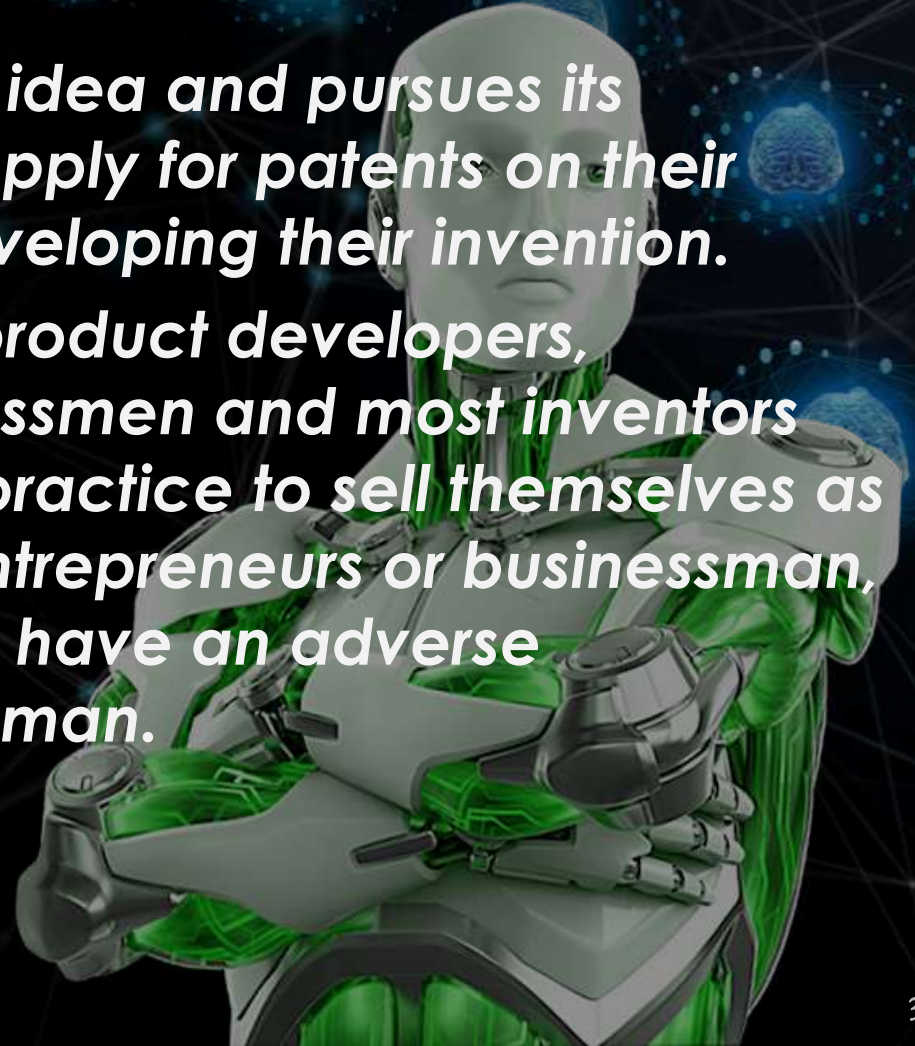
Evidence which establishes that an idea, invention, process, or business model is feasible.



Inventor

Someone who has a new idea and pursues its development. Inventors apply for patents on their inventions as a part of developing their invention.

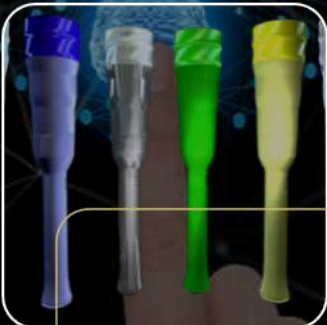
Many inventors are also product developers, entrepreneurs and businessmen and most inventors find it a good marketing practice to sell themselves as product developers or, entrepreneurs or businessman, as the term inventor often have an adverse connotation to a businessman.



Invention

An open and curious mind allows an inventor to see beyond what is known. Seeing a new possibility, connection, or relationship can spark an invention. Inventive thinking frequently involves combining concepts or elements from different realms that would not normally be put together. Sometimes inventors disregard the boundaries between distinctly separate territories or fields. Several concepts may be considered when thinking about invention.

Types of Inventions



Product



Service



Process



Business Model



Innovator

In the diffusion of innovation theory, the group which is the first to try new ideas, processes, goods and services



Innovator

The ability to produce new ideas; provide better solutions; and pioneer new products.



Innovation is the process of translating an idea or invention into a good or service that creates value or for which customers will pay.



Evolutionary innovations (continuous or dynamic evolutionary innovation) that are brought about by many incremental advances in technology or processes.



Invention cycle

Idea
Generation

Prototype

Protection

Testing

Development

Testing

Commercializ
ation

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Patent

A document issued by the patent office that purports to give an inventor the exclusive right to make, use and sell an invention as specified in the claims of that patent. A patent, which is the mature form of a patent application, consists of drawings of the invention, a specification explaining it, and claims that define the scope of exclusivity.

A patent is an exclusive right granted for an invention, which is a product or a process that provides a new way of doing something, or offers a new technical solution to a problem.

Invention Patent

An invention patent is granted for new and inventive technical solution for a product, new method of producing or doing something, or an improvement on an existing product. Invention patents allow you to protect the new technology that you develop.

Design Patent

Design Patent: A type of patent covering the new, original and ornamental aspects of an article of manufacture (product). The prime focus is on the overall appearance of the new product. An application will also contain a textual description of the product.

A design patent is granted for new designs relating to the shape, pattern or their combinations, or the combination of color, shape and/or pattern that are aesthetically pleasing and industrially applicable.

Patent pending

Patent Pending: A phrase that often appears on manufactured items. It means that someone has applied for a patent on an invention that is contained in the manufactured item. It serves as a warning that a patent may be issued that would cover the item and that copiers should be careful because they might infringe if the patent is issued. Once the patent is issued, the patent owner will stop using the phrase "patent pending" and start using a phrase such as "covered by Patent Number xxxxxx." Applying the patent pending phrase to an item when no patent application has been made can result in a fine.

Brand

"Name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers."

Definition: According to American Marketing Association "Brand or part of brand is that which is given legal protection because it is capable of exclusive appropriation".

Trademark

Trade mark is a legal term. When a brand is registered and legalized, it becomes a trade mark. Hence registered brands are trademarks.

Brand positioning

Brand Positioning “... the act of designing the company’s offer and image so that it occupies a distinct and valued place in the target customer’s minds.”

Branding

Brand: the sum of all of the characteristics, both tangible and intangible, that make an organization, service, or product unique.

“A ‘brand’ is not a thing, a product, a company or an organization. A brand does not exist in the physical world – it is a mental construct. A brand can best be described as the sum total of all human experiences, perceptions and feelings about a particular thing, product or organization. Brands exist in the consciousness of individuals and of the public.

Brand Equity

The owner of a well known brand name can generate more money from products with that brand name than from products with its generic equivalent, because consumers believe that a product with a well-known name is better than products with less well known names.

Brand Extension

Brand Extension is working to extend the established brand name in new product categories.

Logo

Logos are very important as they quickly identify visually a company or product. This is so because our visual memory is really good. Logos have to be simple and attractive at the same time.

Co-Branding

The term 'co-branding' is relatively new to the business vocabulary and is used to encompass a wide range of marketing activity involving the use of two (and sometimes more) brands.

Brand Elements and their Selection Criteria

- Brand name
- Logo/symbol
- URL (uniform resource locators)
- Character
- Slogan
- Jingle
- Packaging

Brand Names

Need to be chosen keeping the six criteria of memorability, meaningfulness, likability, transferability, adaptability, and protectability in mind.

Naming Guidelines Brand awareness:

- ❖ **Simplicity and ease of pronunciation and spelling**
- ❖ **Familiarity and meaningfulness**
- ❖ **Differentiated, distinctive, and uniqueness Brand associations**
- ❖ **The explicit and implicit meanings are important.**
- ❖ **Can reinforce an important attribute or benefit association that makes up its positioning**

Brand Naming Procedures:

- ▬ **Define objectives**
- ▬ **Generate names**
- ▬ **Screen initial candidates**
- ▬ **Study candidate names**
- ▬ **Research the final candidates**
- ▬ **Select the final name**

Brand Names

Word(s) that identify not only a product but also its manufacturer or producer.

URLs (uniform resource locators)

Specify domain names on the Internet. A company can either sue the current owner of the URL for copyright infringement, buy the name from the current owner, or register all conceivable variations of its brand as domain names ahead of time.

Characters

A special type of brand symbol - one that takes on human or real-life characteristics. Some are brought to life through animation for a particular campaign or event.

Slogans

Short phrases are effective shorthand means to build brand equity.

Classic Slogans “Melts in your mouth, not in your hands” (M&M’s)

Jingles

Jingles are musical messages or ringtone written around the brand. Typically composed by professional songwriters, they often have enough catchy hooks and choruses to become almost permanently registered in the minds of listener -sometimes whether they want them to or not!

Jingles are perhaps most valuable in enhancing brand awareness.

Packaging

From the perspective of both the firm and consumers, packaging must achieve a number of objectives:

- *Identify the brand*
- *Convey descriptive and persuasive information*
- *Facilitate product transportation and protection*
- *Assist at-home storage*
- *Aid product consumption.*

Packaging Can Influence Taste. Our sense of taste and touch is very suggestible, and what we see on a package can lead us to taste what we think we are going to taste.

Packaging Can Influence Value Long after we have bought a product, a package can still lead us to believe we bought it because it was a good value.

Packaging

Packaging Can Influence Consumption. Studies of 48 different types of foods and personal care products have shown that people pour and consume between 18% and 32% more of a product as the size of the container doubles.

Packaging Can Influence How a Person Uses a Product. One strategy to increase use of mature products has been to encourage people to use the brand in new situations, like soup for breakfast, or new uses, like baking soda as a refrigerator deodorizer. An analysis of 26 products and 402 consumers showed that twice as many people learned about the new use from the package than from television.

Contemporary packaging

Contemporary packaging ensures safe use marketing essentials. Contemporary Packaging gives companies the opportunity to incorporate the latest technologies and address lifestyle changes as well as environmental, social, and political concerns. Contemporary aseptic packaging involves the process that keeps foods fresh sterilizing the package and the food product. Bottling and Tetra Pak are examples of this method, which keeps food fresh for up to twelve months or more.

Selection Brand Criteria



Memorability



Meaningfulness



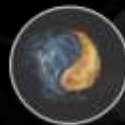
Likability



Transferability



Adaptability



Protect ability

Offensive Strategy (build brand equity)

Offensive Strategy

- **Meaningfulness**
- **Memorability**
- **Likability**

Offensive Strategy (build brand equity)

- ❖ **Memorability:** Memorable and attention-getting brands facilitate recall or recognition
- ❖ **Meaningfulness:** Brand elements may take on descriptive or persuasive meaning. General information about the nature of the product category (guides brand awareness and salience) Specific information about particular attributes and benefits of the brand (guides brand image and positioning)
- ❖ **Likability:** Do customers find the brand element aesthetically appealing? Descriptive and persuasive elements reduce the burden on marketing communications to build awareness

Defensive Role

(leveraging and maintaining brand equity)

Defensive Role

- Adaptability
- Transferability
- Protect ability

Defensive Role (leveraging and maintaining brand equity)

- ❖ **Transferability:** How useful is the brand element for line or category extensions? To what extent does the brand element add to brand equity across geographic boundaries and market segments?
- ❖ **Adaptability:** The more adaptable and flexible the brand element, the easier it is to update it to changes in consumer values and opinions. E.G. logos and characters can be given a new look or a new design to make them appear more modern and relevant.
- ❖ **Protect ability:** Choose brand elements that can be legally protected internationally. Formally register chosen brand elements with the appropriate legal bodies. Vigorously defend trademarks from unauthorized competitive infringement.

Intellectual Property Protection

(Protect ability)

Trade secret, patents, brand/trademark, copyright

Industrial property, which includes inventions (patents), trade secret, trademarks, industrial designs, and geographic indications of source; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs.

IP Infringement

Infringement: (1) Doing something forbidden by the grant of a Intellectual property to another. (2) Encroach or trespass on the rights of others, usually involving intellectual property. A device infringes on a patent if the claims of a valid patent read on that device. Infringement can be direct or Literal Infringement, infringement under the Doctrine of Equivalents, Contributory Infringement or Active Inducement to Infringe.

Infringer: Any party that who makes, uses, sells, places on sale, or imports into the country where the patent is in force the invention as claimed.

Innocent infringer: An infringer who could not be expected to know of the existence of the Intellectual property, and consequently who does not have to pay damages.

Innocent Infringer

Innocent infringer: An infringer who could not be expected to know of the existence of the Intellectual property, and consequently who does not have to pay damages.

Infringer: Any party who makes, uses, sells, places on sale, or imports into the country the intellectual property belong to another.

Infringement: Doing something forbidden by the grant of a Intellectual property to another. Encroach or trespass on the rights of others, usually involving intellectual property.

IP License

License: A legal contract given by a licensor to a licensee the right to use a Patented invention, Trademark, Design, Know-how, Trade secret, or Copyrighted work.

Label license (US): A statement that the purchase of the labeled goods gives a license to use them in a patented process.

Technology Transfer

Technology transfer is much discussed but is defined in different ways depending on the context.

The definition describes WIPO's practical approach to technology transfer in the context of the Organization's work to promote the strategic use of Intellectual Property for economic development.

Technology Transfer

For most universities and research institutions technology transfer is defined in the words of the Association of University Technology Managers (AUTM) as "the process of transferring scientific findings from one organization to another for the purpose of further development and commercialization". This transfer is generally effected by means of IP licensing agreements (contracts) between universities and private companies or publicly owned commercialization agencies. In the licensing agreement, the university or research center grants a permission (license) to use the IP in a newly developed technology to a private sector licensee or a "spin off" company in exchange for royalties or other payments.

Technology Transfer

Technology transfer, also called transfer of technology (TOT), is the process of transferring (disseminating) technology from the places and in groups of its origination to wider distribution among more people and places.

It occurs along various axes: among universities, from universities to businesses, from large businesses to smaller ones, from governments to businesses, across borders, both formally and informally, and both openly and surreptitiously.



Technology Transfer

Often it occurs by concerted effort to share skills, knowledge, technologies, methods of manufacturing, samples of manufacturing, and facilities among governments or universities and other institutions to ensure that scientific and technological developments are accessible to a wider range of users who can then further develop and exploit the technology into new products, processes, applications, materials, or services. It is closely related to (and may arguably be considered a subset of) knowledge transfer. **Horizontal transfer** is the movement of technologies from one area to another. The transfer of technology (TOT) is primarily horizontal. **Vertical transfer** occurs when technologies are moved from applied research centers to research and development departments.

Business Model Approach From idea to market Process



Research and innovation

IP Assets Protection

IP Right Management

IP Asset Leverage & Commercialization

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Research

Research is the systematic investigation into and study of materials, sources, etc., in order to establish facts and reach new conclusions.

Idea Generation

The process of creating, developing, and communicating ideas which are abstract, concrete, or visual. The process includes the process of constructing through the idea, innovating the concept, developing the process, and bringing the concept to reality.

Intellectual Property Assets Protection

Trade secret, patents, brand/trademark, copyright

Industrial property, which includes inventions (patents), trade secret, trademarks, industrial designs, and geographic indications of source; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs.

Leverage

The ability to influence a system, or an environment, in a way that multiplies the outcome of one's efforts without a corresponding increase in the consumption of resources.

In other words, leverage is the advantageous condition of having a relatively small amount of cost yield a relatively high level of returns.

Commercialization

Stage in product development process where the decision to order full-scale production and launch is made.

Commercialization is broadly defined as the process of taking an idea to a successful outcome in the market, whether it is a product, service, process or organizational system.

Commercialization should also include knowledge diffusion, consulting services and contract research rather than just the linear transfer of technology or intellectual property.

Innovation Process



Problem Recognition

The acknowledgement and definition of an issue that does or may arise during the performance of a process. Business managers need to be skilled in problem recognition and solution techniques to be of the greatest help in guiding their company toward greater success.

Problem Solving

The process of working through details of a problem to reach a solution. Problem solving may include mathematical or systematic operations and can be a gauge of an individual's critical thinking skills.

Problem Solving Team

A group of individuals assembled to work on a project that involves resolving one or more issues that have already arisen or to deal effectively with issues as they arise. In a business context, a problem solving team will typically be formed for a limited time frame incorporating staff from different organizational levels with various relevant skill sets.

Solution Exploitation

The process used to generate ideas, concepts and associations that lead to the exploitation of new ideas.

Innovation

Innovation is an introduction of new ideas into the market place in the form of new products or services or new market or an improvement in an organization or process.

Innovation can bring complete revolution or an extension to an existing product or services, and provide unique identity to a business.

Creativity is defined as the production of new and useful ideas concerning products, services, processes by individuals or small group of persons working together.

Business Innovation Definition

Business innovation is the creation of substantial new value for customers and the company by creatively changing one or more dimensions of the business system . In other words, business innovation is the creation and adoption of something new that generates business value. This includes new products, services, or processes, such as integrated supply chain solutions

Innovations: Think different **- Act different - Make it different**



**Observing and
Questioning**



**Imagine and
Experimenting**



**Brain thinking
and Networking**



**Design and
Associational
Thinking**

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Observing Process

The scientific process or scientific method requires observations of nature and formulating and testing the hypothesis. It consists of following steps.

- ❖ *Observe something and ask questions about a natural phenomenon (scientific observation)*
- ❖ *Make your hypothesis*
- ❖ *Make predictions about logical consequences of the hypothesis*
- ❖ *Test your predictions by controlled experiment, a natural experiment, an observational study or a field experiment*
- ❖ *Create your conclusion on the basis of data or information gathered in your experiment.*

Imagination

The faculty or action of forming new ideas, or images or concepts of external objects not present to the senses.

The power of reproducing images stored in the memory under the suggestion of associated images (reproductive imagination) or of recombining former experiences in the creation of new images directed at a specific goal or aiding in the solution of problems (Creative Imagination).

Experimental Design

Experimental design ensures that what you are doing is genuinely (and solely) responsible for the results.

Independent Brain Thinking and Debating

The players on the team are sent off their separate ways to think independently about the problem on the table, and then regroup to fire ideas at one another and debate their merits. Ideas are treated not as precious pearls to be polished, but as sparks born of friction. They ignite heat, iterations, and tough questions that propel and shape them further. It's not an inquisition. But it's exploration by interrogation. Experience has taught us what the geologists learned long ago: it takes pressure to make diamonds.

Networking your ideas

Networking is based on teamwork. For example a small team typically 3 participants and 1 person that possesses experience and knowledge in design and associational thinking. You want to limit the flow of information and foster collaboration.

Leveraging diversity would be highly recommended. Gathering three participants who represent different stakeholders or areas of expertise e.g. design, engineering, and strategy is a good way to develop ideas that take into account all the challenges.

Design Thinking

*Design thinking is a human centered,
collaborative & creative approach to solving
complex problems,
it is a balance of thinking...*

Associational Thinking

Associational thinking means associating or connecting things that were not previously connected.

“Creativity is connecting

things.”

Steve

Business Value Equation

Research &
Innovation

Intellectual
Property
Asset
Management

Leverage &
Commerciali
zation



Value &
Added Value

Research & Innovation

Ideation (Idea generation & selection)

- ✓ *Technology Landscape*
- ✓ *State-Of-Art Analysis*

Conception (concept definition)

- ✓ *Prior art search*
- ✓ *Patentability Assessment*
- ✓ *Competitor IP Watch*

Intellectual Property Protection

- ✓ *Prior art Search*
- ✓ *Inventor disclosure*
- ✓ *Patent drafting*
- ✓ *Patent filing*
- ✓ *Provisional, Nonprovisional, Continuation/Divisional/Continuation-In-Part Applications*
- ✓ *Examination Process – Patent Offices*
- ✓ *Arguments & Amendments*
- ✓ *Patent Issuance/ Obtainment*
- ✓ *Patent Maintenance*
- ✓ *IP Portfolio Development*

IP Right Management

✓ Patent Rights

✓ Design Patent Rights

✓ Copyright

✓ Trademark

✓ Brands

✓ Database Rights

Leverage & Commercialization

Patent Valuation

✓IP Landscape

✓Due Diligence

✓Licensing Studies Scenarios In / Cross / Out

✓Technology transfer

Other Commercialization Scenarios

✓Product Design & Development

✓Product Manufacturing

✓Product Launch

Infringement Scenarios

✓Invalidity Studies

✓Product Infringement

Thank You

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