



Nth Degree Software
"empowering better thinking"

White Paper

2008

Innovation Infrastructure

Systems approach to building an innovation organization.

Table of Contents (click on [blue](#) hyperlinks)

Micro White Paper

- 1. Purpose – How to build an Innovation Organization***
- 2. Creativity vs. Innovation – A BIG Difference***
- 3. The Need for Innovation – Staying Competitive***
- 4. The Challenges of Innovation – Embracing Change***
- 5. The Innovation Infrastructure Solution – Systems Framework***
- 6. New Facilitation Technology – Emulating how Humans Think***
- 7. Innovation Applications – Putting Theory into Practice***
 - Personal Innovation**
 - Collaborative Innovation**
 - Enterprise Innovation**

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Micro White Paper (TOC)

1. Purpose – *How to build an Innovation Organization*

While the importance for innovation is understood, there is little real understanding of how to build an innovation organization. So, rather than relying on serendipitous acts of creativity to foster innovation as many organizations do today, this white paper describes how Innovation requires systemization through deployment of an **Innovation Infrastructure**.

2. Creativity vs. Innovation – *A BIG Difference*

Creativity is a “mental activity” that generates new ideas, solutions or concepts. Innovation is a “thinking process” that turns creative ideas into something of value.

3. The Need for Innovation – *Staying Competitive*

Over the past century the watchwords were *efficiency* and *quality*. But cost cutting efficiency and quality are no longer enough to remain competitive ... Continuous innovation is now required.

4. The Challenges of Innovation – *Embracing Change*

Historically worker’s were educated to think analytically and trained to *master routine work processes*. Today, a huge mind shift requires workers to think innovatively and *master the process of **changing** the routine* to meet emerging opportunities.

5. The Innovation Infrastructure Solution – *Systems Framework*

Less than 20 years ago, the typical Innovation Infrastructure was an individual creative genius shouting *Eureka!* Today, organizations need to intentionally and deliberately foster innovation.

6. New Facilitation Technology – *Emulating How Humans Think*

As Assembly-line technology and automation tools improved manual-worker *labor* productivity, Facilitation Technology and cognitive tools improve knowledge-worker *thinking* productivity.

7. Innovation Applications – *Putting Theory into Practice*

- **Personal Innovation:** Provides workers with tools empowering them to tap into their creative talents to make performance improvements in their own jobs.
- **Collaborative Innovation:** Facilitates informal team collaboration and experimentation to develop breakthrough ideas that no one alone could produce.
- **Enterprise Innovation:** Guides formal innovation teams to find and turn incremental and radical opportunities into valuable commercial innovations.

Innovation Infrastructure

Systems approach to building an innovation organization.



Jeffrey Immelt, CEO of GE

"The only source of profit, the only reason to invest in companies in the future is their ability to innovate."



Tom Peters

"Innovation is so critical it should be on the agenda of every meeting in every single department."

1. White Paper Purpose (TOC)

Today, innovation is pretty much in a free-form state. And while the importance of innovation is increasingly talked about and showing up as a strategic priority ... there has been little genuine understanding of how to build an innovation organization.

So instead of relying on serendipitous acts of creativity to foster innovation, this white paper describes how an Innovation Infrastructure can help you bring a steady pipeline of incremental and radical breakthrough innovations to your organization and marketplace.

2. Creativity vs. Innovation ... What's the difference (TOC)

Everyone wants innovation and wants to be innovative, but few can really define what this means. Ask ten people to define innovation and you'll likely get ten different answers.

Creativity Defined: According to wikipedia, there are over 60 definitions for creativity. The most commonly used are:

- Creativity is a thinking skill used to develop new ideas and solutions.
- Creativity is the ability to produce something new, to generate unique approaches and solutions to issues or problems or opportunities.

Innovation Defined: The classic definitions for Innovation are:

- Innovation is turning a creative idea into something of value and profit.
- Innovation is a complex thinking process used to transform creative ideas into useful products and services.

From a business perspective, modern innovation is an organizational process with all the procedures and tools needed for generating, considering, and acting on creative insights leading to improved or new business products, services, or internal processes.

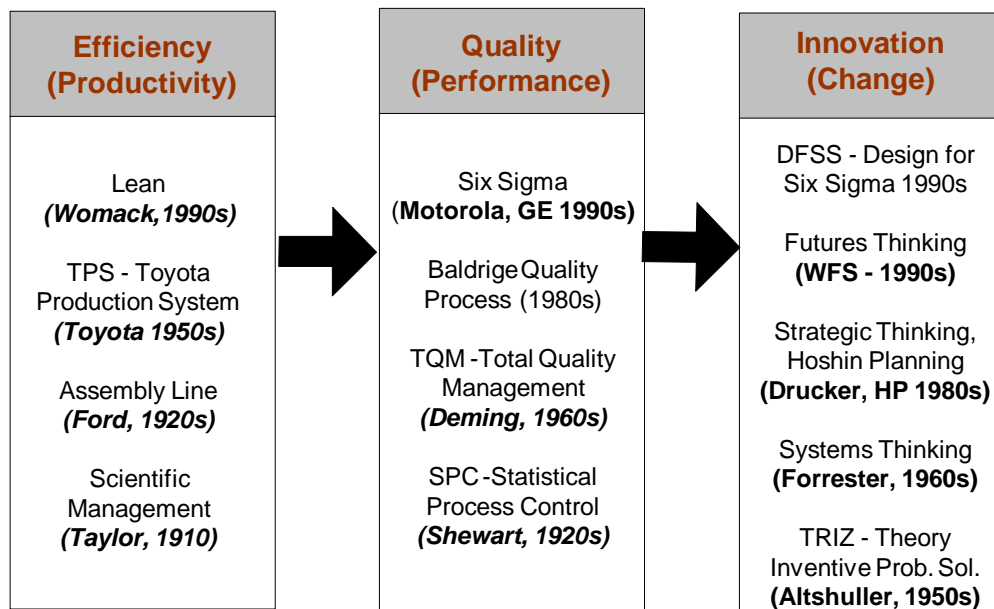
3. Need for Innovation ... Staying competitive (TOC)

In the 50s thru 80s the watchword was *efficiency*. This kind of innovation had its roots in F.W. Taylors development of scientific management at the turn of the century and evolved into Womack’s Lean methodology in the 90s.

Over the past 25 years, the watchword was *quality*. Quality methodologies started with TQM (Total Quality Management) from Deming in the 1960s and evolved to Six-Sigma in the 90s.

During these times, the fields of *efficiency and quality* have been systemized to the point that the world now benefits from the best products at the fastest rates of production.

Evolution of Innovation Methodologies and Tools



But improving Efficiency & Quality is not longer enough to remain competitive.

IT guru Kevin Kelly may have said it best; “*Efficiency, while a necessary condition for business success, is insufficient to sustain growth over decades. While new levels of efficiency and productivity require inventive solutions, the goal of efficiency is not the same as the goal of innovation. ... Wealth flows directly from innovation... not optimization.*”

4. Challenges of Innovation (TOC)

Tom Peters author and business guru bluntly said: *“I worry what will happen to the American psyche should the nation be knocked off the economic catbird seat. But, I believe American business is capable of competing if companies are willing to continually reinvent themselves. ... The only way we’re going to survive is to innovate our way out of the box.”*

Peter Drucker once said that *“Innovation is the only competitive advantage a company really has, because quality improvements and price reductions can be replicated, as can technology. Therefore, if a company could have just one major capability, it should be innovation.”*

Assess the following innovation obstacles and enablers to determine how ready your organization is for innovation.

Obstacles & Enablers of Innovation

Obstacles to Innovation	Enablers of Innovation
Resistance to Change	Embracing Change
Innovation by Luck	Innovation by Design
Scripted Thinking	Facilitated Thinking

Resistance to Change vs. Embracing Change

Innovation by definition requires change and change requires moving away from the comfort of the status quo. Resistance is normal and should not be used as an excuse not to innovate

Human change: Humans get entrenched in their ways of working ... and don’t like change. In yesterday’s relatively stable world, workers were trained to become very efficient in performing prescribed tasks. The worker’s mindset was to *master a routine*. Today, workers must respond to change and emerging opportunities with a mindset to *master the process of changing the routine*.

Organizational change: Organizational structures by their nature are not pre-disposed to change. In fact their primary purpose is to produce predictable behaviors that are usually based on successful “past” experiences. Unfortunately, risk aversion and uncertainty can leave companies ill-equipped to deal with challenges that don't mirror the past.

Cultural change: Culture is the very embodiment of an organization's resistance to change. By definition culture resists change in order to maintain shared beliefs, values, customs, and behaviors. And once again in a changing marketplace, cultural rigidity suppresses an organizations ability to innovate.

Innovation by Luck or Design

Do you want to gamble on your future?

Leaders define and create the organizational culture in which innovation blossoms. Without the right leadership, companies rarely innovate ... and at best get lucky.

As a gambler knows, on any given occasion you can get lucky ... but the odds are against you. Effective leaders recognize that relying on intermittent innovation efforts is putting their company's success in the hands of chance.

Continuous innovation is a matter of habit.

Leaders also realize that there must be a shift from lucky innovation to a predictable innovation that is a matter of strategy *and habit*. These leaders embrace innovation as a core value, and ensure that the right tools and methodology are in place to produce innovation as a routine part of everyone's job.

Without the right innovation methodology and infrastructure you're risking far too much - you're risking your future.

Scripted Thinking vs. Facilitated Thinking

The # 1 challenge in innovation is scripted thinking

When we think, our minds default to using dominant thinking patterns, called scripts, which have been acquired through education and our life/work experiences. Over the past 100 years we have been in an era of scientific thinking and problem solving. Knowledge-workers were mostly educated to thinking analytically and do problem solving.

While scripted thinking works well for doing routine tasks, the danger of using routine thinking patterns is that it can prevent us from seeing anything other than what is revealed by that script. Scripted thinking prevents us from gaining innovative insights and shapes thinking performance in an unproductive fashion. It's like using the same hammer for every job.

5. The Innovation Infrastructure Solution – Systems Framework (TOC)

Less than 20 years ago, the typical Innovation Infrastructure was an individual creative genius shouting *Eureka* ... and a corporate innovation hero jumping over internal hurdles to bring revolutionary products and services to market

To succeed today, it is necessary to move beyond an ad hoc or unstructured approach to innovation. Organizations need to intentionally and deliberately foster innovation through instituting appropriate processes, methodologies and supporting technologies. Organizations need to take a systems approach to innovation in the same way they once approached efficiency and quality and deploy an *Innovation Infrastructure*. (see Fig.x)

Individual (Human Mind)

There are some gifted people who have rare creative and innovative talents, and combined with a photographic memory can do great things. For the rest of us we need help to be innovative and tools to overcome mental frailties like these.

- **Learning and Forgetting:** Learning creative and innovation skills is more important than ever. However, the average knowledge-worker remembers only about 2-4% of what they were taught. So when the time comes to apply creative thinking on-the-job, much might have been forgotten.
- **Information overload:** The quantity of information to perform work is increasing faster than knowledge workers can remember.
- **Growing complexity of work:** Work is getting too complex for one person to handle. More and more people need to collaborate to get work done.
- **Knowledge and Skills Obsolescence:** Not only is more information and skills needed to perform work, but these knowledge/skills are becoming obsolete faster. So as change accelerates, the lifespan of knowledge and human skills is growing shorter.

While mankind will continue to benefit from individual genius, many more innovations will become possible through technologies like the following which assist humans to collaborate, think and probe the nature of the universe in more detail than our natural senses allow.

Information (Knowledge Management Technology)

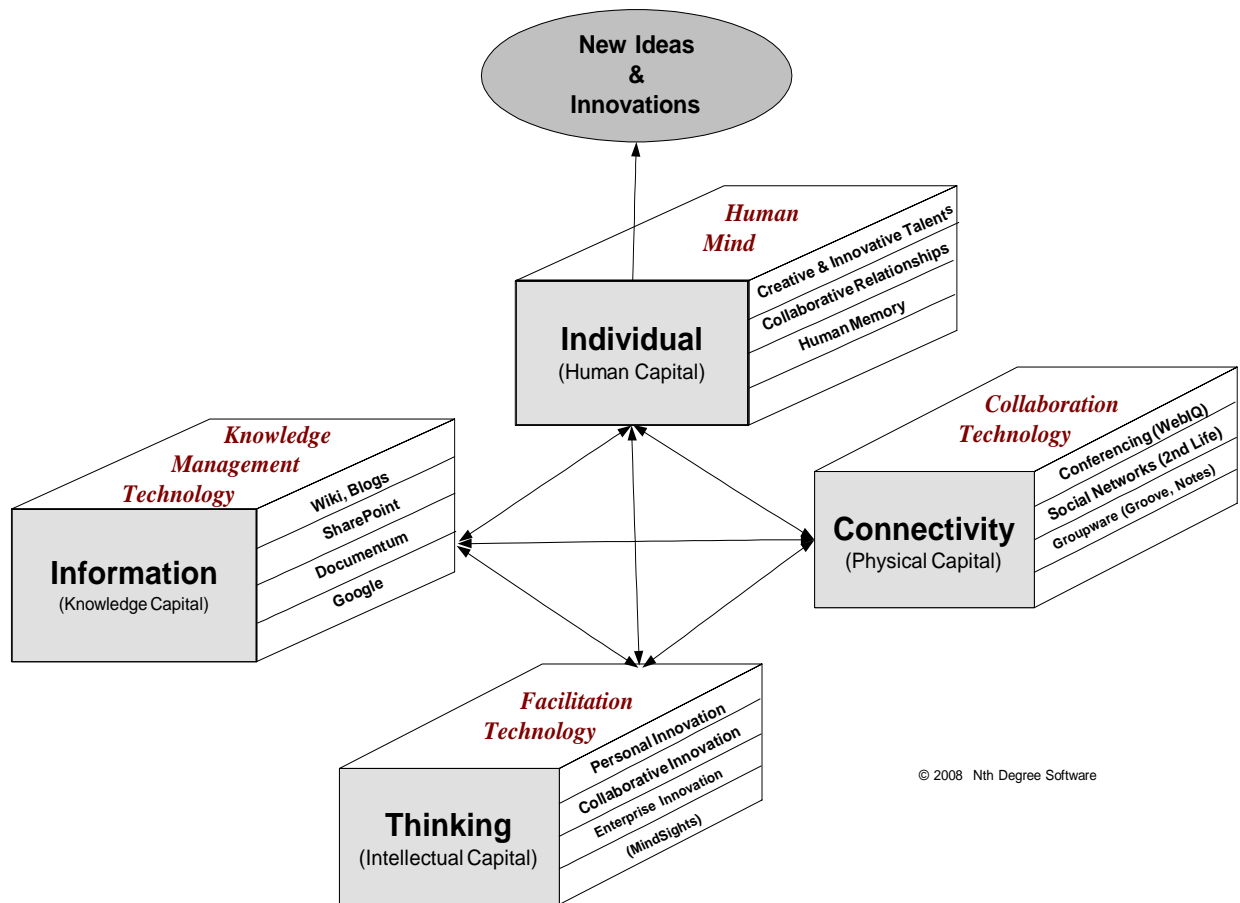
There is a correlation between people who develop more innovative ideas, with people that have a wide range of available and relevant background knowledge. Effective thinking can only occur if a person/team acquires the right “critical masses” of data and information to think upon.

Today, a key to innovation is not how much you remember but how effectively you can find and access the relevant information to think upon with tools like the following

- **Wikis** allows users to add and edit content collectively and provide for affordable Knowledge Management systems. Note: “Wiki” means “rapid” in Hawaiian.

- **Blogs** (short for **web logs**) are interactive online journals that provide commentary or news on a particular subject; others function as more personal online diaries.
- **Documentum** from EMC and **SharePoint** from Microsoft are document management platforms for developing and deploying content applications.
- **Google** of course if the primer internet search engine and turning into a comprehensive data mining platform.

Innovation Infrastructure



Connectivity (Collaboration Technology)

Less than 300 years ago most individuals collaborated with people within 20 miles of where they were born. Now of course we can collaborate with virtually anyone in the world.

Working collaboratively brings forth a synergy that raises each person's level of thinking. Collaboration helps to create a shared understanding and fosters the co-creation of new ideas that

no one person could develop alone. The integration of collaborative technologies like the following becomes essential.

- **Web conferencing** is used to conduct live meetings or presentations over the Internet. WebIQ and WebEx are applications.
- **Groupware** technology support groups of people working together, often at different sites. Lotus Notes from IBM and Groove from Microsoft are groupware examples
- **Social networks** allow anyone from anywhere in the world to meet new people of similar interests and chat with them. 2nd Life, MySpace and Facebook are examples.

Thinking (Facilitation Technology)

The evolution of Tools reflects the evolution of Civilization

While the deepest workings of the human mind remain beyond our comprehension, we know quite well that we can readily improve thinking by using tools. *“If you want to teach people a new way of thinking, give them a tool, ...”* - Buckminster Fuller

And as Don Norman puts it; *“The power of the unaided mind is greatly exaggerated. It is “tools” that make us smart, the cognitive artifacts that allow human beings to overcome the limitations of human memory and conscious reasoning. “*

Facilitation Technology ... The missing piece of the Innovation Infrastructure puzzle.

Rarely can people bring to mind all the right mental tools and questions to ask at the exact moment to improve innovative thinking. Instead of relying on human memory, Facilitation Technology takes a different approach. Its goal is to function like a skilled consultant, teacher or mentor who is always available and ready to support your thinking needs at the exact moment you need it.

Nth Degree Software is the first to develop Facilitation Technology, and as Gartner Research put it: *“Facilitation Technology is a BIG idea, one the world needs!”* It is without peer. Not Oracle, SAP nor even Microsoft is better prepared to improve the effectiveness of knowledge-workers.”

Note: Facilitation Technology is Not AI (Artificial Intelligence)

Facilitation Technology is not a substitute for human thinking, and is actually just the opposite of Artificial Intelligence. The purpose of AI is to automat human thinking in ways that lead to deterministic answers. This works well routine thinking that follows a script. Facilitation Technology uses questions to enhance natural human intelligence by taking the mind out of scripted thinking patterns and leading to new associations, ideas and innovations.

6. New Facilitation Technology – Emulating How Humans Think (TOC)

Facilitation Technology Defined

Facilitation Technology is a process that improves knowledge-worker thinking productivity in much the same way the invention of the assembly line improved manual-worker labor productivity. With a just-in-time approach, a Facilitation Technology delivers within a precise thought process the right questions to ask, the correct thinking tools to use, and the proper thinking methods to enhance personal or team thinking performance.

Facilitation Technology is built on the premise that the choice of using thinking methods and tools should follow the same principle that underlies the selection of any manual tool: *choose one appropriate for the task at hand.*

The following is an analogy of an automobile assembly line process compared to a problem solving process. Both follow a sequence of tasks (mental tasks), both use tools (manual vs. cognitive “thinklets”) and both use raw materials (physical vs. data/information). Note: 125 different kinds of pliers have been invented to do 125 different manual tasks.

Automobile Assembly Line Process

	Task 1	Task...	Example	Task N	
Task	Production Process	...	Assemble - automobile door	...	Physical Outputs (Car)
Tools	Production Tools	...	Welder, Screwdriver, Pliers, etc.	...	
Raw Materials	Parts, Steel Fabric	...	Door Panel, Latches, Handle, etc.	...	

Improves Manual Worker "**Labor**" Productivity

Problem Solving Facilitation Technology Process

	Mental Task 1	Task...	Example	Task N	
Task	Thinking Framework	...	Analyze - problem cause	...	Cognitive Outputs (Solution)
Tools	"Thinklets" Cognitive Tools	...	Deviation, Gap Analysis, Causal Questions	...	
Raw Materials	Data, Information, Knowledge	...	Data on what changed just before problem occurred, etc.	...	

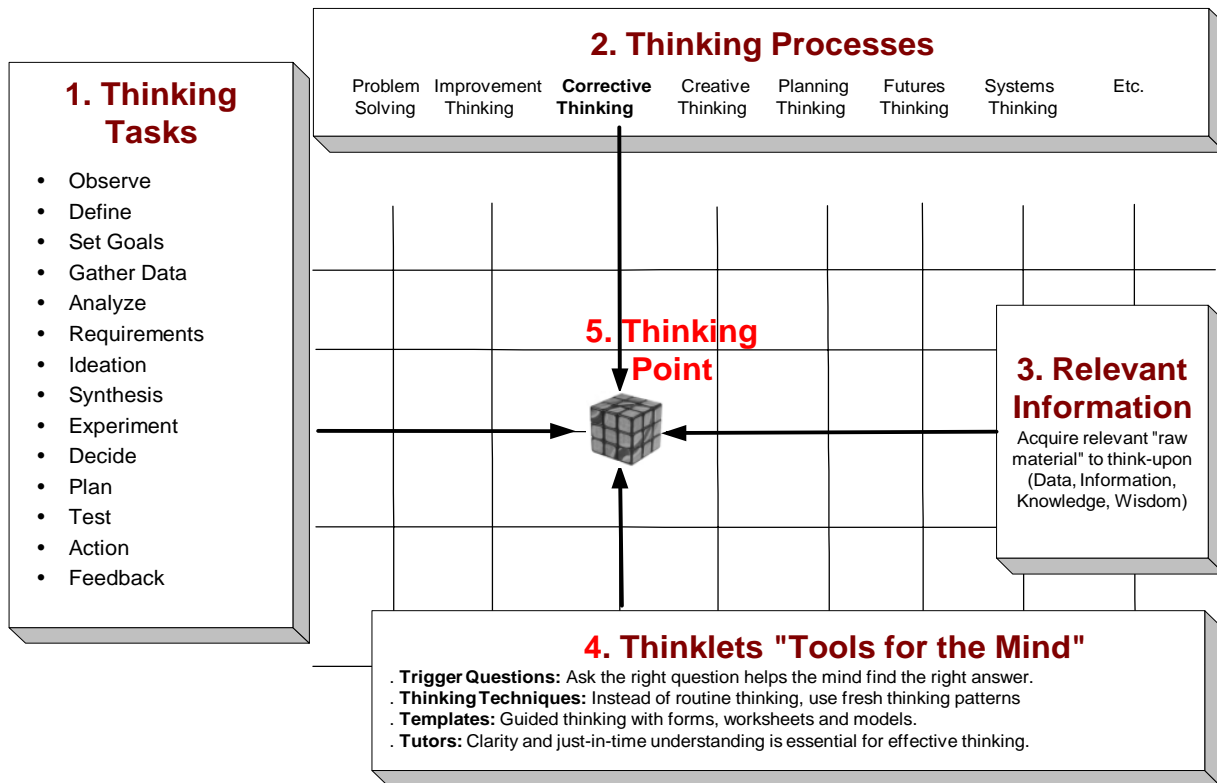
Improves Knowledge Worker "**Thinking**" Productivity

How the heck does Facilitation Technology work???????

Facilitation Technology emulates how skilled consultants, facilitators, coaches or teachers provide intellectual guidance. The following Thinking Emulation Grid™ is at the heart of this technology. The grid organizes all of the thinking components into a smoothly coordinated and integrated system to guide thinkers along specific thought processes and tasks where just-in-time delivery of the right cognitive tools stimulate ideas within the right context.

In some respects this grid is based on the way the brain and its neurons work. According to brain theory, the human mind does not store information alphabetically like a dictionary but rather organizes information by association. This is why one idea leads to another. The grids use of Thinking Points and its connections to thinking task, tools and data is like neuron being connected by dendrites.

Thinking Emulation Grid



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1. Thinking Tasks - The building blocks of thinking

All thinking tasks have some purpose or objective. At the highest level there 14 primary thinking tasks that range from Observation to Feedback, see Fig. X. Each of these primary tasks have more subtasks, for example, the task to “Decide” can have these subtasks.

- Determine readiness for decision making
- Identify decision criteria
- Choose a decision strategy
- Make a decision.
- Validate correctness of decision

While no study has ever been done to determine the number of thinking task, this author would guess in the thousands.

2. Thinking Processes - The reasons why knowledge-worker think.

Thinking Processes are the mental structures or frameworks in which thinking occurs and are made up of a sequence of tasks. From a business perspective, there are eleven basic reasons why knowledge workers think. Choosing the right thinking process is the critical first step in effective thinking. For example, using a problem solving process when an improvement process is needed will yield unproductive results.

Basic Thinking Processes

Thinking Processes	Reasons for Thinking
Problem Solving	Resolve a conflict
Creative Thinking	Develop something NEW
Improvement Thinking	Make something BETTER
Futures Thinking	Prepare something for the FUTURE
Corrective Thinking	Restore something to a PAST condition.
Systems Thinking	Look at the WHOLE situation
Planning	Set Goals
Decision Making	Choose among alternatives
Implementation	Take some action
Learning	Acquire and understand knowledge
Scientific Thinking	Discover new knowledge

3. Relevant Information – The Critical mental mass for effective thinking to occur.

No matter how effective your overall thinking skills, it does little good if the data and information you are thinking upon is incomplete, misunderstood, distorted, inaccurate or completely false. There is a direct correlation between data and thinking. Effective thinking occurs only if a person acquires the right “critical mass” of relevant background data and information to think upon.

4. Thinklets - Tools for the mind.

So what are thinklets? In its purest sense a Thinklet can be as simple as *“asking the perfect question.”* or providing a small burst of thinking stimuli (expert “facilitation” questions) embedded in traditional thinking techniques, templates and worksheets.

These thinklets help the thinker alter routine thinking patterns and activate not commonly used patterns leading to new associations, relationships and ultimately new innovative ways of thinking. There are five kinds of thinklets.

- Trigger Questions: Ask the right question helps the mind find the right answer.
- Thinking Techniques: Instead of routine thinking, use fresh thinking patterns
- Templates: Guided thinking with forms, worksheets and models.
- Tutors: Clarity and just-in-time understanding is essential for effective thinking.

5. Thinking Points - Emulating the human consultant.

Thinking points are at the heart of the emulation grid. They represent the organizing points where the right data and the right thinklet come together at the moment of thinking to optimize the outcome.

Thinking Points are where human facilitators are emulated. It is at these points where thinklets are applied just as if the human facilitator was giving intellectual guidance. The purpose of a thinking point is to function as if the human consultant, expert or professor were working directly with you and providing intellectual guidance to help you find your own best idea or solution.

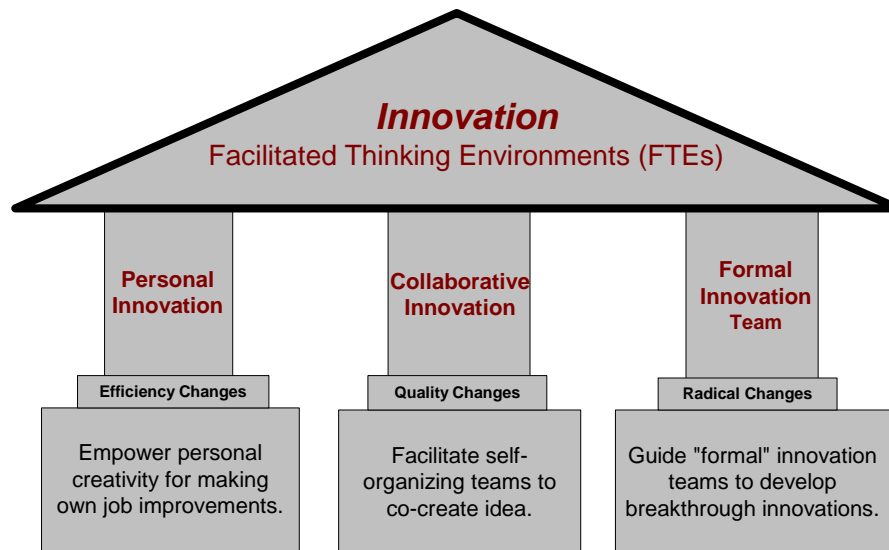
7. Innovation Applications – Putting Theory into Practice (TOC)

“The synergy between theory, methods, and tools lies at the heart of any field of human endeavor that truly builds knowledge.” - Peter Senge

Facilitated Thinking Environment – Applications.

Putting the theory of Facilitation Technology into practice creates innovative new applications called Facilitated Thinking Environments (FTEs). FTE applications put in place a comprehensive environment that surrounds knowledge-workers with the mental frameworks that delivers within a precise thought process the cognitive tools needed to boost Knowledge-worker productivity of thought. FTEs can help make the average worker good, the good become excellent, and the excellent can attain exceptional levels of innovative thinking.

The following schematic depicts a Facilitated Thinking Innovation Environment (FTE) The FTE is comprised of the three applications that are designed to systematically harness creative ideas and support the entire spectrum of an organizations innovation needs.



Three Pillars of Innovation

Personal Innovation Application (TOC)

The personal innovation imperative

While Innovation articles have been telling organizations to “*innovate or die*”, there has been very little written about the need for personal innovation. The fact is, sitting at the very heart of innovation is the individual. And it’s those individuals who acquire the skills and the companies who encourage individual innovation who will gain significant competitive advantages.

In the new book, *The Game Changer*, Procter and Gamble’s CEO A.G. Lafley warns that if managers and knowledge workers don’t make a commitment to support and practice innovation, they will be left behind by a world becoming much more innovative.

So ... whether you like it or not, innovation is coming to your organization and you might as well get ahead of the curve instead of playing catch-up. This application helps you do this in the following ways.

Developing an innovation mindset

The first step is to acquire an innovation mind-set where you come to work and ask questions like; "Is there a better way to do things around here? How can we improve on our products, processes and services?" It's a mind-set that encourages you to share new ideas and embrace the belief that you only win as an organization when everyone's brain is engaged.

Improving your job and advancing your career – Learn by doing

One of the best ways to get ahead in your career is to do great work on your current job. An objective is for you to learn innovation by doing it. The application is designed for you to take control and make your own job better. It's not about you suggesting ideas for others to do something about, but focuses on implementing ideas that you can do yourself.

The application works by guiding your thinking with a personal innovation process and tools that enables you to find ways to: improve customer satisfaction, improve quality, reduce costs, and speed the time it takes to deliver products and services to your customers.

Power-up Your Creativity and Innovation Skills

We all have creative and innovation abilities. For most of us, they either have not been fully developed or have been lost and need to be reacquired. This application helps you build these innovation skills.

- **Questioning skills:** As Albert Einstein said; *"The key to creative (innovative) thinking is never to stop questioning."* Regrettably for many of us, we have lost our ability to ask questions. As children we keep asking "why" as an innate longing to understand things. As we grew older, we became fearful to ask questions because it implied a lack of understanding or ignorance ... and who wants to be thought of as ignorant!
- **Critical thinking skills:** We all spend a large part of our lives "thinking." Unfortunately, much of our thinking can be distorted, uninformed and quite often incorrectly biased. Yet the quality of work, and life, is directly related to the quality of our critical thinking, the most important of all thinking skills. Note: Critical thinking is, in short, self-awareness of how you are thinking while you are in the process of thinking. The goal is to improve personal intelligence to help ensure you are applying the best thinking you are capable of for any given situation.
- **Creative, Systems and Futures thinking skills:** Creativity follows the attributes of children's play: Have fun, Be open, Entertain differences, Suspend judgment and Project new realities. We all have the potential to think creatively but as adults we lost those attributes. This application not only facilitates reacquiring creativity skills but also facilitates whole mind thinking skills like Systems & Futures Thinking and other key skills of innovation.
- **Personal innovation process skills:** Just as important as acquiring innovation skills is knowing how to use the innovation process. When innovation skills are productively guided, the results can yield powerful creative and breakthrough ideas.

Collaborative Innovation Application (TOC)

In today's complex world, no one person is going to have all the answers. Innovation works best like a network, with internal and external people working together.

This application approaches innovation through knowledge-worker collaborating directly with each other, rather than through traditional structures and hierarchies. They come together with a shared vision and goals because they are intrinsically motivated to do so and seek to collaborate in ways that advance their shared idea. The application promotes a diverse, information and interaction rich environment in the following ways.

Focused Innovation: Successful innovation is focused innovation that directly supports personal or organizational goals. This application focuses creative thinking on a specific topic or question. It overcomes the inherent problems with Employee Suggestion Box applications or its modern equivalents: "Idea Management Systems" that start with great fanfare and communication but run into problems like these:

- Employees don't know how to look and find innovation opportunities.
- Employees do not know how to develop quality creative ideas and solutions.
- Employees who do develop creative ideas want other people to implement them.
- Future communication efforts don't boost further suggestions as employees get tired of being requested for new ideas.

Systems Viewpoint & Knowledge Sharing: Developing innovative solutions in one area that causes problems in another is NOT innovation ... it's just bad business. Effective innovation now needs to look at the whole. But because everything is becoming more interconnected, there are fewer individuals who are complete experts on any given area.

With this informal team approach, people bring a variety of perspectives and expert knowledge that enables understanding the whole situation. This increases the likelihood that multiple ideas will be generated that considers the situation systematically. It also promotes learning experiences, another advantage of a collaborative innovation process.

Experimentation: Every company's ability to innovate depends on a series of experiments [successful or not], that help create new products and services or improve old ones. Experimentation to find out what works and doesn't is now essential for successful innovation.

Within a formal setting these experiments can get very complex and costly. And, pilot programs for new innovations set the path in stone too early thus increasing the costs of failure. Informal groups can do quick and simple experiments that are faster and less complex.

Entrepreneurial spirit: The creation of anything new involves risk and the possibility of failure. Working on a voluntary informal team makes people believe in themselves enough to take the

prospect of failure head-on and develops an entrepreneurial spirit that inspires people to become the best they can be.

Collaboration Skills: The prevailing work in companies is now favoring collaboration, which means knowledge workers now need collaboration skills. The application promotes collaborative thinking tools, techniques and methods to leverage people’s collective knowledge, ideas, and wisdom to produce results that could not be achieved by any one person alone.

Collaborative Innovation Process: Facilitated collaboration helps people understand the nuances of complex systems by structuring the innovation process in a way that encompasses all relevant factors, not just the obvious or convenient ones. Carefully designed and facilitated collaborative processes leads to much more comprehensive solutions, and in much less time.

Enterprise Innovation Application (TOC)

Ask company executives how important Innovation is to their success you will generally get a quick positive answer. Ask them to describe what innovation methods, tools and practices they are using you are likely to get silence or a response about their “innovation culture.”

What are the enterprise innovation Methodologies and Tools best practices in use today?

There is a lot of noise in the marketplace with virtually every consulting company touting everything from PLM (Product Lifecycle Management) to TRIZ (Theory of Inventive Problem Solving) as an enterprise innovation methodology or tool. Internet research also found the following commonly discussed method and tools for enterprise innovation.

Methods & Tools used in Innovation

- DFSS (Design for Six Sigma)
- Six Sigma (DMAIC)
- TQM (Total Quality Management)
- DOE (Design of Experiments)
- Lean
- TPS (Toyota Production System)
- Stage-Gate
- Kaizen
- CPS (Creative Problem Solving)
- Mind Mapping
- Six Thinking Hats
- QFD (Quality Function Deployment)
- Taguchi Methods
- Hoshin Planning
- PDCA (Plan-Do-Check-Act)

So which of these are the right methods and tools to use? The answer is ALL of them and NONE of them. NONE of them because each was designed to address a specific purpose, and it *wasn't* innovation. And, ALL of them because each has parts that are essential for successful innovation. The solution is a Facilitated Thinking Environment specifically designed for enterprise innovation.

What kind of Innovative Thinking is done today?

Many people believe that innovation is simply about creative thinking. But, innovation is a deceptively complex process that uses many different types of thinking skills that are generally not found in one person. It goes far beyond just creative thinking and conducting brainstorming sessions. In addition to creative thinking, innovative thinking uses many skills, a few examples.

Innovative Thinking Examples

- **Strategic Planning Thinking:** Observe trends and align innovation opportunities with objectives.
- **Critical Thinking:** Ensure you have correct information for effective innovative thinking to occur.
- **Futures Thinking:** Develop scenarios and identify work to be done “now” in order to get ready for future innovations.
- **Entrepreneurial Thinking:** Experiment to find what creative ideas can become valuable innovations.
- **Systems Thinking:** Design more valuable innovations that satisfies the whole rather than just some parts.
- **Project Management Thinking:** Bring profitable innovations to market.

What is the standard Innovation Process in use today?

There is NONE! While a search of the internet found lots of hits on the words “Innovation Process”, there was not clear definition. Even Wikipedia did not have a definition for Innovation Process. And Wikipedia has become a fairly reliable source of current definitions and thinking about virtually all topics. What was found in Wikipedia, however, was a definition for a six step creative Problem Solving Process.

So what are people using? For lack of anything else, many people simply apply a problem solving process to innovation. This is quite normal because problem solving is what we have been taught to do. However, as mentioned earlier, innovation is not about solving problems but about embracing change. Using problem solving is like using the wrong hammer, but until now it's been the only hammer.

Bringing it all together in the Enterprise Innovation Application (FTE).

Enterprise innovation is most effective when it's coupled with an institutionalized process that draws together employees from different levels and functions. With this application companies can separate innovation from day-to-day concerns, putting their best people on it, and ensuring the lines of reporting lead to the chief executive.

The purpose of this application is to guide “formal” innovation teams using the following 12 steps (task) innovation process to create and turn “quality” ideas into something of value to customers and profit for the organization.

Innovation Process

- Step 1: Define organization's mission, vision and values.
- Step 2: Assess trends, strengths and weaknesses.
- Step 3: Find improvement opportunities - Incremental change.
- Step 4: Find growth opportunities – Breakthrough, radical change.
- Step 5: Select an opportunity for further experimentation.
- Step 6: Gather and analyze relevant information.
- Step 7: Generate creative ideas or solutions.
- Step 8: Experiment and turn creative ideas into innovations.
- Step 9: Decide on what innovation to implement.
- Step 10: Design and test innovation.
- Step 11: Plan and implement innovation.
- Step 12: Obtain feedback for continuous improvement.

Note: Each of these process steps (Tasks) has the methods, tools and questions associated with them. For more information go to www.nthdegreesoft.com/xxx.

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