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Innovation Tips and Practices

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Thinking Outside the Box

- Thinking outside the box is the major route to **innovation** in a company. Long term success demands innovative thinking that leads to commercial success.

- Over the last 20 -25 years, six sigma, lean manufacturing and other approaches have allowed companies to reduce costs, improve quality and achieve incremental innovation.

- Today, much more is needed to remain competitive. Radical and breakthrough innovations are needed to grow and prosper. **Thinking out of the box is no longer optional for companies, it's mandatory**.

THE WAY IT
HAS ALWAYS
BEEN DONE

Drivers Behind the Growth of Innovation

- **Companies need discoveries and new strategies to drive organic growth.**
- **Analysts now expect innovation successes.**
- **Companies and industries may struggle with increased rate of change.**
- **Cutting costs and operational excellence is no longer a big differentiator.**
- **Methods and tools are emerging that significantly improve innovation success rates.**
- **Design, from cell phones to hotels to web sites, is now an imperative for competitiveness.**
- **Innovation has now evolved beyond technology planning to include strategies, market opportunities, and operational questions.**
- **Innovation adds new options to consider along *where to play* and *how to win*…**
- **Sustainability initiatives in most companies, the arrival of smart, connected products, robotics, many others**

Source: "Delivering Game-Changing Innovation", Monitor Executive Briefing, Boston, October 2008
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There are Many Excuses NOT to Innovate!

We're inwardly focused. Our culture is pro-incremental, anti-innovation. We can't bring ideas from 30,000 feet to the ground. We don't know our customers well enough, although many think we do. We tried all that stuff before. It's too risky. We are numbers driven. Our business model requires rigorous analytics. If it ain't broke, don't fix it. Been there, done that. We have the NIH Syndrome. I'm already overloaded. The emphasis here is on cost reduction. Why change, we're doing great. We do innovation in R/D, not here. We have an engineering culture here. We focus on product performance and functionality. We don't partner well with others. We always fight over price. Our channel resists change and innovation, so we're wasting our time. We need to concentrate on our core market and continue to extend our product lines. Our systems and structures inhibit/punish people who try to innovate. Our incentive plans are all about meeting our short term goals. Our department doesn't have the right skill sets for innovation. Our problems are in generating sales for our existing products. We're process-oriented and proud of it. Etc., etc., etc.

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How a Few Big Companies Innovate

Innovation Activities	Apple	Google	GE	HP
Lead	With Jobs, CEO set vision for innovation	Self-directed with executive permission	Led by Innovation Director	Innovation pursued by BUs
Inform	With Jobs, CEO fed ideas into the organization	Individual ideas sourced company-wide	Director sets parameters	Internal to BUs within company
Fund	Part of core business	Ideas selected by internal panel	Visible fund, but separate	Per project in the BU
Measure	Customer experience	% viable concepts, % employee participation	% new market customers	Projects throughout with BUs
Equip	User research	Methods to build business concepts from ideas	Dedicated researchers and methods	Dedicated researchers and methods

Source: "Delivering Game-Changing Innovation", Monitor Executive Briefing, Boston, October 2008
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Getting Your Staff to Think Outside the Box

- As a Manager/Leader, you must create an environment where innovation can thrive. Actions include:

1. Solicit ideas from all levels
2. Encourage and enable collaboration
3. Open the organization to diverse perspectives
4. Use Process thoughtfully and carefully
5. Provide intellectual challenge
6. Be an appreciative audience
7. Embrace the certainty of failure
8. Provide the setting for "good work"
9. Design compensation plans to reward OOBT

Source: Teresa M. Amabile and Mukti Khaire, "Creativity and the Role of the Leader", Harvard Business Review, October 2008

Traps and Remedies of Thinking Outside the Box

- Rosabeth Moss Kanter at the HBS has studied Innovation and OOBT for many years. Here are several of her Lessons of Innovation
    1. **Strategy Mistakes**: hurdles too high, scope too narrow
        - ✓ **Remedy: widen the search, broaden the scope**
    2. **Process Mistakes**: controls too tight
        - ✓ **Remedy: Add flexibility to planning and control systems**
    3. **Structure Mistakes**: Connections too loose, separations too sharp
        - ✓ **Remedy: Facilitate close connections between innovators and mainstream businesses**
    4. **Skills Mistakes**: Leadership too weak, communication too poor
        - ✓ **Remedy: Select for leadership and interpersonal skills, and surround innovators with a supportive culture of collaboration**

Source: Rosabeth Moss Kanter, "Innovation, the Classic Traps" Harvard Business Review, November 2006

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The Innovator's DNA

- Jeffrey H. Dyer, Hal B. Gregersen, and Clayton M. Christensen report in "The Innovator's DNA" (*Harvard Business Review*, December 2009) and in their book (published in 2011) **that five discovery skills distinguish the most innovative entrepreneurs from other executives.**
- Leading innovators excel at several of the five primary discovery skills: **associating (cognitive skill), questioning, observing, networking and experimenting (behavioral skills).**
- The "Innovator's DNA" emerged from an eight year study involving 500 innovators and over 5000 executives in over 75 countries.
- The authors applied a methodology for "innovation premiums" to differentiate companies and identify leading executives.
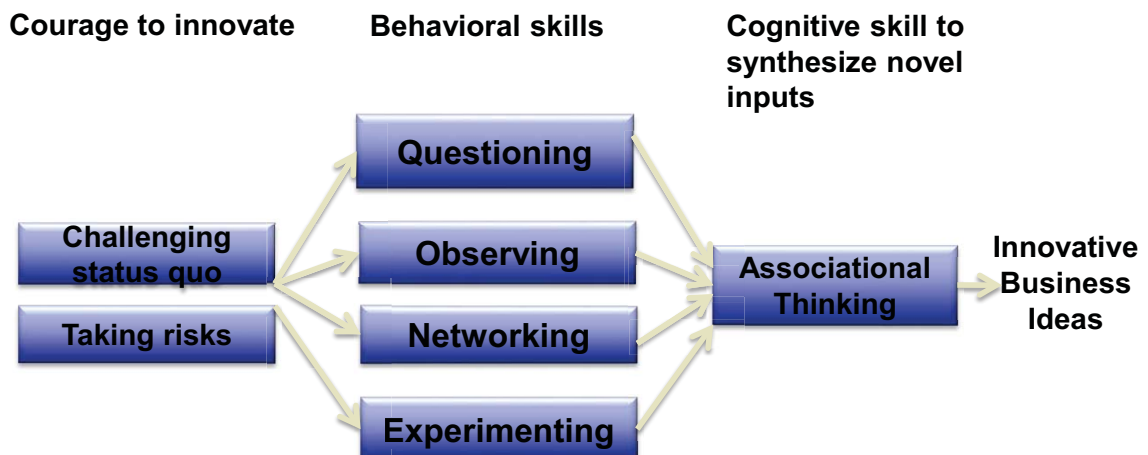
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The Innovator's DNA

- The ability to generate innovative ideas is not merely a function of the mind, but also a function of behaviors. *If we change our behaviors, we can improve our creative impact.*
- Innovative organizations systematically develop processes that encourage questioning, observing, networking and experimenting by employees.
- If you want to rise to the highest levels of your organization, **you need strong discovery skills.**
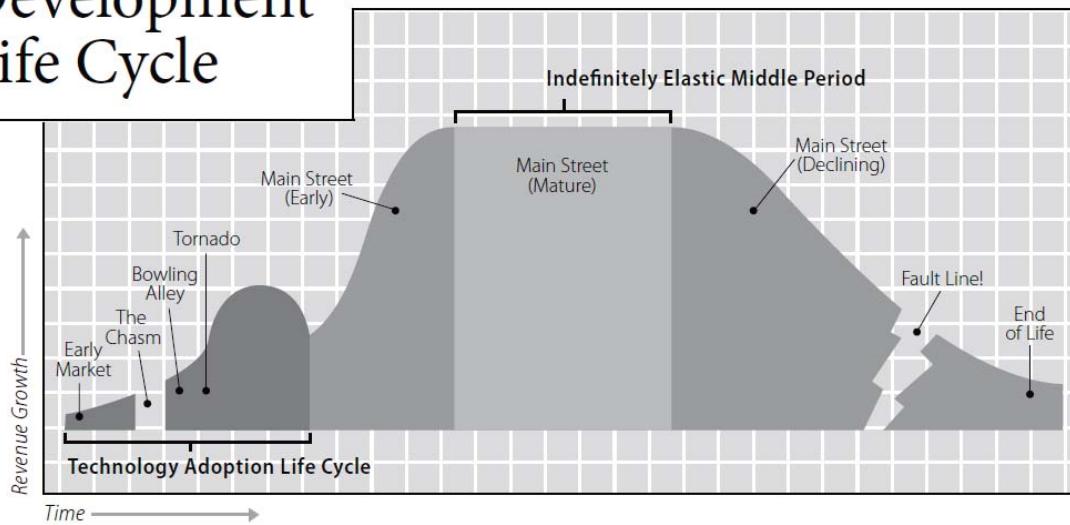
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The Innovator's DNA Model for Generating Innovative Ideas

Courage to innovate   **Behavioral skills**   **Cognitive skill to synthesize novel inputs**

Challenging status quo

Taking risks

Questioning

Observing

Networking

Experimenting

Associational Thinking

Innovative Business Ideas

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Geoffrey Moore's Model

The Market Development Life Cycle

Source: Geoffrey Moore, "Darwin and the Demon" *Harvard Business Review*, July - August 2004

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Aligning Innovation

Aligning Innovation with the Life Cycle
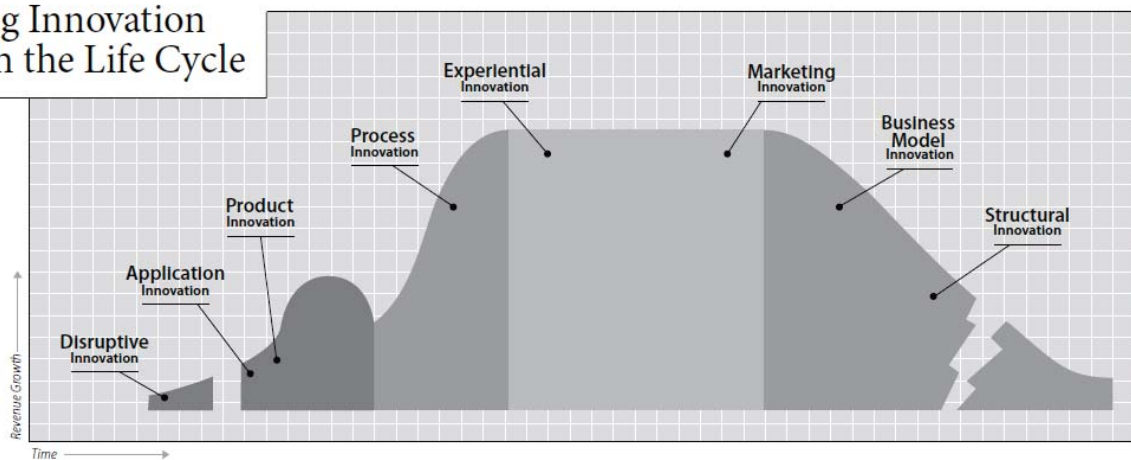
Source: Geoffrey Moore, "Darwin and the Demon" *Harvard Business Review*, July - August 2004

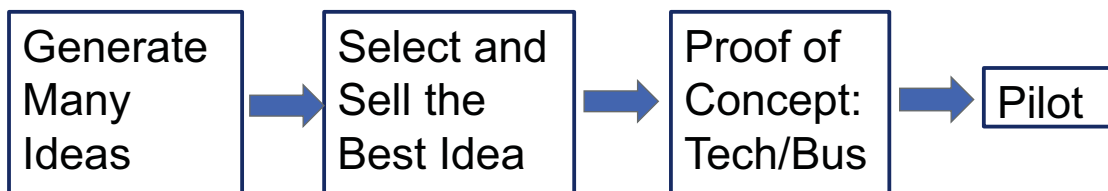**Tufts** UNIVERSITY | GORDON INSTITUTE   Engineering Leaders.

Fostering a Culture of Innovation

- One framework for fostering a culture of Innovation includes:
  - ✓ A strategic roadmap
  - ✓ A well-defined innovation process
  - ✓ A variety of inspiration sources (both internal and external)
  - ✓ A strong set of values
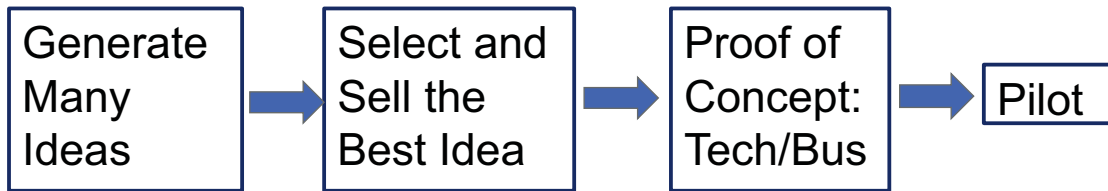 - ✓ Excellence in execution
  - ✓ Top management support

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Nurturing Innovation in Your Organization

| Generate Many Ideas | → | Select and Sell the Best Idea | → | Proof of Concept: Tech/Bus | → | Pilot |

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Nurturing Innovation in Your Organization

| Generate Many Ideas | → | Select and Sell the Best Idea | → | Proof of Concept: Tech/Bus | → | Pilot |

For each of the above steps, what should you…
Start Doing?
Do more or less?
Stop Doing?

KEYS

- Assessment tool developed by Teresa Amabile and the Center for Creative Leadership (CCL).
- Available from CCL.
- www.ccl.org

KEYS®
to Creativity & Innovation

Assessing the Climate for Creativity

- **Stimulants**
  - ✓ Organizational Encouragement
    - ➢ Top Management support for risk-taking, recognition for creative work
  - ✓ Supervisory Encouragement
    - ➢ Boss needs to set clear expectations and goals...not "how"
  - ✓ Work Group Supports
    - ➢ Team diversity, trust, and commitment
  - ✓ Sufficient Resources
  - ✓ Challenging Work
  - ✓ Freedom
- **Obstacles**
  - ✓ Organizational Impediments
    - ➢ Destructive criticism, turf-building, resistance to change
  - ✓ Workload pressure

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The DNA of the World's Most Innovative Companies

- **Most Innovative Companies**
  - ✓ BusinessWeek List
  - ✓ HOLT: used by authors to arrive at an *innovation premium*
  - ✓ FastCompany List
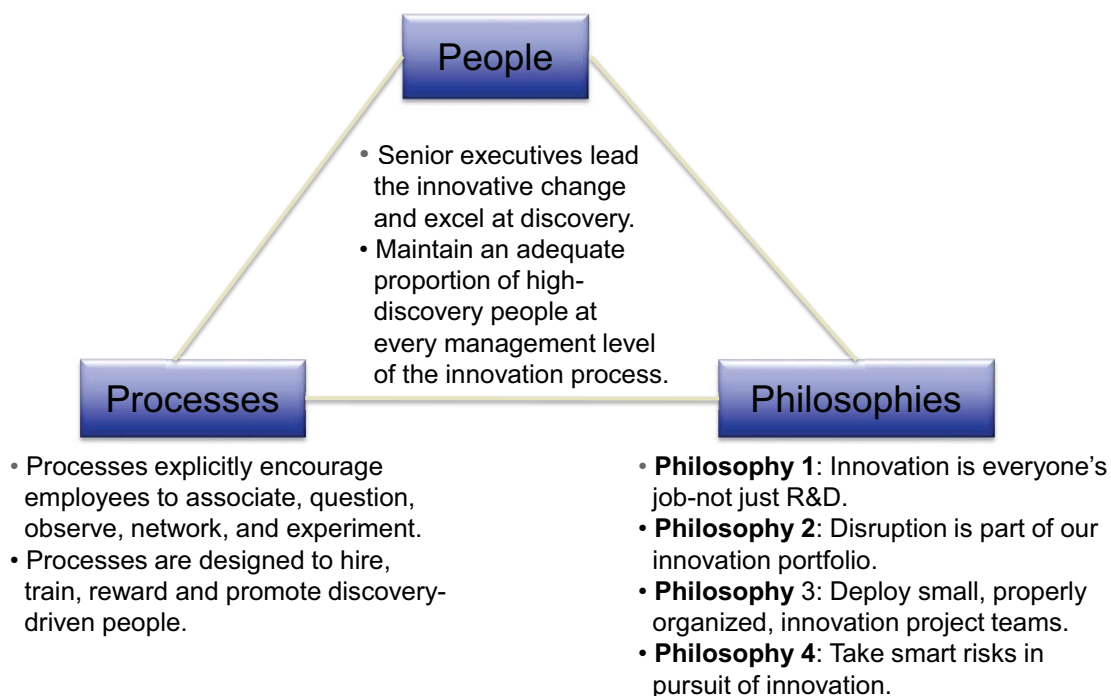 - ✓ MIT Technology Review
  - ✓ Others
- **3 P Framework***
  - ✓ People, Processes, Philosophies

From "The Innovator's DNA"

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People, Processes, Philosophies

People

- Senior executives lead the innovative change and excel at discovery.
- Maintain an adequate proportion of high-discovery people at every management level of the innovation process.

Processes

- Processes explicitly encourage employees to associate, question, observe, network, and experiment.
- Processes are designed to hire, train, reward and promote discovery-driven people.

Philosophies

- **Philosophy 1**: Innovation is everyone's job-not just R&D.
- **Philosophy 2**: Disruption is part of our innovation portfolio.
- **Philosophy 3**: Deploy small, properly organized, innovation project teams.
- **Philosophy 4**: Take smart risks in pursuit of innovation.

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Putting the Innovator's DNA into Practice

- **People…**

✓ Discovery versus Delivery

  ➤ Discovery-driven leaders need the delivery-driven skills of people who excel at execution. Emphasis depends on what stage you're in and what team you're on.

✓ Build Teams and Organizations with Complementary Skills

  ➤ Look for T-shaped expertise

  ➤ At IDEO, teams include experts in "human factors", "technical factors" and "business factors".

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Putting the Innovator's DNA into Practice

- **Processes…**
  - ✓ The DNA of innovative organizations mirrors the DNA of innovative individuals.
    - ➢ Just as questioning, observing, networking and experimenting spark new ideas in individuals, innovative organizations develop processes that encourage and develop these same skills in employees.
    - ➢ IDEO, Amazon, Monsanto, Intuitive Surgical, Keyence, P&G and others are role models.

Putting the Innovator's DNA into Practice

- **Philosophies…**
  - ✓ Four philosophies embraced by many innovative companies include:
    1. Innovation is everyone's job, not just R&D
    2. Disruptive innovation is part of our innovation portfolio
    3. Deploy small, properly organized innovation project teams
    4. Take smart risks in pursuit of innovation

How Innovative is Your Organization or Team?

- The following survey is taken from **"The Innovator's DNA"** pp 171-172. (1=strongly disagree, 2=somewhat disagree, 3=neutral, 4=somewhat agree, 5=strongly agree).

- Add the score for the following 10 questions. If score is 45 or above, your Organization or Team is very high on **"The Innovator's DNA":** 40-45 is high, 35-40 is moderate to high, 30-34 is moderate to low and low if your score is below 30.

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Survey Questions for "People"

1. **Our organization or team has leaders with a well- known track record for generating innovative ideas for new processes, products, services, or businesses.**

2. **Our organization or team actively screens for creativity and innovation skills in the hiring process**.

3. **Evaluating an employee's creativity or innovation skills is an important part of the performance appraisal process within our team or organization.**

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Survey Questions for "Processes"

4. **Our organization or team frequently engages in brainstorming to generate wild or very different ideas by drawing analogies from other products, companies, or industries.**

5. **Our organization or team encourages team members to ask questions that challenge the status quo or conventional ways of doing things.**

6. **Our organization or team cultivates new ideas by giving people frequent opportunities to observe the activities of customers, competitors or suppliers.**

7. **Our organization or team has instituted formal processes to network outside the company to find new ideas for processes or products.**

8. **Our organization or team has adopted processes to allow for frequent experiments (or pilots) of new ideas in search of new innovations.**

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Survey Questions for "Philosophies"

9. **Our organization or team expects everyone to offer creative ideas for how the company should change products, processes and services.**

10. **People in our organization or team are not afraid to take risks and fail because top management supports and rewards risk taking.**

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Ways to Foster A Culture of Innovation (I)

✓ **Wherever you can, whenever you can, always drive fear out of the workplace. Fear is "Public Enemy #1" of an innovative culture.**

✓ As far as the future is concerned, don't speculate on what *might happen, but imagine what you can make happen.*

✓ Help people broaden their perspective by creating diverse teams and rotating employees into new projects -- especially projects that attract them.

✓ Ask questions about everything. After asking questions, ask different questions. After asking different questions, ask them in a different way.

✓ Learn to tolerate ambiguity and cope with soft data. It is impossible to get all the facts about anything. "Not everything that counts can be counted. Not everything that can be counted counts," said Einstein.

Source: www.ideachampions.com

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Ways to Foster A Culture of Innovation (II)

✓ Improve the way brainstorming sessions and meetings are facilitated in your organization. Create higher standards and practices.

✓ Make sure people are working on the right issues. Identify specific business challenges to focus on. Be able to frame these issues as questions that start with the words, "How can we?"

✓ Develop a process of trying out new concepts quickly and at low cost. Learn quickly what's working and what's not.

✓ A great source of new ideas are people that are new to the company. Get new hires together and tap their brainpower and imagination.

✓ **Add your own ideas to this list and keep looking for new ways to nurture and encourage innovation in your environment!**

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A Few Conclusions (I)

- Out-of-the-box thinking, the basis for innovation, is essential for long term growth in today's global economy.
- ***Out-of-the box thinking starts with leadership at the top and permeates to all levels in an organization***. An environment must be created that offers a balance between rigorous, analytical analysis, and creative, out-of-the-box thinking. Companies that achieve this balance will enjoy a competitive advantage.
- ***"The Innovator's DNA"*** offers a path for individuals and organizations to become better innovators by mastering the skills of questioning, observing, networking, experimenting, and associating.

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A Few Conclusions (II)

- There are many obstacles to out-of-box-thinking, including fear of the unknown, business model constraints, human nature, and the traps described from Rosabeth Moss Kanter's work.
- The suggestions offered here to get you and your staff thinking outside the box and for you to help create and sustain a culture of innovation represent a starting point and should be viewed as a journey, and not a destination.
- **Can you add a few conclusions that apply to you and your company?**

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Additional References

- In addition to the references cited in the preceding slides, here are other books and articles that should be helpful.
    - ✓ Jean-Philippe Deschamps and Beebe Nelson, *Innovation Governance,* Wiley & Sons, 2014
    - ✓ Geoffrey A. Moore, *Crossing the Chasm, 3rd edition,* HarperCollins, 2014
    - ✓ Any books or articles by Clayton M. Christensen et al, especially:
        - ➤ Clayton M. Christensen, *The Innovator's Dilemma,* HarperCollins, 2003
        - ➤ Clayton M. Christensen and Michael E. Raynor, *The Innovator's Solution,* Harvard Business Review Press, 2013
        - ➤ Clayton M. Christensen, Scott D. Anthony and Erik A. Roth, *Seeing What's Next,* Harvard Business Review Press, 2004
    - ✓ Michael E. Raynor, *The Innovator's Manifesto,* Crown publishing, 2011
    - ✓ Samuel H. Liggero, *Surviving Challenging Times,* Lab Manager, 2009
    - ✓ George S. Day, *Is it Real? Can We Win? Is It Worth Doing?,* Harvard Business Review, 2007
    - ✓ Rosabeth Moss Kanter, *Innovation, The Classic Traps*, HBR, 2006
    - ✓ Cary Huang, *The Scale of the Universe 2* http://scaleofuniverse.com/

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Appendix: Ways to Foster A Culture of Innovation

1. Remember that innovation requires no fixed rules or templates -- only guiding principles. Creating a more innovative culture is an organic and creative act.

2. Wherever you can, whenever you can, always drive fear out of the workplace. Fear is "Public Enemy #1" of an innovative culture.

3. Have more fun. If you're not having fun (or at least enjoying the process) something is off.

4. Always question authority, especially the authority of your own longstanding beliefs.

5. Make new mistakes.

6. As far as the future is concerned, don't speculate on what *might happen, but imagine what you can make happen.*

7. Increase the visual stimuli of your organization's physical space. Replace gray and white walls with color. Add inspiring photos and art, especially visuals that inspire people to think differently. Reconfigure space whenever possible.

Source: www.ideachampions.com

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Ways to Foster A Culture of Innovation

8. Help people broaden their perspective by creating diverse teams and rotating employees into new projects -- especially ones they are fascinated by.

9. Ask questions about everything. After asking questions, ask different questions. After asking different questions, ask them in a different way.

10. Ensure a high level of personal freedom and trust. Provide more time for people to pursue new ideas and innovations.

11. Encourage everyone to communicate. Provide user-friendly systems to make this happen.

12. Instead of seeing creativity training as a way to pour knowledge into people's heads, see it as a way to grind new glasses for people so they can see the world in a different way.

13. Learn to tolerate ambiguity and cope with soft data. It is impossible to get all the facts about anything. "Not everything that counts can be counted. Not everything that can be counted counts," said Einstein.

Ways to Foster A Culture of Innovation

14. Embrace and celebrate failure. 50 to 70 per cent of all new product innovations fail at even the most successful companies. The main difference between companies who succeed at innovation and those who don't isn't their rate of success -- it's the fact that successful companies have a LOT of ideas, pilots, and product innovations in the pipeline.

15. Notice innovation efforts. Nurture them wherever they crop up. Reward them.

16. When you're promoting innovation in-house, always promote the *benefits of a new idea or project, not the features.*

17. Don't focus so much on taking risks, per se, but on taking the risks OUT of big and bold ideas.

18. Encourage people to get out of their offices and silos. Encourage people to meet informally, one-on-one, and in small groups.

Ways to Foster A Culture of Innovation

19. Think long term. Since the average successful "spin-off" takes about 7.5 years, the commitment to innovation initiatives need to be well beyond "next quarter."

20. Create a portfolio of opportunities: short-term, long-term, incremental, and discontinuous. Just like an investment portfolio, balance is critical.

21. Involve as many people as you can in the development of your innovation initiative so you get upfront buy-in. This is the "go-slow now to go-fast later" approach. (The opposite approach of having a few people go off to a desert island and come back with their concept is almost always doomed to failure).

22. Improve the way brainstorming sessions and meetings are facilitated in your organization. Create higher standards and practices.

23. Make sure people are working on the right issues. Identify specific business challenges to focus on. Be able to frame these issues as questions that start with the words, "How can we?"

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Ways to Foster A Culture of Innovation

24. Communicate, communicate, communicate, communicate, communicate and then communicate again. Deliver each important message at least six times.

25. Select and install idea management software for your intranet. (Or, if you've got an intranet and certain directories available to everyone, set up your own idea depository/database and make it as interactive as you want).

26. Don't focus on growth. Growth is a product of successful innovation. Focus on the process of becoming adept at taking ideas from the generation stage to the marketplace.

27. Make customers your innovation partners, while realizing that customers are often limited to incremental innovations, not breakthrough ones.

28. Understand that the best innovations are initiated by individuals acting on their own at the periphery of your organization. Don't make your innovation processes so rigid that they get in the way of informal and spontaneous innovation efforts. Build flexibility into your design. Think "self-organizing" innovation, not "command and control" innovation.

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Ways to Foster A Culture of Innovation

29. Find new ways to capture learnings throughout your organization and new ways to share these learnings with everyone. Use real-life stories to transfer the learnings.

30. Stimulate interaction between segments of the company that traditionally don't connect or collaborate with each other.

31. Develop a process of trying out new concepts quickly and on the cheap. Learn quickly what's working and what's not.

32. Avoid analysis paralysis. Chaotic action is preferable to orderly inaction.

33. Before reaching closure on any course of action, seek alternatives. Make it a discipline to seek the idea after the "best" idea emerges.

34. Know that attacking costs as a root problem solves nothing. Unreasonable costs are almost always a sign of more profound problems (e.g. inefficient structures, processes or training).

35. A great source of new ideas are people that are new to the company. Get new hires together and tap their brainpower and imagination.

Add your own ideas to this list and keep looking for new ways to nurture and encourage innovation in your environment!

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