MARKETING AND INNOVATION SERIES

INVENTORITIS EXPOSED:

BUILDING A SOLID BRIDGE BETWEEN MARKETING AND ENGINEERING

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PRODUCT MARKETING

The primary objective of this paper is to expose inventoritis in innovation so that the industrial process can be more effectively managed and resources can be applied in a more rational way. Ultimately, this should lead to greater and more predictable return on innovation activities.

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Introduction – The 30 Second Version

Why should you read this? Who should read this? Why should you forward this?

An often misunderstood and poorly managed industrial process is the industrial process itself. How products are conceived, developed, brought into production and distributed into the market successfully. Professionals working in the fields of venture capital, technology transfer, intellectual property, strategic marketing, engineering and R&D management have much to gain from an improved understanding of the primary cause of the failure of many innovations. Such an understanding would help many people involved in the innovation process experience less grief, whether they be backyard or institutional inventors, managers, engineers, financiers, scientists, lawyers, owners or others involved in creating, developing and marketing innovations.

On the journey from conception or acquisition to deployment, there are far too many problems and far too few successes. Only a small percentage of innovations meet expectations and people involved in these processes want to increase the percentage. They would like to concentrate their resources on those innovations that are likely to succeed. This paper is intended for those whose goal is to profit from these activities.

There are many thousands of new products introduced in North America each year with the vast majority of them either stillborn or taken off the market within two years. These products are often launched with budgets in excess of $10 million and most of these well funded innovations also end up becoming losers. The percentage of patents issued to lone inventors that never return enough profit from eventual sales of the patented subject matter to cover the patenting costs is astounding. The number of lone inventors who get rich from their first idea is less than one in a thousand. Yet inventors and companies march on, never stopping to take a hard look at why the failure rate is so high.

In recent decades, the science of behavioral psychology has developed to the extent that most types of irrational behaviors have been given a name and the root causes are at least somewhat understood. But it appears psychologists have not yet caught up with people working in the innovation field. Therefore, the irrational behavior leading to such poor financial returns in innovation has not yet been given a proper name. A word that does not appear in any English language dictionary yet resonates with industry veterans and captures the essence of the problem, primarily a psychological one, is “inventoritis.” (“inventor” + “itis” = “inventoritis” with the first “i” in “itis” pronounced like the word “I” or “eye”)

We’ll begin with a description of the issues followed by stating a working definition. Then we’ll go back and see where it came from, focusing on the time when the electric lamp or light bulb was created and developed into a widely used commercial product. We chose the light bulb as a place to focus our review because it currently stands as a symbol of ideas and innovation and the man largely credited with it, Thomas Edison, is still widely known as the “World’s Greatest Inventor” a century after his time. Why do many of the current books on innovation have a picture of a light bulb on the cover?

The questions of why inventoritis is a big issue, why we need to deal with it and how to identify it will be discussed. The current practice of seeking and obtaining patent protection for ideas and innovations will be mentioned throughout in the context of inventoritis. This will include a look at some of the numbers. We will close following a discussion of the impacts and opportunities relating to a better understanding of inventoritis.

Objective – The Wake Up Call

The primary objective of this paper is to expose inventoritis in innovation so that the industrial process can be more effectively managed and resources can be applied in a more rational way. Ultimately, this should lead to greater and more predictable return on innovation activities.

A better understanding of inventoritis leads to the building of solid bridges between marketing, engineering and sales. Marketing is the process of anticipating, identifying and satisfying customer requirements profitably. Engineering is defined in more than just the traditional sense. Engineering includes the designing of manufactured goods or products, including the scientific research that determines both technical feasibility and commercial viability. Sales are simply sales. There is usually considerable misunderstanding between the people who sell a company's products and those who develop and produce them. In addition, the differences between product managers and product marketing managers are not clearly defined, neither in regards to what they theoretically should do, nor in regards to what it is they actually do.

Our goal in preparing this document is to stimulate discussion and get people and companies who are interested in achieving greater return on innovation to call or email us. We have much to offer in this regard.

Issues – The Real Pain

The classic scenario is one in which an inventor fails to recover the costs of development and patenting. Individuals often lack expertise in marketing or sales and in general business processes, while having unreasonably high expectations of their product or idea. They often grossly underestimate what it takes to achieve commercial success. The typical result is that the product or idea does not reach the market and the impoverished inventor casts the blame on others, including engineers, lawyers, financiers, managers or any other professionals who would challenge or question the assumption that the product or idea is an excellent one.

For corporate or institutional inventions and the people behind them, the classic scenario for the lone inventor has relevance. Companies fall in love with their products and ideas much the same way as individuals. Most scientists and engineers lack sufficient expertise in business activities to be able to kill bad projects early or to avoid them in the first place. Nor do they have the skills to bring good projects to market successfully. Engineering-driven companies often focus inwardly and develop products or processes for which there is little or no need.

There are numerous deficiencies in the marketing process that arise from the primarily psychological problem of inventoritis. Companies and individuals that have inventoritis do not consistently:

- Strive to be the best of the best,
- Conduct adequate research or marketing trials,
- Create adequate systems and processes,
- Strive to affiliate with the best of the best,
- Establish a sound research and development process,
- Leverage all of the opportunities on the table,
- Execute effectively,
- Avoid common pitfalls learned from the mistakes of others,

- Repeat tried and true methods rather than ignore or reinvent them,
- Plan or execute marketing strategies effectively,
- Seek to properly understand the competition or marketplace,
- Work smarter, better, faster, cheaper or harder than necessary to win,
- Look for ways to control or access credible channels,
- Budget enough money for their product launch or product campaign,
- Budget enough money for early or front-end marketing,
- Develop great relationships with their staff, clients or investors,
- Connect with amazing distributors or value chain partners,
- Price their products properly,
- Follow key industry and customer trends,
- Execute effective sales campaigns,
- Lobby for media coverage,
- Focus on well-defined markets,
- Seek outside help,
- Earn profits from their inventions or innovations.

This list is a long one and some companies and individuals do well in most areas but miss or under emphasize one or more essential ones.

It seems that few inventors fully appreciate that in the process of bringing a new product or idea to market, usually less than 10% of the job has been done by conceiving and prototyping it. Inventoritis causes them to become blinded by enthusiasm once smitten with an invention, thereafter losing objectivity. They act out in excessive reliance on the assumed idea that the invention is an excellent one. Most inventions never reach a real market or they turn out to be marketing duds.

Functional Definition of Inventoritis

inventoritis *n.* {in-‘ven-t&r-I-t&s}.
Any of a group of disorders usually characterized by withdrawal from reality, illogical patterns of thinking, paranoia, delusions and hallucinations accompanied in many cases by a portfolio containing patents and other forms of intellectual property including trade secrets. Inventoritis is associated with depressed or non-existent product sales and defects in marketing programs and is caused by excessive reliance on the assumed idea that one’s product or idea is an exceptional one.

The Numbers – Most Ideas Prove Themselves Worthless

The number of lone inventors who are able to successfully market their first invention is difficult to know, although it is widely believed by most industry professionals to be very low. There does not seem to be consensus as to how low the success rates are, nor has there been much research done in this area. Fortunately, there are enough data available from corporate innovation processes that some reasonable estimates can be made. Few inventors know what they are up against before they go out and apply for their first patent. The goal of this chapter is estimate the liklihood of commercial success and suggest why individuals are usually at a severe disadvantage relative to well established corporate or institutional innovators.

For the world’s largest and most sophisticated companies, including those with corporate research and development centers, the success rates are certainly much better than for

the typical lone inventor. However, the numbers are still poor with the rate being well below 50% – certainly below what most managers and owners would like.

Companies stay alfloat because the products they sell, including new products, rarely rely on patented subject matter. Across a range of industries, companies derive about a quarter of their sales and profits from new products, only some of which are patented. The other three quarters of a company's sales and profits come from yesterday's breadwinners that still have years left in their product life cycles.

So what happens if a company stops innovating? In most cases, it will slowly die. Companies operating in a competitive marketplace need to continually introduce new products or products that are better, faster, or cheaper to stay in business. They don't need to overdo it with innovations, but there's a need to have something in the works. Companies that are leaders in innovation become the pacesetters for the rest of the industry. The other players are forced to keep up or get knocked out of the never-ending race.

Besides a basic need to constantly introduce new and improved products, another factor that stimulates the corporate innovation process is the tantalizing prospect of huge profits from world-beater innovations. For the few innovations that become blockbuster commercial hits, the rewards can be great. Companies that come up with such innovations and exploit them well can end up dominating their industry categories and rake in huge profits.

There are several references that give the failure rates for new product introductions. The normal range is typically from 70 to 80%. These sources include:

1. Various studies cited by Advertising Age,[1]
2. A study[2] by Linton, Matysiak & Wilkes, Inc. of the top 20 food companies reviewing 1935 new products,
3. A Booz Allen Hamilton study[3] on new product management that claims one out of seven product ideas yields a successful product,
4. Boston Consulting Group vice presidents and directors James Andrew and Kermit King claiming 60 to 85% in an article[4] titled 'Boosting Innovation Productivity',
5. Some college textbooks[5] claim 80%.

A study[6] by the Product Development and Management Association titled 'The PDMA Foundation's 2004 Comparative Performance Assessment Study (CPAS)' shows 40%

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[1] Brock, D. (1997). Getting the most out of your new product introductions. *Partners in Excellence.* Retrieved April 27, 2007, from the World Wide Web: http://www.excellenc.com/articles.htm

[2] Linton, D.B. (1997, July 1). Market study results released: new product introduction success, failure rates analyzed. *Frozen Food Digest 12(5),* 76.

[3] Dean, B. (2005, March 28). Case study: Incorporating focus group research into the product development process. *DM News,* Article 32310. Retrieved March 31, 2007, from the World Wide Web: www.dmnews.com/cms/dm-news/e-commerce/32310.html

[4] Andrew, J.P. & King, K. (2003, April). Boosting innovation productivity. *BCG opportunities for action, April 2003*. Retrieved April 27, 2007, from World Wide Web: http://www.bcg.com/publications/publication_view.jsp?pubid=847

[5] Friedman, H.H. (2000). *Product policy; new product development.* Retrieved March 31, 2007, from City University of New York, Brooklyn College Economics Department website: http://academic.brooklyn.cuny.edu/economic/friedman/mmproductpolicy.htm

[6] Adams, M. & Boike, D. (2004, July). PDMA foundation CPAS study reveals new trends. *Visions, XXVIII:3,* 26-29; and: The PDMA Foundation's 2004 comparative performance

rather than the higher 70-80%. The PDMA figure appears to be based just on the post-commercialization or post-launch failure rate. It does not include all products that go into the development pipeline, rather just those that make it to the launch pad. Including all the steps from idea generation, the PDMA study failure rate is over 80%.

From this data, it is quite clear that only about one quarter (1/4) of the products that go into the development process end up being successful. This is a deplorably low figure that applies across a wide range of industries. The data comes mainly from well-established companies, typically the top ones in the various industries. In other words, one in four successes are currently accepted as the best that can be done in terms of converting ideas introduced to the development process into successful products.

What happens in the case of start-up companies? For these companies which are usually quite small, there is a whole other set of failure rate data involved. U.S. and Canadian statistics reveal that only about one third (1/3) to one half (1/2) of new companies remain in business for at least 3 to 5 years.[7,8] About a third of them make a profit during that time, another third break even and the remaining third lose money. Many of the companies that close their doors within the first few years do so because of business failures. Running a profitable business is obviously not easy.

Multiplying the survival probability for a start-up company with the new product success probability makes the overall likelihood of success for a start-up company successfully developing and commercializing an invention or new product seem fairly dismal. The math looks like (1/3 to 1/2) x 1/4 = 1/12 to 1/8 overall likelihood of success. Since the probabilities are not entirely mutually exclusive, the more forgiving 1/8 figure will be used. Determining what influence one of these variables might have over the other is beyond the scope of this book. In any event, a 1 in 8 or 12.5% chance of success seems somewhat risky which is why venture capitalists and finance people generally have a hard time dealing with start-up companies based on a new product idea. However, a well managed start-up company with a highly successful product, can generate a phenomenal return.

So, for large and well established companies that have developed sophisticated R&D operations, the odds of a successful new product launch is about 1/4, dropping to about 1/8 for start-up companies. What about the lone inventor? There are no readily available statistics for this. Anecdotally, the number is a very low one.

Throughout industry, the informal consensus for individual inventors is that 95% of the granted patents issued to them do not return the out of pocket costs that went into the patenting process. It typically costs $5,000 to $20,000 to obtain a U.S. patent. The costs depend mainly on the complexity of the subject matter and the number of rounds in the examination process, with two rounds being the normal minimum. Among these same individuals, those who experience true “commercial success” with their first patented idea, appear to number less than one in a thousand.

Inventions for the purposes of this discussion are limited to those covered by patents. Commercial success is defined as receiving enough money from the sale of the patented

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assessment study (CPAS). *PDMA Foundation.* Retrieved March 31, 2007 from the World Wide Web: www.pdma.org/cpas.php

[7] Knaup, A.E. (2005, May 1). Survival and longevity in the business employment dynamics data. *Monthly Labour Review 128:5,* 50-57.

[8] Baldwin, J., Bian, L., Dupuy, R., Gellatly, G., Statistics Canada (2000, February). Failure rates for new Canadian firms: New perspectives on entry and exit. *Minister of Industry / Statistics Canada Catalog no. 61-526-XIE.* Retrieved March 31, 2007 from Statistics Canada website: www.statcan.ca/cgi-bin/downpub/freepub.cgi

subject matter or sale of the patent itself such that all the costs, including the applicable overhead costs over time, are adequately compensated, plus a reasonable rate of return. Also included in the costs are the market value costs of all materials, products and services used in each step of the process from the initial idea generation through to the sale or deployment of the patented products or technology. Depending on the invention, these costs will vary from a low in the $50,000 to $100,000 range to millions or tens of millions for a serious full scale product launch.

The very low success numbers for lone inventors seem quite reasonable when three additional variables are taken into account:

1. experience,
2. resources and
3. contacts.

These are tied together under the umbrella of leadership abilities and expertise. Suppose that each of the three variables has a rating out of 10, from 1 to 10 with 1 being the lowest and 10 being the highest. A lone inventor with no experience, no money and no contacts would score one out of 10 or 1/10 in each area. Multiplying these three probabilities together would yield 1/10 x 1/10 x 1/10 = 1/1,000. On the other hand, someone who is a great leader with tremendous relevant expertise and experience, adequate resources to fund and otherwise support the development and commercialization of the new product, and has all the necessary contacts to make it work, would score 10 out of 10 on each of the three areas. Multiplying those probabilities together would yield 10/10 x 10/10 x 10/10 = 1,000/1,000 or 1. This set of probabilities multiplied together can be called the individual's 'capability factor' or "CF".

Continuing the exercise, assuming the lone inventor doesn't own a well established company, take the start-up company probability of successfully launching a new product at 1/8 and multiply it by the individual's CF. For the worst case, that would yield 1/1,000 x 1/8 = 1/8,000 and for the best case, the yield would be 1/1 x 1/8 = 1/8. This gives a wide range, from a one in eight (1/8) chance at one end to one in eight thousand (1/8,000) at the other. This fits well with the "one in a thousand" notion.

A typical case might be an inventor working on his or her 3rd or 4th commercialization project. With some experience (say a rating of 5 out of 10 or a 5/10 ratio), half the resources needed to get through the development and launch process (5/10), and half of the contact score (5/10) for a total CF of 5/10 x 5/10 x 5/10 = 125/1,000 or 1/8. That means this person would have a likelihood of 1/8 x 1/8 = 1/64 or a 1 to 2% chance of making it work. These are still not great odds.

Now, how would world famous inventor Thomas Edison have scored in one of his later years after he was well established? He certainly had all the experience, resources and contacts needed to make it a success. He also had a family of well established companies in operation. In that case, his capability factor or CF of 1 would be multiplied against the large company successful launch probability of 1/4. For Edison the overall probability of a successful product launch based on this model would be 1/1 x 1/4 = 1/4, the same as for a big and well established company with all the necessary R&D infrastructure in place which is exactly what he had. Edison actually did much better than this.

The vast majority of Edison's projects were commercial successes. An example of a very expensive one that did not do well (he lost millions of dollars) involved developing iron processing technologies and building facilities to extract iron from low grade ore. While he was in the midst of the development process, a large high-grade ore body was discovered by a competitor that made his developments designed for low-grade ore

bodies largely moot. Edison was able to offset the losses by applying the important new technologies he developed to other areas such as pioneering the manufacture of cement. He eventually managed to turn the failure into a success. Virtually all the world's cement is now made in rotary kilns based on those Edison patented. Furthermore, the high-grade iron ore body did not last forever and modern ore-processing systems and methods have been built on his developments.

Edison's commercial success rates were much higher than 1 in 4 or 25%, mainly because his inventoritis-free approach to innovation was radically different and better than the ones now in use by most corporate innovators. There is a large inventoritis variable in the current corporate model that Edison managed to overcome. His overall number was closer to 100%.

This simple model was designed to quantify the probability of success for lone inventors relative to both new and well established companies. It is intended to be taken as a starting point for further work and to give rough estimates of the chances of success for various types of inventors. It highlights the fact that inexperienced individuals with few resources and no networks of contacts have a very slim chance of successfully commercializing their first ideas or inventions. This model can be used to help guide these individuals toward improving their chances of achieving commercial success.

One of the main reasons most lone inventors (also referred to as independent inventors) fare so poorly relative to corporate innovators is that inventoritis seems to be more of a problem with them. The corporate innovators also fare as badly as they do due to inventoritis issues. Lone inventors and corporate innovators alike all need to overcome it. Lone inventors also need to strive to develop relevant experience, amass sufficient resources, and build a suitable network of contacts in order to achieve commercial success with their ideas.

Developing great leadership skills along with a good understanding and appreciation of the innovation process is also essential for an individual working on achieving commercial success through innovation. Fortunately, most of these factors are well within an individual's control. Individuals who are relatively free of inventoritis can work on each of the key areas, dramatically improving their chances of success. For individuals with severe inventoritis, their ideas are almost always worth less than zero when the financial results are tallied.

The Origins of Inventoritis – How the Light Bulb became the Symbol of Ideas and Innovation

Thomas Edison is an American hero. He is credited with the invention of the light bulb and played a tremendous role in ushering in modern industry worldwide, based on his advancements in electrical energy. Electric light greatly changed the way people lived and worked by turning the night into day so that offices and factories could operate effectively without being limited to daylight hours. Edison is widely credited with having over 1,000 patents in his name and is often given the moniker: "World's Greatest Inventor."

What is not as well known, perhaps, is that his penchant for invention was rivaled only by his effectiveness as a marketer. Edison was in the habit of working backward from the market and doing whatever was needed to most expeditiously fill what he found to be the real or actual need. He was known to always be actively researching what everyone else was doing and had done. He sometimes bought and, on occasion, stole technology from others.

Few people today know or appreciate that Edison did not invent the light bulb. Joseph Swan was installing them in homes and landmarks in England before Edison's first successful test was completed on October 21, 1879, when Edison's carbon filament lamp successfully operated for only 13.5 hours. Additionally, Edison had bought the Canadian and US patent rights filed in 1874 for a carbon filament lamp by a Canadian medical electrician named Henry Woodward and his colleague Mathew Evans. What Edison did was to create the first *commercially viable* filament lamp which incidentally did not occur until more than six months after Edison filed his patent. Edison understood the importance and power of a good public relations and media strategy and was able to capture the media attention while others were busy working in relative obscurity. He developed his prototype lamps to the degree they could last over 1,200 hours using a carbonized bamboo filament; however, this advancement was not made until several months after having filed his patent application and having made the front pages with his early announcements. Edison then developed Direct Current (DC) electrical power systems to power the light bulbs. Swan sued Edison for patent infringement and eventually won, resulting in Edison having to take Swan in as a partner in the British company.

Legendary car maker Henry Ford, a close friend of Edison, described inventoritis without giving it a name in his 1930 book titled 'Edison As I Know Him'. Ford described an inventor as one who "frequently wastes his time and his money trying to extend his invention to uses for which it is not at all suitable." Ford asserted "Edison has never done this." The context and meaning of the term "uses" should not be limited only to technical feasibility but should include commercial viability as well. Edison and Ford always considered commercial viability a requirement for anything they were involved with. Ford built a massively successful enterprise, presently the fifth largest company in the United States and ninth in the world because he understood thoroughly the importance of this principle.

Many inventors who file patents, including the inventors of the zipper, (sewing machine inventor Elias Howe in 1851, Whitcomb Judson in 1893, and much later again electrical engineer Gideon Sundback in 1917) fall into the trap of being too far ahead of their time or otherwise being out of tune with the market. The zipper finally started getting good market acceptance around 1930 and has since become one of the world's best known products – almost a century later. It did little good for the early inventors. Judson showed his version of the zipper to 20 million (20,000,000) people and sold only 20.

Better known among inventors is Nikola Tesla. After some great successes, Tesla lost touch with the market and was later pursuing visions that generated much interest and debate but did not yield marketable products. This is one of the worst outcomes people with inventoritis can experience since their monetary gains never equal the strength of their innovative ideas. Tesla experienced this fully.

On the other hand, Edison, through an extensive network, was able to learn this crucial lesson of not misunderstanding the market with his first patented invention. The following story told by Henry Ford in his 1930 book 'Edison As I Know Him'[9] shows that he was obviously quite aware of the typical outcome of inventoritis:

> *In common with all inventors*, Mr. Edison, in his first patented device concentrated on something which he *thought* was needed, but which, in fact, was of no use to anyone. In 1868, he took out a patent for an arrangement that would quickly and accurately record the vote of a legislative body. He had the

[9] Ford, H. & Crowther, S. (1930). *Edison as I know him*. New York: Cosmopolitan Book Corporation. (pp. 56-57).

> impression that Congress in particular needed his invention so that time taken in voting might be used for more valuable purposes. He still laughs about the reception which this, his first child, received in Washington:
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> "It was exhibited before a committee that had something to do with the Capitol. The chairman of the committee, after seeing how quickly and perfectly it worked, said: 'Young man, if there is any invention on earth that we don't want down here, it is this. One of the greatest weapons in the hands of a minority to prevent bad legislation is filibustering on votes, and this instrument would prevent it.'
>
> "I saw the truth in this, because as a press operator I had taken miles of Congressional proceedings, and to this day an enormous amount of time is wasted during each session of the House in foolishly calling the member' names and recording and then adding their votes, when the whole operation could be done in almost a moment by merely pressing a particular button at each desk. For filibustering purposes, however, the present methods are admirable."
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> That *cured* Edison of inventing things which he *thought ought to be wanted*. Thereafter he kept to things he *knew were wanted* and which would have widespread application. (Emphasis added)

Congress still does its voting the same way it did in 1868 but Edison was treated by the committee chairman and overcame his early onset of inventoritis. Once thus inoculated, Edison had a lifelong winning streak with almost 100% of his 1,093 lifetime U.S. patents having been tied to commercial successes.

Tesla however, went in the other direction. After some breathtaking early successes, he alienated himself from the marketplace and everyone in it.

Tesla started out working for Edison in 1884, redesigning various electric machines. They had a falling out over a $50,000 bonus that Tesla was expecting to be paid by Edison. Edison, although impressed by Tesla's work, did not pay him more than the salary due, suggesting that the bonus offer was not a serious one.

Tesla was induced to leave Edison's operation in 1886 by two competing backers and set up shop for himself under the name Tesla Electric Light Company. That fell apart within months after Tesla got into a big dispute with his backers. They took the company from Tesla as lights were being installed throughout the town. The dispute was centered on Tesla wanting to use his unproven technological approaches, while the others insisted upon a more conservative approach using existing technology to meet the growing demand for electric lighting.

After a difficult year during which Tesla worked as a street laborer digging ditches, he signed up with George Westinghouse in 1988 who bought all his patents for cash, Westinghouse stock, and a piece of the action on every horsepower of electricity sold. This worked extremely well for the next decade. Tesla made a great deal of money while being able to work on various interesting projects. He became famous and built up impressive labs. This wasn't entirely satisfactory to him or to Westinghouse and they parted ways in about 1898. Tesla then went out on his own.

Ten years later, in 1907, when Westinghouse was weakened in a financial panic, Tesla accepted a buyout of his residual Westinghouse royalty interests for $215,000 which was a hefty sum in those days. Tesla squandered the money while working on inventions for which there was no market or customer.

In the meantime, from 1901 to 1904, Tesla made an enemy of the very powerful J.P. Morgan, whom he cheated out of $150,000 intended to be used in developing radio

communications. Tesla diverted the money to radical high voltage electrical experiments without telling Morgan. He never did complete the radio work although he had invented it sometime prior. The high voltage experiments yielded no commercial products. Guglielmo Marconi meanwhile, stole Tesla's radio invention, became famous for it and for many years was credited with inventing radio communication. Tesla was eventually credited with inventing radio, but not until after he had died.

Tesla died a broke, paranoid, miserable, lonely man who in his last years was holed up in the Hotel New Yorker having dialogues with a flock of pigeons he had enticed into his room. Just prior to that, news of his activities was finding its way onto America's newspapers, but not with reports of new commercial successes. Reporters were writing about his ideas and designs for communication with other planets, wireless global electrical energy and his gloomy philosophy of war including his death rays and a machine that could literally split the earth. In contrast, when Edison died, the President of the United States asked everyone in the country to dim their lights for a minute of remembrance, a practice that was widely observed.

Discredited in his time, Nikola Tesla was made out by his business competitors and others to be little more than a kook with some good technical abilities. Even today, Tesla is widely portrayed as a victim, kept or displaced from prominence by a conspiracy including Edison and the other powerful people that were running American industry. Both these great men had their faults and they each have fans and detractors today. Tesla's fan club is a vocal and diverse one including many scientists, engineers, advocates of free energy and anti-establishment people who consistently view him as a victim of outside circumstances rather than a brilliant scientist and engineer but lousy marketer. Many of Tesla's fans view marketing people as not worthy of their esteem while viewing the marketing field as not being a valuable discipline.

What led these two prominent individuals to such vastly different outcomes? *Inventoritis.* Tesla is the poster boy for this disease, arguably being a greater inventor and scientist than Edison, while self-educated Edison was effectively treated by the congressional committee chairman who rejected his first patented invention, the "Electrographic Vote-Recorder." Edison lived the rest of his life mostly free of inventoritis and still has the reputation as being the World's Greatest Inventor. Edison understood and consistently applied sound principles of marketing whereas Tesla did not.

Since Edison's death, the light bulb has since come to be universally recognized as the symbol of ideas and innovation.

Edison Used a Sound *Process* to Market Products Effectively

"Genius is one percent inspiration and 99% perspiration. As a result, a genius is often a talented person who has simply done all of his homework." This is Thomas Edison's most famous quote. Historians and journalists have almost always held this in the context of

his laboratory and seem to forget that a large part of his efforts were invested in product marketing – outside of the scientific work being conducted in the labs.

He never lost his focus on doing his homework to understand the market. He also never overlooked the players (e.g., customers, suppliers, and competitors) in the market. Finally, the financial and business aspects, and the sales and marketing requirements, were always accounted for. He worked out effective strategies and executed them. He branded himself by making his name synonymous with the term "inventor" to the exclusion of others so effectively that today, a hundred years later, this connection remains embedded in concrete.

His work ethic is legendary, but one should remember he almost always had several people helping him in the work. When it was likely to take numerous, sometimes thousands of attempts to get to a satisfactory result on one of his objectives, he would employ an efficient assembly line approach to the task. While working for Edison, Nikola Tesla once described Edison's lab methodology as an "empirical dragnet." The perspiration was not only Edison's to sweat; rather he shared his release among a number of dedicated workers.

Legendary car maker Henry Ford knew Edison well from having been an employee for a while, then a close friend for many years afterward. Ford had a unique personal perspective on Edison's broad mindedness, marketing, business and inventive genius, technical expertise and lack of inventoritis. Ford was working as an engineer in one of Edison's early electricity generating stations and knew much about him and his abilities before they had first met.

Ford confirmed this at their first meeting that took place at the 1896 annual convention of the Edison central station executives where they were surrounded by electrical people who were firmly of the opinion that automobiles would be electric. Ford discussed his approach to the automobile powered by a gas engine and was profoundly impacted by Edison's response.

The following story in Ford's words taken from his 'Edison As I Know Him' book[10] that was written while Ford was at the top of his game and his company was at its peak. Ford was selling millions of cars per year with over half the global automotive market share. He had recently completed construction of his manufacturing crown jewel, the massive River Rouge Plant, after a decade of construction. In Henry Ford's words:

> Our first actual meeting was at a dinner at the old Manhattan Beach Hotel at Manhattan Beach, which is just a few miles from Coney Island. We were holding an Edison Convention, an annual event to which came the chief engineers and managers of the various Edison plants in order to exchange experiences. I went with Mr. Alexander Dow, the president of the Detroit Edison Company. The dinner table was oval, with Mr. Edison at the head. At his right sat Charles Edgar, president of the Boston Edison Company, and I sat next to him. On the other side of the table were Samuel Insull, who has since become great in the electrical industry; J. W. Lieb, Jr., president of the New York Edison Company; John Van Vleeck, the chief engineer of the New York Company; John L. Beggs, and a number of others of whom my recollection is not so certain.
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> During the afternoon session, the convention had given itself up largely to discussing the new field that was opening for electricity in the charging of storage

[10] Ford, H. & Crowther, S. (1930). *Edison as I know him*. New York: Cosmopolitan Book Corporation. (pp. 1-7).

batteries for vehicles. The central station men saw in the electric carriage, the horseless carriage that every one had been looking for.

They predicted that the cabs and carriages would soon be on the streets by the thousands and would require much attention in the way of recharged batteries and the like, and of course that meant enormous revenues. At dinner the talk continued until Alexander Dow, pointing across the table to me, said: "There's a young fellow who has made a gas car." Then he went on to tell how he had heard something going pop, pop, pop below his office window and had looked out and seen a small carriage without any horses, and my wife and little boy sitting in it; that then I came out of the plant, got into the seat, and the thing moved off- pop, pop, popping all the way while everyone stopped to look. Someone at the table asked me how I had made my carriage go, and I started to tell, speaking fairly loudly so that those across the table could hear me, for they all stopped talking to listen.

Mr. Edison caught some of it and put his hand to his ear to hear better, for even then he was decidedly deaf. Mr. Lieb saw Mr. Edison trying to hear and motioned to me to pull up a chair from another table and sit beside Mr. Edison and speak up so that all of them could hear. I got up, but just then Mr. Edgar offered to change places with me, putting me next to Mr. Edison. He began to ask me questions which showed that he had already made a study of the gas engine. "Is it a four-cycle engine?" he asked. I told him that it was, and he nodded approval. Then he wanted to know if I exploded the gas in the cylinder by electricity and whether I did it by a contact or by a spark, for that was before spark plugs had been invented. I told him that it was a make-and-break contact that was bumped apart by the piston, and I drew a diagram for him of the whole contact arrangement which I had on my first car, the one that Mr. Dow had seen. But I said that on the second car, on which I was then working, I had made what we today would call a spark plug, it was really an insulating plug with a make and break mechanism using washers of mica. I drew that too. He said that a spark would give a much surer ignition and a contact. He asked me no end of details and I sketched everything for him, for I have always found that I could convey an idea quicker by sketching than by just describing it.

When I had finished, he brought his fist down on the table with a bang and said: "Young man, that's the thing; you have it. Keep at it. Electric cars must keep near to power stations. The storage battery is too heavy. Steam cars won't do either, for they have to have a boiler and fire. Your car is self-contained (carries its own power plant) no fire, no boiler, no smoke and no steam. You have the thing. Keep at it."

That bang on the table was worth worlds to me. No man up to then had given me any encouragement. I had hoped that I was headed right, sometimes I knew that I was, sometimes I only wondered if I was, but here all at once and out of a clear sky the greatest inventive genius in the world had given me a complete approval. The man who knew most about electricity in the world had said that for the purpose my gas motor was better than any electric motor could be. It could go long distances, he said, and there would be stations to supply the cars with hydrocarbon. That was the first time I ever heard this term for liquid fuel. And this at a time when all the electrical engineers took it as an established fact that there could be nothing new and worthwhile that did not run by electricity! It was to be the universal power. Of course their expectation could not be fully realized because electricity is not a prime mover.

> It was wholly characteristic of Mr. Edison to have the broader vision and to know that, while the uses of electrical power could be extended almost indefinitely in some directions, there were others in which it could be at the best only a makeshift. Not the least among the many remarkable qualities of the Edison mind is its ability constantly to maintain a perspective. He never has any blind enthusiasms. An inventor frequently wastes his time and his money trying to extend his invention to uses for which it is not at all suitable. Edison has never done this. He rides no hobbies. He views each problem that comes up as a thing of itself, to be solved in exactly the right way. His approach is no more that of an electrician than that of a chemist. His knowledge is so nearly universal that he cannot be classed as an electrician or a chemist. In fact, Mr. Edison cannot be classified. He knows instinctively what things can be used for and what they cannot be used for.

The last sentence regarding Edison knowing "instinctively what things can be used for…" should be interpreted in the widest possible context since Edison was already famous, highly experienced and a broad thinker by 1896, as was Ford at the time of his much later recollection. Edison viewed the problem from his highly developed market-savvy perspective. When he pounded his fist on the table and gave Ford his considered opinion, he did so with the full weight of his tremendous accrued knowledge and experience. This was a defining moment in automotive history. Ford certainly viewed it that way more than 30 years later.

Ford was crystal clear on Edison's qualities as an outstanding leader. In the same book,[11] he wrote:

> He is the leader and no one ever questions his leadership. I believe it is rarely possible for any assistant to get ahead of him on a suggestion – not because he is unwilling to receive suggestions but because in his comments on any experiment he invariably covers the point of the subject so thoroughly that the assistant discovers that his suggestion was only a tiny section of what Mr. Edison already had in mind. He does not have to assert leadership. It is simply unquestioned by any man of real intelligence – and Edison does not for long have near him any person who does not possess far more than average intelligence. He will not tolerate stupidity or long-winded explanations.

Edison's original Menlo Park laboratory facility has been preserved by Henry Ford at the historical Greenfield Village site in Dearborn, Michigan. It is within a 15 minute drive from either Ford Motor Company's world headquarters or the recently revitalized River Rouge Plant where the popular F150 series trucks are currently in production. The reconstituted Menlo Park is also within easy walking distance of the company's main global R&D campus which it is located adjacent to.

Ford had the original chair Edison sat in nailed to the floor in front of the last place he used it, his workstation. Menlo Park and the "inventor's" chair are still in place today, open to the public for tours. The chair is fixed in front of a table containing a series of the most advanced batteries of the day. Ford relocated Menlo Park to preserve this important part of the Edison historical record in a very tangible way. He believed the Edison example to be of great importance and historical significance. He appears to have gotten it right.

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[11] Ford, H. & Crowther, S. (1930). *Edison as I know him*. New York: Cosmopolitan Book Corporation. (pp. 65-66).

Unfortunately, the Ford Motor Company is currently in serious financial trouble and might collapse or become absorbed within the next few years. The company took $12.7 billion in losses and sales declined to $160 billion in 2006, down from $177 billion in sales with a small profit the previous year. These are the highest losses recorded in the company's 103 year history. Inventoritis has been part of the problem. The Ford executives and R&D people should revisit the preserved Menlo Park that is located in their midst.

Edison used process to market products effectively. Throughout his long and productive life, he was able to maintain perspective and not lose touch with the market. His methods, applied over a long period of time, helped him to usher in the age of electricity. Ten essential elements of his method of marketing form what we refer to as the *Edison Ten Point Method of Marketing*. He had things going so well over his lifetime that he became branded: the world's most famous inventor, a moniker which remains ever so strong even today. There has never been a more effective product marketer than Thomas Edison.

The Edison Ten Point Method of Marketing:

1. He knew the customer.
2. He was an excellent networker and understood networking theory (a diverse network he could influence or ask for feedback).
3. He understood that execution is everything (he ran projects the same whether they had a patent or not).
4. He was extremely teachable and had a strong commitment to self-improvement.
5. He invented or improved upon many marketing concepts and techniques.
6. He had a world-class set of advisors that were not afraid to exercise candor. (Henry Ford, Harvey Firestone, etc.).
7. He knew how to manage his brand effectively (public relations, media photos, media kits, the use of "show rooms" etc.).
8. He knew how to attract world-class talent (employed Tesla).
9. He controlled credible channels (distribution and media).
10. He knew how to price products and opportunities effectively.

To successfully employ the *Edison Method of Marketing*, one must be free of inventoritis and have sufficient leadership capabilities. Notice that having a ton of money is not part of the method. Edison was not born independently wealthy. By applying sound processes, he was able to attract whatever financial resources he needed to carry out his aims.

Why is Inventoritis a Big Issue?

Development and testing activities have been modeled on Thomas Edison's famed Menlo Park laboratory example and on the premise that by establishing systems and processes toward the objective of coming up with winning products through technical

research and development activities (R&D), the company would gain a competitive advantage. Vast amounts of money are spent in this area and many companies still pride themselves on the money they spend each year on these activities, usually expressed as a percentage of sales, typically in the 1 to 15% range. An endless series of winning products is not the normal result. A 2005 Booz Allen Hamilton study[12] of the global top 1,000 R&D spenders found no direct correlation between R&D spending and sales growth, operating profit or shareholder return.

Clearly, inventoritis is a big issue where such vast R&D spending produces such unreliable results.

Why We Need to Deal with Issues Caused by Inventoritis

Obtaining more predictable and better results from these substantial R&D investments would lead to competitive advantages. An important metric would be an increase in the percentage or number of innovations that are successfully deployed. Hundreds of thousands of new products are launched worldwide every year, with only a small percentage of the products remaining on the market a couple years after the launch. Companies that can increase their success rate even a little bit will be able to capture greater market share from their competitors while being able to apply R&D spending more rationally than they do presently.

How Do We Identify Inventoritis?

An industry metric first introduced in 1992 called the M/E or Grabowski ratio[13] can be used as a measure or at least an indicator of the extent to which organizations are likely exhibiting collective inventoritis.

The M/E ratio was developed by engineer turned marketing consultant Ralph E. Grabowski and is the ratio of marketing to engineering investment. The main component of the marketing investment is the often undervalued discipline of “front-end marketing” that includes conducting market research, gathering competitive intelligence, building the business model and analyzing the payback. Marketing investment for the purposes of the M/E ratio does not include sales and promotion expense.

Grabowski found that the most successful companies had ratios greater than 1.0, spending more in front-end marketing than in engineering. Failures had ratios often well below that. Copier manufacturer Xerox had a ratio of 0.1 and large computer companies Digital and Wang, that were impacted by the advent of the personal computer, had ratios of 0.004 and 0.001 respectively. Personal computer maker Dell and software company Intuit had ratios of 1.5 based on his comparison. Grabowski found that companies with low ratios tended to have inwardly focused engineering cultures.

Other researchers, such as Robert G. Cooper and Elko J. Kleinschmidt, have been investigating the relative amounts of resources applied toward front-end marketing. They have done considerable research work throughout the past 20 years in the product

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[12] Jaruzelski, B., Dehoff, K., & Bordia, R. (2005). The Booz Allen Hamilton global innovation 1000: Money isn’t everything. *Strategy + business magazine issue 41, Winter 2005* Reprint No. 05406. New York: Booz Allen Hamilton.

[13] Grabowski, R.E. (1995). Who is going to buy the darn thing? *Proceedings of the IEEE Electro International, June 21, 1995,* 69-97.

development field. In one study, they found that only small amounts of money (7%) and work (16%) go into the front-end marketing homework. These findings were presented and discussed by Bill Dean in a case study article he prepared for a direct marketing association.[14] Dean stressed the importance of incorporating focus group testing in the product development process. For Dean's article, he also found research revealing that solid up front marketing homework can increase new product success rates by a whopping 43.2%.

The Grabowski M/E ratio is only one of the tools can be used to identify inventoritis at the organizational level. To help develop a clearer picture of where an organization stands relative to its inventoritis issues, a careful examination should be made of the budgeting processes, reward and incentive systems, human resources policies and activities, training programs, innovation recognition systems and strategic planning methodologies.

It is also important to be able to identify inventoritis issues at the personal level. Human resources people need to have at least a basic understanding of how inventoritis impacts various functions. They must also be able to screen and qualify it within individuals to minimize adverse impacts. Managers should be able to determine suitable methods of identifying inventoritis issues within their respective enterprises.

Psychologists can be tasked with producing a complete toolkit as interest in the area develops. It is beyond the scope of this paper to go beyond posing some questions to identify inventoritis within individuals.

The following questions have been developed that can be used as a tool to reveal inventoritis at the personal level. They are based on empirical data gathered from years of product marketing practice, and dealing with a wide range of clients from a lone inventor to Fortune 500 companies. These questions were designed primarily for individual inventors and may or may not apply to companies or institutions depending mainly on the size and nature of the organization. Many companies, not only small ones, are largely extensions of an individual leader and his or her ego so these questions will have greater relevance for them than for large diffusely managed companies. The more affirmative the answers, the higher the likelihood of inventoritis.

Do you have your name on a patent that you own? Most highly successful individuals simply do not own patents on their ideas. Conversely, most individuals who own patents for their inventions are not highly successful.

Are sales pathetic or worse? People and companies exhibiting inventoritis tend to have poor sales or no sales, with inventoritis issues often being a root cause.

Are you a control freak? The issue of needing to be in control is not a simple one and it hinges on people's views of power and money. Inventors tend to be reluctant to let go of control and in a great many cases are in complete control of poor or non-existent businesses. Regardless of how good an idea the invention is, without a proper hold on the marketing aspect an idea will stagnate and become nothing, and 100% of nothing is still nothing.

Do you spend money on personal preferences rather than optimum results? Inability to focus resources on the needs of the business is common and often leads to disaster.

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[14] Dean, B. (2005, March 28). Case study: Incorporating focus group research into the product development process. *DM News,* Article 32310. Retrieved March 31, 2007, from the World Wide Web: www.dmnews.com/cms/dm-news/e-commerce/32310.html

Do you go out and make bonafide sales calls and presentations willingly, with enthusiasm and often enough? Most people with inventoritis hate making sales calls.

Is the company, product or process named after you or someone you and not your target customer cares about (naming after your pet or yacht would be included in this)? This is not usually a fatal problem but it suggests less than complete focus on satisfying customer requirements. Naming a company or product something that has no relevant meaning to a customer or prospect is a missed opportunity. For example, 1-800-SET-TONE for a musical instrument tuning business with that phone number would be more useful than say 1-800-PET-BOAT or some other name based on a founder's personal preferences, which communicates no useful information to a customer or prospect.

Are you paranoid to the extent it makes it hard to deal with you? Inventors are often notoriously difficult people to deal with. Most busy people in industry simply learn to avoid dealing with inventors. Often companies refuse to even listen to or look at ideas coming from outside inventors because of the potential headaches and legal liability issues.

Do you hate engineers, investors, lawyers or any other particular representative professional whose support could help you? Most of these professionals are not evil shysters trying to take unfair advantage of inventors. However, retaining them can be very costly if one is not wealthy or a company big enough to retain them properly and pay for these services. Engineers deal with all sorts of technical issues and have no way to make machines that do not conform to the laws of nature such as anti-gravity devices or free-energy machines.

Investors need to make overall portfolio returns with the normal math working out such that for 10 businesses, one or two will fail miserably, one or two will do very well and the rest will be more like the living dead, with it taking a while to determine which way they are going. The returns from the winners need to cover all the losses plus a rate of return. That means deals need to be cut on each one such that if it becomes one of the winners, there needs to be double, triple or greater returns to offset the losses and poor returns for the majority of the investments.

The majority of all new businesses cease within three to five years of starting. Lawyers, patent agents, marketing agents and other professionals know this so will generally seek healthy retainers and bill for services such that if the client is among the vast majority of those that do not succeed, these professionals get paid for their work.

Do you think your product or idea is really good and worth more than it has sold gross in the last 24 months or since conception? This is a great question for inventions in which the patent is at least a couple years old with some related sales history. Anyone that thinks it is worth more than the gross sales of the previous two years is almost guaranteed to have a severe case of inventoritis.

Are you no richer from your product or idea than you were when you started working on it? A business is required to make money, otherwise it would be a hobby if one is doing it for non-economical reasons or a failure if it is a business that did not make money. In a small number of cases, it is simply a business in the early or developmental stages. Most inventors who have not yet made money from their invention falsely place themselves in the latter category.

Do you bring people on board who are not experts in their field? Getting the right people into the right places at the right times is one of the main determinants of success for every successful enterprise. In the modern competitive arena, this almost always requires recruiting experts. People with inventoritis tend to be poor recruiters.

As mentioned earlier, these questions won't be of much use in large hierarchical companies where the innovation activities are tightly managed and people work in carefully defined jobs that are not entrepreneurial in nature. But then again, a scientist or engineer working deep within a large R&D organization with some of these tendencies could have substantial, albeit hidden influences on the product. The following comments made recently to the authors by Ashton Udall, a professional working in the product development and manufacturing field, suggests this:

> Taken from a product development and manufacturing perspective, I watch companies and inventors make their way through the trade-off process in which they select their optimal combinations of features, costs, materials, and so forth for a product. We've recently worked on a product requiring a rather simple component – as simple and as common as a button for a TV remote product or a shoulder strap for a carrying case. With a common component like this, it's probably a good idea to see if one is already being produced out there that might fit with what you had in mind. Avoid the need to spend thousands on tooling for a new component for your product! Take that money and put it in marketing, or keep it as profit, or put it all on Black in the nearest casino. Why design and build a new TV button?
>
> We sourced a nice alternative component, but the specs weren't quite a match (slightly wider than needed). Rather than modify the designs for this (which would only have been an aesthetic modification), the client is still interested in tooling to maintain exactly what was envisioned. This is where inventoritis and its evil cousin 'designeritis' smack into reality. Multiply this approach a few times within one product development process and you're looking at a surefire way to decrease your profits.

Being able to identify inventoritis in individuals and companies or organizations is a prerequisite to being able to apply solutions. The degree to which symptoms appear may vary, but there is no individual or organization that has not at one time or another experienced the consequences of innovations inflicted by the shortcomings of inventoritis. It is often more easily identified in individuals than collectively but better tools are being developed to ascertain the extent to which organizations are at risk of squandering resources applied to innovation.

Impacts and opportunities

Thomas Edison's excellent marketing abilities and approaches were never widely reported. Henry Ford learned them directly from him and made good use of them in building his massive global car business. General Electric and others from among Edison's original companies today are still among the greatest in the world. A large part of the Edison method was also employed by Bill Gates and his Microsoft team. The key is being able to ensure that R&D initiatives follow and do not lead the marketing strategy. It is also important to ensure that people in the strategy area and those leading the R&D effort do not have inventoritis. Or, if it is identified in a company or its employees, that this condition receive immediate treatment using emerging tools based on success stories both from history and effective leadership and management structure adaptations being modeled today.

The most important thing to do initially is to develop a sound 'innovation psychology', one free of inventoritis. Edison did not do this in his day and to date no one has made much work of the psychological aspects of innovation. No amount of good analysis applied to innovation will yield much benefit so long as there are unresolved psychological issues. Overcoming inventoritis is essential for achieving improved performance of the innovation process from ideation to deployment.

A three pronged strategy can be applied to a company's R&D activities. First, R&D spending should be carefully directed toward the areas that will yield higher gross margins. Secondly, the marketing strategy should always lead the R&D initiatives and not the other way around. Thirdly, there needs to be a bonafide marketing strategy center with solid bridging to the R&D center and the sales area. With this apparatus in place, the R&D expenditures can be determined rationally as they relate to gross profit margin improvements.

The bridge-building opportunity is a very important one. By having the people and budgets properly aligned between the marketing strategy center and R&D center, potentially disruptive technologies can be assessed and channeled. Adjustments can be made to marketing strategies so that the R&D center will concentrate on relevant initiatives. This practice will help to avoid irrational decision-making about investing and divesting. Furthermore, it will allow companies to embrace properly directed and effective marketing intelligence flow, establish firelines to prevent any true disruption and aggressively move forward on initiatives where there is a clear strategic advantage.

By ensuring anyone with inventoritis gets checked at the door or obtains treatment, companies will be able to increase the returns on their substantial R&D investments. It is important to ensure that anyone with inventoritis be treated of this condition and if untreated, be kept out of the leadership of the innovation process.

Building solid leadership bridges between the marketing, engineering and sales areas and ensuring the R&D activities are led from within the marketing strategy area will limit the influence of inventoritis and help companies achieve better returns on their important investments in innovation. As a result of being able to apply R&D spending more rationally, a higher percentage of innovations will become commercial successes.

For lone inventors and corporate innovators alike, commercial success is the primary goal. This requires being an effective product marketer and improving the processes to incrementally increase the success rates. That can only happen in an inventoritis-free environment.

Conclusion

Inventoritis, a largely psychological disorder, is a root cause of the vast amounts of money spent on innovation R&D leading to no direct correlation between R&D spending and sales growth, operating profit or shareholder return among the top 1000 global R&D spenders. It is important to ensure that anyone with inventoritis be treated of this condition and if untreated be kept out of the leadership of the innovation process.

Building solid bridges between the marketing and engineering areas and ensuring the R&D activities are led from within the marketing strategy area will limit the influence of inventoritis and help companies achieve better returns on their important investments in innovation.

As a result of being able to apply R&D spending more rationally, a higher percentage of innovations being successfully deployed is expected.

Atomica Creative Group is here to help companies and individuals whose goal is to profit from innovation activities.

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Atomica Creative Group is a specialized strategic product marketing firm. Through leading edge insight and research, sound strategic planning and effective project management, Atomica helps companies achieve greater success in bringing new products to market and in improving their existing businesses. Clients engage experts on an advisory, consultative or collaborative basis to support their product marketing initiatives.

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