METHODICAL GUIDELINES FOR PREPARATION TO PRACTICALS BY STUDENTS ON THE SUBJECT "INNOVATION MANAGEMENT AND ENTREPRENEURSHIP"

CONTENTS AND TASKS OF THE COURSE

The educational subject is the theoretical basis of knowledge and skills complex, forming a profile of a specialist in management of foreign economic activity.

Aim for mastering the subject "Innovation Management and Entrepreneurship" is to master the knowledge system in the field of innovative development management of the enterprise on international markets according to the adopted goals and set strategy.

Tasks of studying the subject are:

- understanding the essence, types and characteristics of innovations in international environment;
- mastering peculiarities, role and place of the management of international innovative activity in the management system at macro, mezo and micro level;
- familiarization with existing approaches to the understanding of innovation policy essence and study the corresponding categorical apparatus reflecting the process of innovation development management;
- studying new business opportunities for implementing measures to improve the competitiveness of the enterprise;
- studying market situations and developing adequate international innovation strategies for the enterprise development;
- couching skills of innovative development management of the enterprise-subject of foreign economic activity, innovation project, risks, etc.

MODULE № 1. MANAGEMENT OF INNOVATIVE ACTIVITY

1.1. The essence and basic concepts of innovation activity management

Purpose of the class is to study the essence, types and characteristics of innovations in international environment, to analyse peculiarities, role and place of the management of international innovative activity in the management system.

Discussion questions:

- 1. The nature and types of innovations in the economic activity.
- 2. Goals, tasks and principles of innovation activity.
- 3. Objects and subjects of innovation activity.
- 4. Features in innovation creation.
- 5. Stages of the life cycle of an innovative product.
- 6. Features of modern progressive models of innovation process.
- 7. Factors that stimulate the innovation attraction.
- 8. Trends in innovative development of the world and national economy.
- 9. System of innovation activity regulation.
- 10. The process of international innovation activity management.
- 11. The influence of innovative activity of enterprises on their competitiveness in the international business environment.

Additional material

'Discovery consists of looking at the same thing as everyone else and thinking something different.'

[Albert Szent-Gyorgyi-Nobel Prize Winner]

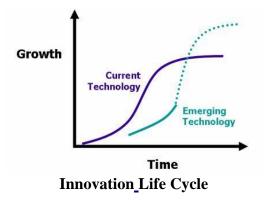
Innovation is a new idea, device or process; the application of better solutions that meet new requirements, unsatisfied needs, or existing market needs. This is accomplished through more effective

products, processes, services, technologies, or ideas that are readily available to markets, governments and society.

The continuous innovative effort for new products-services or new productive processes create a competitive advantage in three critical areas:

- a. Evaluation of the resources involving research and development activities, application of a new technology, sales productivity, production etc, new productive investments and expansion into new markets or broadening of the customer base.
- b. Development and renewal of the entity with investments and growth, professional evolution opportunities for human resources, new recruitments and optimism, high morale and spirit.
- c. Business success building on the reputation and attracting new customers, image of a dynamic business, products that distinguish from the competition, ongoing development and making hard for the competition to gather pace.

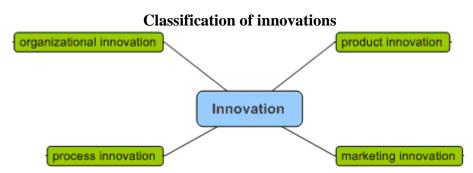
Once innovation occurs, innovations may be spread from the innovator to other individuals and groups. This process has been proposed that the life cycle of innovations can be described using the 's-curve' or diffusion curve. The s-curve maps growth of revenue or productivity against time. In the early stage of a particular innovation, growth is relatively slow as the new product establishes itself. At some point customers begin to demand and the product growth increases more rapidly. New incremental innovations or changes to the product allow growth to continue. Towards the end of its lifecycle, growth slows and may even begin to decline. In the later stages, no amount of new investment in that product will yield a normal rate of return.



The s-curve derives from an assumption that new products are likely to have "product life" - i.e., a start-up phase, a rapid increase in revenue and eventual decline. In fact the great majority of innovations never get off the bottom of the curve, and never produce normal returns.

Innovative companies will typically be working on new innovations that will eventually replace older ones. Successive s-curves will come along to replace older ones and continue to drive growth upwards. In the figure above the first curve shows a current technology. The second shows an emerging technology that currently yields lower growth but will eventually overtake current technology and lead to even greater levels of growth. The length of life will depend on many factors.

The **innovation process** is the process of converting scientific knowledge into innovation that meets new social needs; consistent chain of action, covering all stages of the creation of new products and their implementation.



1) An **organisational innovation** is the implementation of a new organisational method in the firm's business practice, workplace, organisation or external relations.

Organisational innovation can be intended to increase a firm's performance by reducing administrative costs or transaction costs, improving workplace satisfaction (and thus labour productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing costs of supplies.

The distinguishing feature of an organisational innovation compared to other organisational changes in a firm is the implementation of an organisational method that has not been used before in the firm.

Examples: the first implementation of practices for employee development and improving worker retention, such as education and training systems; the first introduction of management systems for general production or supply operations, such as supply chain management systems, business reengineering, lean production and quality-management systems.

2) A **product innovation** is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics.

Examples: first portable MP3 player; introduction of ABS braking, GPS (Global Positioning System) navigational systems or other subsystem improvements in cars.

3) A **process innovation** is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, technology, equipment and/or software.

Examples: the implementation of new automation equipment on a production line or the implementation of computer-assisted design for product development. An example of a new delivery method is the introduction of a bar-coded or active RFID (Radio Frequency Identification) goods-tracking system.

4) A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

Marketing innovation is aimed at better addressing customer needs, opening up new markets, or newly positioning a firm's product on the market, with the objective of increasing the firm's sales. The distinguishing feature of a marketing innovation compared to other changes in a firm's marketing instruments is the implementation of a marketing method not previously used by the firm. It must be part of a new marketing concept or strategy that represents a significant departure from the firm's existing marketing methods. New marketing methods can be implemented for both new and existing products.

Example: the first use of a significantly different media or technique - such as product placement in movies or television programmes - is a marketing innovation.

| Innovation | Breakthrough

Innovation classification based on type of results

1) **Radical innovation** involves introducing new products or services that develop into major new businesses or spawn new industries, or that cause significant change in a whole industry and tend to create new values.

Example: banking business has gone through at least a mild metamorphosis - ATM machines, funds available just about anyplace in the world with the appropriate plastic card.

2) Incremental innovation includes the modification, refinement, simplification, consolidation, and enhancement of existing products, processes, services, and production and distribution activities. The majority of innovations fall in this category.

Examples:

- Many versions of Sony's Walkman are not the original but all the models that followed and were built on a common platform.
- Most automobiles, with annual minor improvements that over years provided significant benefits in safety, efficiency and user comforts.

3) Breakthroughs take people by surprise. They are rare events, arising from scientific or engineering insights. They are called "breakthroughs" because they do something that most people did not realize was possible. Breakthroughs create something new or satisfy a previously undiscovered need. Big breakthroughs often have uses and effects far beyond what their inventors had in mind. Breakthroughs can launch new industries or transform existing ones. Breakthroughts are also called "Disruptive innovation".

Example: the first EARS laser printer was made by Xerox. This laser printer could print 60 copies a minute at 600 dots per inch. No one had ever built anything like this before!

Classification according to types of strategy Open Innovation Closed

- 1) Open innovation consists of strategies by which firms can acquire technologies they need and exploit technologies they have developed. In open innovation firms get their technology from multiple sources. Open strategies for innovation seek efficiency through effective partnering. Nobody ever created a breakthrough with open innovation.
- 2) Closed innovation employs strategy of hiring the smartest technical people in an industry. It assumes that a firm must itself develop its own new products and services and be the first company to get them to market. It assumes that the firm that leads the industry in R&D spending will eventually lead the market. Finally, it assumes that a company should hold on to its intellectual property tightly to keep the competition from benefiting from the ideas.

Classification into top-down and bottom-up innovation



1) **Top-down innovation** (TDI) has the advantage that the people in power set the pace – they set the targets and the objectives and provide the funding. The implementation is left to the appropriate personnel.

This approach takes the form of a directive, such as:

- We will explore that new market
- We will eliminate some segment of our current product line
- We will compete in some new market segment with a new product
- We will invest in this new technology for the future
- We will make an investment in automated manufacturing.

Such directives leave no doubt as to where the firm will find its future. The only limits of top-down innovation are the people resources.

Example:

In 1982 Canon began reconceptualising the plain-paper copier business and investigated the opportunities for lightweight compact copiers. Management knew that the new copier would not come into being by minor improvements in component and assembly designs. It would need a thorough analysis of the market to establish the required features, advantages and benefits. Canon approached the opportunity with a high-level project team.

The team included:

- Project manager the director of the Reprographic Products Development Center (RPDC);
- Advisor to the project-managing director of the RPDC;
- Director of the corporate technical planning and operations center;
- Representatives from quality control, finance, and marketing;
- Task force to examine the colour copying issues.
- **2) Bottom-up innovation** (BUI) is innovation originating someplace in the bowels of the firm. Everyone is welcome to participate in bottom-up innovation. BUI provides the greatest challenges to innovators those

people who think differently, who ask many questions, who have many interests, who are dissatisfied without change, who are considered arrogant, who bring a different perspective, who ask why not more often than why, who create problems for first level managers, but who are the lifeblood and future of the firm. These are the people who come up with ideas and are willing to go through the laborious process of first convincing themselves and then convincing several levels of management of the value of those ideas.

Example of bottom-up innovation:

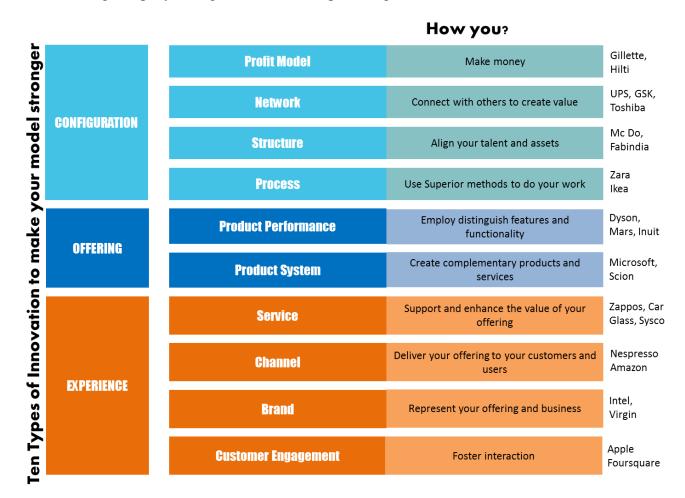
3M is a good example of bottom-up innovation. 3M now operates in 63 countries and promotes entrepreneurial spirit worldwide. 3M is a leader in coated and no woven abrasives, tapes of unimaginable compositions, transportation and personal safety, medical, pharmaceutical, and health care information systems, a leading supplier of connecting, insulating, and protective products for the electronic related industries, Post-it Notes and many other related products.

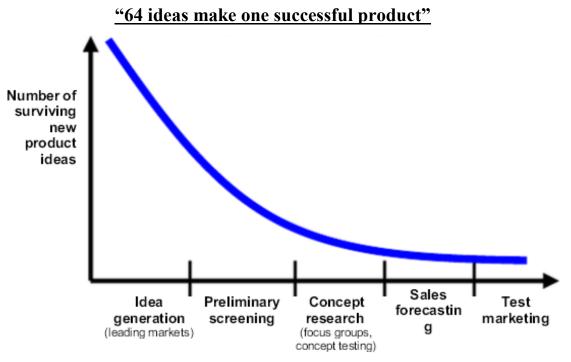
Innovation is part of the company's culture that has been fostered for more than seventy-five years. That culture, while providing freedom of action and opportunities for exploring new ideas, was guided by operational and financial discipline. The history of some of the products that now represent its major divisions includes mild threats of termination from management if the person championing the product did not cease spending time on it. That history also reveals that those threatened individuals continued to pursue their efforts in some form in spite of management's objections.

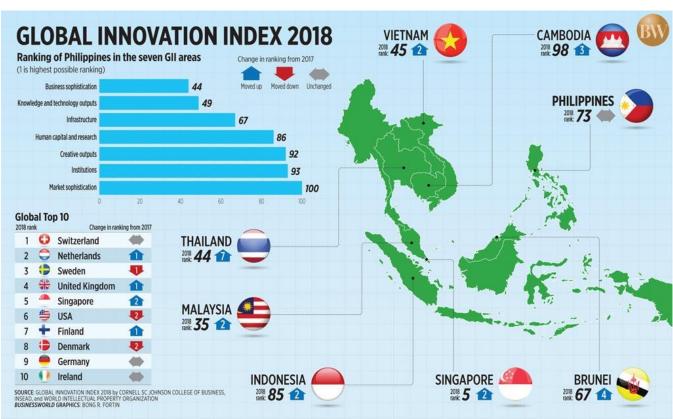
Innovation management as a system is a set of economic, motivational, organizational and legal means, methods and forms of managing innovations in order to optimize the economic results of the business.

The benefits of effective **innovation management** practices are the following:

- Accelerated time to market
- Reduced risk of commercial failure
- Improved return on investment (ROI)
- Higher productivity from innovation teams
- Differentiating company through innovation and providing new sources of sustained value for customers







1.2. Innovative strategy and innovation policy of the enterprise

Purpose of the class – to study features of developing and fulfilling innovative strategy and innovation policy of the enterprise, to familiarize with existing approaches to the understanding of innovation policy essence and study the corresponding categorical apparatus reflecting the process of innovation development management.

Discussion questions:

- 1. The essence of innovation strategy and its interconnection with the general strategy of the enterprise.
- 2. Classification of innovative strategies, expediency of their use in the international activity of the enterprise.

- 3. Principles in the formation of innovative strategies.
- 4. The essence and peculiarities of strategic management of the enterprise innovative activity.
- 5. Using SWOT-analysis to determine the international innovation strategies of the enterprise.
- 6. The essence, place and role of innovative policy in the enterprise activity.
- 7. Basic principles and issues of innovation policy formation.
- 8. State, regional and corporate innovation policy.
- 9. Directions of innovative policy implementation.
- 10. The role of innovation policy in developing the innovation system of the enterprise-subject of foreign economic activity.

Test tasks

1.3. Management of innovation projects

The purpose of the class is to study features of management of innovative projects in the international market, to master tools for the rationale of the innovative project.

Discussion questions:

- 1. Methodic bases of management of innovative projects: the essence and peculiarities of innovation projects.
 - 2. International and national standards for the management of innovation projects.
 - 3. Classification of the innovative project processes.
- 4. The rationale of the project: project analysis, business planning of innovative projects, SMART analysis of the project objectives.
 - 5. The life cycle of an innovation project.
- 6. Management of integration processes, scope, schedule, cost, quality, human resources, information provision and risks of international innovation projects.

Calculation tasks.

1.4. Evaluation of the effectiveness and risk management of innovation activity

The purpose of the class is to study main indicators of economic effectiveness of innovation projects, directions of risk management of innovation activity.

Discussion questions:

- 1. Basic principles for determining the international innovation activity effectiveness.
- 2. Effects from implementation of innovation on the international market.
- 3. Main indicators of economic effectiveness of innovation projects: net present value, the profitability index, payback period, internal rate of return.
 - 4. Functional-cost analysis of the innovative object.
 - 5. The assessment of innovation activity economic effectiveness.
 - 6. Assessing social results of innovation activity.
 - 7. Classification of risks in innovation activity.

Test tasks

MODULE # 2. ENTREPRENEURSHIP

2.1. The essence of entrepreneurship. Intrapreneurship as a form of innovative activity organization

The purpose of the class is to study the essence, targets and tasks of entrepreneurship, sasic aspects and conditions of successful intrapreneurship development.

Discussion questions:

- 1. The essence, targets and tasks of entrepreneurship.
- 2. Systematic approach to intrapreneurship studying.
- 3. Barriers in intrapreneurship implementing, advantages and disadvantages of entrepreneurship.
- 4. Conditions needed for the intrapreneurship implementation.
- 5. Basic aspects of successful intrapreneurship development.
- 6. Intrapreneurship development stages.
- 7. Foreign experience of entrepreneurship organization.
- 8. Entrepreneurship support systems in the EU, the US, Japan and other countries.
- 9. The mechanism of entrepreneurship development.
- 10. Approaches to the intrapreneurship model formation at the enterprise.
- 11. Methods and forms of intrapreneurship organization.
- 12. Main components of entrepreneurial environment and its characteristics.

Test

	High	Above a	average A	verage	Below average	Low	
Ability to handle uncertainty							
Confidence							
Discipline		3 [. [
Drive/ambition							
Energy							j.
Plexibility							
Independence							
Ability to seize opportunity							
Persistence							
Problem-solving							
Total		+ [+ [+] = [
Score results	A Company			edendan a la Tergal		<u></u>	

Test. Why do I Want to Be an Entrepreneur?

Knowing your own intentions can be a powerful asset as you plan the course of your business. When details and decisions become overwhelming, knowing why you got started and what you want out of it can provide some guidance and clarity.

Simply answer yes or no to the items below, and print out the page when done. Refer back to this list later on, and feel free to change your answers as things develop.

OII, alla	1001 110	e to change your answers as things develop.
Yes	No	
0	0	I come from a family of entrepreneurs
0	0	I have always had businesses to make money as I was growing up
0	0	I was the one in my family/group who always came up with the non-obvious solutions to problems
0	0	I look for easier ways to do things
0	0	I do not have a problem taking risks with my own money or my families' money in order to receive greater rewards and results
0	0	I am tired of working long hours for my employer and want to reap some of the benefits for myself and my family
0	0	I know that I will have to work LONGER hours when working for myself at potentially lower wages until the business is successful
0	0	I feel that I have more to offer the world and my community
0	0	I make good decisions quickly and do not have to dwell on most tough problems
0	0	I am a self-motivated person and have the ability to motivate others
0	0	I want to do it for the money
0	0	I do not have to work hard
0	0	I want to create good jobs for my family and the community
0	0	I normally observe things around me that others do not
0	0	I have great ideas I want to put to use
0	0	I have a compulsion in my life to be an entrepreneur
	Yes 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Yes No C C

Entrepreneurs Vs Intrapreneurs

Entrepreneurs

Intrapreneurs

Owner / Operator An Employee
Takes extreme risks Calculated risk
Needs to encourage intrapreneur Way to improve company performance
Profit goes to the entrepreneur Profit for the organization

Implements own or other's ideas Shares own ideas, seeks approval Inclined more towards consumer sales More inclined towards B 2 B products

Education and experience less concern More concern or a must Generally at age between 30 – 40 Most often after 40 Full responsible of failure / success Tries not to take failure

Correct mistakes and tries to overcome Avoids risky projects as much possible Generally from entrepreneur or business family or background

Avoids risky projects as much possible Mostly salaried and rarely entrepreneur

Involvement in all business areas

Generally defines his own hierarchy

Expects always financial profits

Major areas and the delegated areas

Depends on the existing hierarchy

Remuneration / Recognition / Reward

2.2. Marketing concept of entrepreneurship formation in the business system and features of the implementation of intrapreneurial strategies

The purpose of the class is to consider different market situations and developing adequate intrapreneurial strategies for the enterprise's development.

Discussion questions:

- 1. The marketing concept of intrapreneurship formation in the business system.
- 2. Peculiarities of intrapreneurship at different stages of the life cycle of the enterprise: stage of business idea creation, the stage of business idea implementation and creating business structures, stage of the sustainable performance and profitability achievement, damping stage.
 - 3. The essence and types of intrapreneurial strategies.
 - 4. Successful business strategies for business development.
 - 5. Principles and peculiarities of intrapreneurship strategies' development.
 - 6. A toolkit for the implementation of global innovation strategies.

Case study

One of the most well-known examples of intrapreneurship is the "Skunk Works" group at Lockheed Martin. The group was originally named after a reference in a cartoon, and was first brought together in 1943 to build the P-80 fighter jet. Because the project was to eventually become a part of the war effort, the project was internally protected and secretive.

Another example could be **3M**, who encourage many projects within the company. They give certain freedom to employees to create their own projects, and they even give them funds to use for these projects. The 3M group provides grants as a part of its intrapreneurship and innovation program, within the 15% employee time. The "Genesis Grant", for example, provides researchers of innovative projects up to \$85,000 to move those projects past the idea stage.

In another major company, **IBM**, the intrapreneurship program developed 25 new businesses within its first five years. In 2004, the 22 businesses that survived, generated over billion in revenue.

Intel also has a tradition of implementing intrapreneurship.

One Intel engineer who took the plunge was Paul Scagnetti, who had worked for a couple of years developing chip-making processes. Tinkering at home after working 12-hour days, he came up with a concept for a handheld computer aimed at helping people do just one thing: record and plan their fitness and nutrition data. Mr. Scagnetti's idea passed muster with Intel's finance people and he got approval to work on the project with a partner for nine months. Intel then gave him funding to hire 15 people and launch the product, the Vivonic Fitness Planner, in sporting goods stores on the West Coast.

Google is also known to be intrapreneur friendly, allowing their employees to spend up to 20% of their time to pursue projects of their choice. Google, W.L Gore Technologies or HP have also similar programs, giving 10% to 20% of time for employees to pursue own ideas.

The Gmail messaging system of Google or the Gore guitar strings made in synthetical material are initiatives born in the mind of regular employees.

Test tasks

2.3. Resource provision of intrapreneurship

The purpose of the class is to study features of intrapreneurship resource support and resource optimization.

Discussion questions:

- 1. Peculiarities of intrapreneurship resource support.
- 2. Entrepreneurship funding.
- 3. Internal reserves creating opportunities for the intrapreneurship development.
- 4. The structures supporting innovation development: venture capital firms, business incubators, regional scientific and technical centers, technopolises, technology parks, consortia.

Test tasks

2.4. Entrepreneurial culture and behavior

The purpose of the class is to analyse main directions of building a culture promoting intrapreneurship in the company, to study influence of mentoring, coaching, counseling on the intrapreneurship development.

Discussion questions:

- 1. Features and components of intrapreneurship culture.
- 2. The main directions of building a culture promoting intrapreneurship in the company.
- 3. The main features of entrepreneurial behavior.
- 4. Behavioral characteristics of intrapreneurs.
- 5. Requirements to the qualities of an intrapreneur.
- 6. Decision-making model in entrepreneurship.
- 7. Mentoring, coaching, counseling.
- 8. Features of forming teams for the intrapreneurship development.

Test tasks

Case study "UNHAPPY AT WORK? BE AN INTRAPRENEUR"

Five methods to be an intrapreneur:

1. Stop with the "buts".

- "How about you try running this new marketing strategy by your boss?" I say.
- "I love that idea, BUT ..." is the reply.
- Stop with the excuses. If you turn the buts around, you'll find opportunities.

Find creative ways to overcome obstacles to help propel the business toward its goals.

2. Deliver solutions.

Your boss knows about problems. What he needs is solutions. You're only doing a small and easy part of the job if you just discover a new problem. You can be even more valuable by bringing a viable solution, or solutions, to the table. If you have multiple solutions, disassemble the differences, pros and cons for the team to understand the options and guide the organization to a sound decision. Recommend a concrete first step to get the ball rolling.

3. Show your smarts.

The expert is the one who knows more about a topic than anyone else in the room.

Offer your ideas and guidance in meetings and email discussion topics internally and with clients. Provide suggestions and counsel to members of all levels of your organization. Become a source of creativity, knowledge, and guidance, and your organization will start to see you as an intrapreneurial leader. Learn how to make suggestions diplomatically.

Sometimes the best suggestion starts with a simple open-ended question that moves a person or the group in a new direction. For example, you could say: "What would happen if we looked at this problem this way ...?"

4. Be a hero to your boss.

Your boss has objectives and quotas he needs to meet. Your job is to help him get there. When you do, you can become a shining star to your boss.

Fully understand and appreciate what your boss is required to achieve, and then don't just support his mission, but help him achieve it better, faster, and more cost effectively.

If you don't know what your boss's goals are, then ask him what they are and how you can help. Keep focusing on creating new value. That's innovation – the bread and butter of intrapreneurship.

5. Use positive executive behaviors.

No one is going to believe you should be promoted if you don't exhibit the positive behaviors of someone already in that role. If you want to become a vice president, act like one.

The promotion follows the behavior. Fill the position you want – which includes exhibiting the required skills, attitude, and behaviors which will lead to achievements and can set yourself up for earning the title.

GAME "Kill a Stupid Rule" for innovative ideas

1. Gather a group of employees.

Then break them down into two-or three-person teams. If possible, pair up people from different functional areas.

2. Give the smaller groups 10 minutes to answer one question:

"If you could kill or change all the stupid rules that get in the way of better serving our customers or just doing your job, what would they be and how would you do it?"

3. Then sit back.

And make sure your skin is particularly thick that day, because many of the stupid rules employees will want to kill are *your* stupid rules.

"At the 10-minute mark the teams will be begging you for more time," Lisa says, "not because they're coming up empty but because 10 minutes isn't nearly enough time to write everything down. So don't stop them. You'll rarely see employees get as engaged during team meetings. Giving them more time shows how serious you are about the exercise, which is important for building your team's trust in you and in the possibility that things will actually change."

4. Ask everyone to write their "favorite" stupid rule on a sticky note.

Then have each place his or her rule on a whiteboard grid that has two axes: Y is ease of implementation, and X is degree of impact.

Your grid will then have four quadrants: Hard to implement with low impact, hard to implement with high impact, easy to implement with low impact, and easy to implement with high impact.

Some people will automatically assume eliminating their favorite stupid rule has tremendous impact even if it doesn't. That's understandable.

5. Talk about the results.

Some of the same rules will show up multiple times. Some will be rules only one person follows. Some won't be formal rules, falling more into the, "But that's how we've always done things," category.

And some won't be rules at all: Meetings just for the sake of meeting, reports that no one reads, multiple sign-offs for purchases or approvals....

6. Let the group pick a few easy to implement/high impact rules--and kill those rules on the spot.

Prove you're willing to listen. Prove you're willing to change.

Prove employee engagement is a verb, not a noun.

7. And don't stop there.

Some rules you can't kill on the spot. A few might require first changes in process or workflow.

No problem. Make the necessary changes; anything you do that streamlines a process and frees up employees to do real work is time well spent. Then let everyone know when those rules are killed. That way you reinforce how seriously you take their input and how important it is to make positive changes.

8. Then keep listening.

When employees know you take their input seriously, you won't need to try to flip the innovation switch by holding brainstorming sessions to solicit ideas.

As long as you're listening and acting on what you hear, your employees will bring great ideas to you.