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Shifting Company Culture Toward Innovation

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Learning Objectives

- Discover key aspects of innovation that lead to adoption
- Learn to develop a language to improve understanding among thought leaders
- Learn to create the process that guides innovators through development
- Learn to differentiate between processes and tools

Description

Technology is changing and disrupting how people manage workflows. As we continue to strive toward innovative pursuits, it is important to understand what compels a person to embrace change. This industry talk will cover what we've learned through the pursuit of various technologies into our workflows. We'll discuss some of the technologies tested and the results that were found. We'll share our thought process moving forward to develop future innovative ideas. We'll identify key factors in an organization that can stifle or stimulate change.

Speaker

Craig Chappell is the Virtual Design and Construction Technology Specialist for TDIndustries in Dallas, Texas. He is also Chairman of TD's Innovation Forum. The Innovation Forum's Mission is to develop a culture of innovation to expand the possibilities of the construction business through the discovery and exploration of innovative ideas and new technology.

He has served as Adjunct Faculty at Kansas State University teaching Revit in the Department of Architectural Engineering and Construction for four years. He is currently an associate faculty member at Collin College in the Computer-Aided Drafting and Design Department and serves on their Faculty Advisory Board.

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Discover key aspects of innovation that lead to adoption

Definition

It is important to clearly define to your organization what your definition of innovation will be. Innovation can be defined as a change that creates value. It is not just the use of new technology. It can also be a service or internal process. It is not limited to a product that is being designed for an external customer but can also be anything that improves an internal process.



"Innovation is not a big breakthrough invention every time. Innovation is a constant thing…coming to work every day to find a better way." Jack Welch (Former Chairman & CEO, General Electric)

Culture

The culture within a company is critical to the success of the company. The culture of innovative thought must be woven into the thread of a company's vision. When people are aligned to a common vision, it helps to gain support in accomplishing that vision.

TDIndustries' Mission Statement is: "We are Committed to providing outstanding Career opportunities by exceeding our Customers' expectations through Continuous aggressive improvement."

TDIndustries At the Heart of Your Building

TDIndustries has a strong culture built around Servant Leadership. From the bottom all the way to top leadership, we are encouraged to maintain a Servant Leadership mentality to help each other succeed. Servant Leaders actively listen, build trust and openly share knowledge. A Servant Leader is responsible for providing their team with the tools needed to be successful. The culture of Servant Leadership is in every level of the company and even impacts our relationships with customers.

Part of that success comes from Employee Ownership through an ESOP program. A key difference is that TD employees refer to each other as Partners, because we all have a stake in the business and individual success drives the overall company's success. Throughout this handout, references to colleagues within TD will be referred to as Partners.

One major statement in the Mission is Continuous Aggressive Improvement, which is often abbreviated with CAI. Engineering has four CAI teams that routinely evaluate processes in various scopes of responsibility for improvement. TD's culture is designed for Partners to identify ways to improve and share them with their teams.

Along with the Mission Statement, TD also has five core values that are strongly encouraged and prominently displayed throughout all branches the company:



- Build and Maintain Trusting Relationships – Be an empathetic listener. Act with fairness. Speak with honesty. Make and keep your commitments.
- Fiercely Protect the Safety of All Partners – Show concern for every person. Your safety is my responsibility. Stop any unsafe work behaviors. Zero injuries for our families.
- Lead with a Servant's Heart – Be humble and respectful. Listen to understand, not just respond. Teach, inspire and support others to be their best. Hold yourself and others accountable.
- Passionately Pursue Excellence – Hold high expectations of myself and others. Innovate and challenge the status quo. Never stop learning. Be 100% responsible for results – No excuses.
- Celebrate the Power of Individual Differences – Create a culture of collaboration and inclusion. Encourage new ideas. Learn from each other's perspectives. Be grateful for each contributor. Achieve more together.

Some of these Core Values have already been mentioned. Between the Mission Statement and Core Values, TDIndustries is clearly focused on improving to benefit our clients and ourselves. This continuous push to improve in our culture makes innovation changes possible.

Change Management

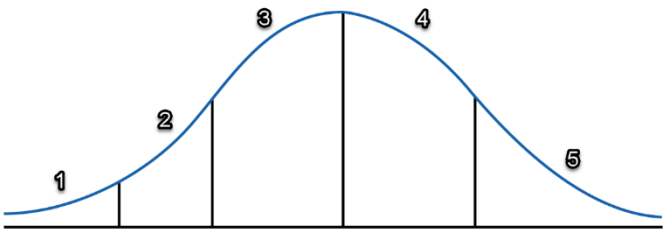


Change Management is a general term for all efforts in preparing a person or team with making organizational changes. Change Management is so vital to continued growth of companies that it has become a focused career path for people to understand and consult individuals or companies through change.

When new technology is vastly different from an existing platform, there will be colleagues who resist the change. Some people get comfortable in a platform they know well and have no desire to learn a new process. 84% of people will not move towards a new idea without proof of their success.

The Law of Diffusion of Innovation

The Law of Diffusion of Innovation organizes different types of people to visually see how an idea can grow and what groups must embrace the idea for it to become successful.



1. Innovators represent about 2.5%. They like to be the first ones with the newest thing. They are more willing to take risks and try new ideas with only the hope of success in mind. They require very little to be motivated.
2. Early Adopters represent 13.5%. These people tend to have leadership roles and understand that change is necessary and embrace it. They tend to be comfortable using new ideas.
3. Early Majority represent 34%. They may be more willing to adopt a new idea than the average person but will need to see some form of proof before they use it.
4. The Late Majority represent another 34%. These people tend to be more skeptical of change and will not budge until a majority of the people have tried.
5. The Laggards represent the last 16%. These people conform to tradition and known workflows and are not as influenced by the majority. They are the most skeptical and hardest to influence.

One aspect that drives Early Adopters and especially Innovators is the scarcity of an idea or product. A 'brand new' product that is hard to acquire is high in demand for these people. By making an idea or product scarce, you will attract their attention even more.

In *The Tipping Point: How Little Things Can Make a Big Difference* by Malcolm Gladwell, the point on the curve from Early Adopters into the Early Majority is the Tipping Point where an idea grows momentum into adoption. Other material may refer to this as The Chasm. This is the critical area of adoption. It is easy for an idea to gain adoption from the first 16%. It is the remaining 84% that need to justify why.

A large concept mentioned in *The Tipping Point* is The Law of the Few. This states that there are certain exceptional people that can start an epidemic for an idea or product.

- Mavens focus more on data and systems. They understand information and are not good at persuading other people. They are better at analyzing markets and solving problems.
- Connectors are great at networking and creating connections between the right people. They have connections across multiple social circles and communities and serve the important function of introducing the right people to each other.

- Salespeople are the talkers who help sell the product. They have the ability of persuasion to affect people's decisions and encourage them to agree with the message being presented.

The Stickiness Factor is another key message in *The Tipping Point* that refers to having some short idea that can trigger the memory for the entire message. In other sources, this could be referred to as a "hook". This trigger of memory helps to retain knowledge of the entire message.

Customer Discovery

The most successful companies add value for their customer's needs. Companies that do not talk to their customers will likely fail. A customer can be defined as an external person, but also an internal colleague.

Ask questions that seek understanding into the customer's experiences. Allow the customer to talk more than you ask questions or lead the conversation. Dive deeper into their pains and goals to understand what is creating hurdles that prevent them from reaching their hopes.

STORY: A CAI team was talking to Partners about a potential solution to document lessons learned. In one customer discovery meeting, the questions were asked seeking approval for the team's new solution and was met with immediate rejection. In a follow up meeting with other Partners, the questions were reformatted to seek input on how they, the customer, would prefer to research past lessons learned and documented the responses. The latter responses aligned with the same proposed solution. This reframed questioning developed natural support.

It is also important to seek diversity of roles and experiences when developing solutions to support customers. Office workers will provide a different perspective than a person who works a trade in the field. Both will add value. Don't necessarily view disagreement as a bad thing. People who are passionate about excelling may argue their views on a solution, working together to find common interest in the success for everyone.

In line with that potential conflict, it is important to get honest and valuable feedback. Conversations must be framed to foster honest understanding and not just the customer wishing to approve the idea. The customer is the one inevitably using the solution and that honesty is important for the solution's success.

Which of the following discovery questions do you think are good? Which ones are bad? (Answers are provided at the end of this handout.)

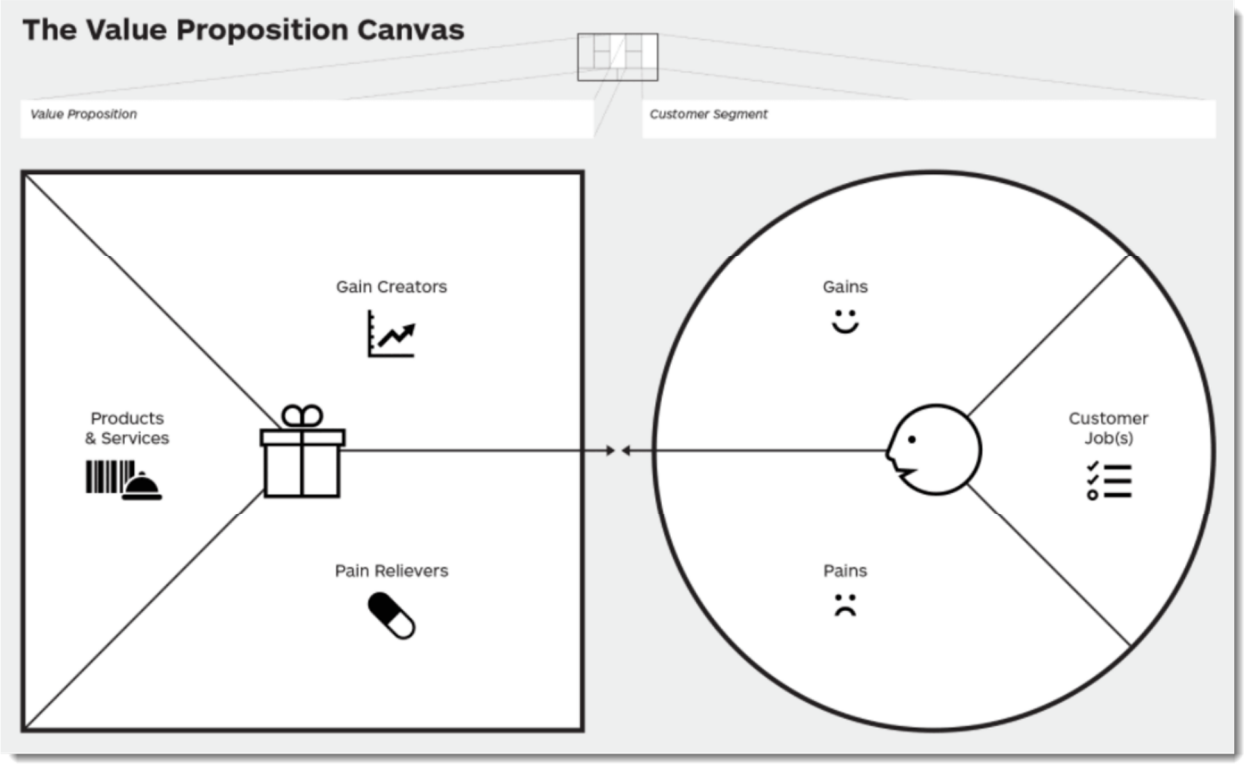
1. Do you think my idea is a good idea?
2. Would you buy this product that does X?
3. How much would you pay for X?
4. Talk me through the last time X happened?
5. What else have you tried?
6. How are you dealing with it now?
7. Who else should I talk to?
8. Is there anything else I should have asked?

Some key factors discussed in *The Mom Test* by Rob Fitzpatrick are to talk about your customer's life and their struggles, not your idea. Ask for stories about their past struggles instead of their opinions about the future. Allow the customer to talk more than you. Ask about their problems and goals without taking opinions as fact.

> *ASK FOR STORIES ABOUT THEIR PAST STRUGGLES INSTEAD OF THEIR OPINIONS ABOUT THE FUTURE.*

Value Proposition Canvas

The Value Proposition Canvas is a tool from Strategyzer, a company that provides support for teams in developing new solutions around customer needs.



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The Customer Segment on the right helps to break down the client's objectives. What is the Customer trying to accomplish in dealing with a potential challenge? The pains represent negative outcomes related to risk or hurdles. The gains represent what the hopeful result would be and what value would be created.

The Value Proposition on the left helps to analyze the tools in development and how they will align with the identified client needs. The pain relievers address how to support the identified pains of the customer. The gain creators relate to how the solution will directly support the hopeful result of the customer.

Develop a language to improve understanding among thought leaders

Terminology is important

There are numerous companies and programs dedicated to assisting teams working through change or growth. Programs such as Lean, Six Sigma, Project Management and Change Management all have overlapping ideas that may use different terminology for similar concepts. Your company may even develop custom terminology to better fit your culture. Whatever support your team gets, it is important that everyone within your team and company work to use the same terminology. Before any action begins, the culture and conversations need to be immersed in this use of a common language.

Start with leadership and key individuals that are influencers. Frame training conversations around the terminology of the tools. Incorporate intentional marketing around the company to slowly expose people to the terms and tools for developing innovative thought. Include the terminology in written articles and notices provided around the company.

Aligning the organization

Leading up to any program developed for encouraging people to participate in an Innovation Challenge, run a campaign of media to help educate and motivate everyone inside the organization.



Cast a vision to the company showing how the Innovation Program will help the company. Show the importance of each person and how much of an impact each person could bring to the success of the whole company.

In the Campaign, tell stories about successes and failures from previous events that will generate thought and action for new ideas. Be real and truthful about the lessons learned from each test.

> *INCORPORATE INTENTIONAL MARKETING AROUND THE COMPANY TO SLOWLY EXPOSE PEOPLE TO THE TERMS AND TOOLS FOR DEVELOPING INNOVATIVE THOUGHT.*

Create the process that guides innovators through development

Design Thinking

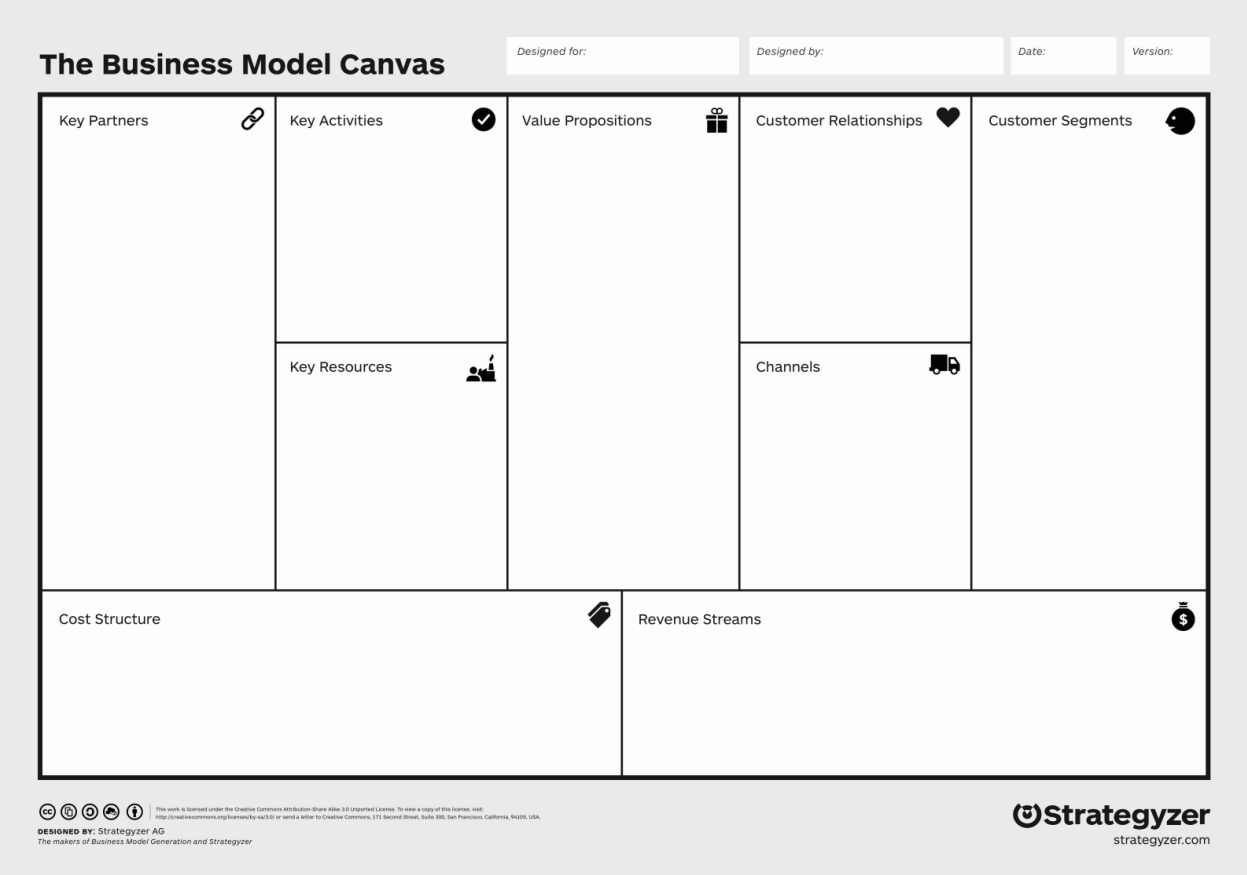
Design Thinking is a repeating process to hypothesize an idea, seek customer information, develop a plan, test the plan, learn from the test and refine the product before launch. It provides a defined process to guide a team through established steps.

Keep people at the core of the solution. An idea or product should be focused on supporting people and their goals.

Business Model Canvas

The Business Model Canvas is another tool from Strategyzer that builds on the Value Proposition Canvas to fully break out all the information to create a working business model.

Look at market analytics and study the customer base. Don't let your feelings towards a cool new product drive you into purchasing a useless tool. Who would be using it? Why would they use it? Maintain facts on the innovative idea and don't let your feelings determine your choices.



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STORY: From lessons learned through our various innovation tests, we have grown to be much more critical of an idea and research facts before making decisions. To that point, we have done research on 3D printing. Stereolithography (SLA) Printing can use different resins and provide a much stronger object than Fused Deposition Modeling (FDM) printers. The SLA printers can develop some amazing objects. Our problem, at this point, is finding a customer that aligns with our existing core business models that would benefit from that product. The Design Thinking and Value Proposition Canvas tools have shown us that we have not found the right customer or process yet.

Common Steps

1. Hypothesis – develop a statement that leads to the purpose without binding you to a solution or path.

2. Customer Discovery – this is critical to success. The team must ask the right questions in the right manner. Ask questions to draw out genuine feedback from your Customer. *The Mom Test* by Rob Fitzpatrick is a good resource for understanding this process. Don't ask your customer if they like your idea. Instead, ask open questions seeking insight into their lives and how they hope to accomplish their goals. For example, what are your favorite apps on your phone? Why is that app good for you?

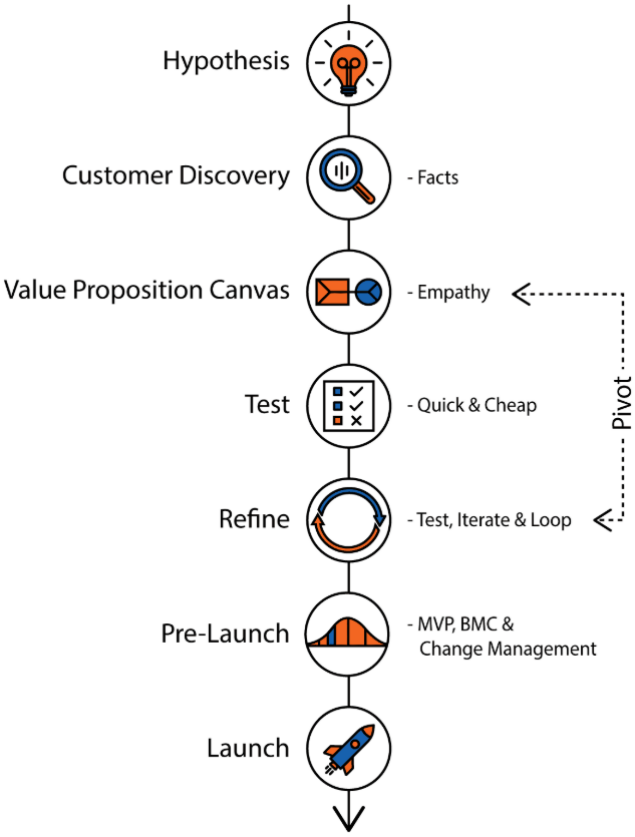
3. Using the Value Proposition Canvas will help lay out the customer's pains and gains and align them with your product solution.

4. Test the idea with the goal of testing quickly and with low cost to find how effective the idea will be.

5. Learn from the test and refine the solution through iteration loops

6. Pre-launch is for evaluating the Minimum Viable Product (MVP), developing the Business Model Canvas (BMC) and determining what Change Management will be needed.

7. Launch the product to market.



Entrepreneurship

Think like an entrepreneur attempting to start a new business, even when looking to develop an idea internally. Determine the market value and demand. Determine how broad and scalable is the customer base. Determine how scalable is the idea. With an idea that has potential, go through the Design Thinking steps.

Test

Perform a small, quick test of the idea to begin getting information on outcomes to determine success or failure.

STORY: We had done extensive study on the benefits of utilizing an exoskeleton suit to assist our field workers lifting of heavy items. Market research was done. A Value Proposition Canvas was developed for every aspect of support for a Customer wearing the suit. We even developed a relationship with the manufacturer of a suit. Initial testing showed a totally different story however. The Partners using the suit did not like the sweat around all the straps in the hot environment. There was also concern about the mechanics of the suit extending beyond the back shoulders. A more important and unforeseen issue was the social impact. Numerous times, the Partner wearing the suit was laughed at and ridiculed by other trades on the job site. We quickly found that our Partners who were willing to try the suit were asking to stop using it. On paper, the suit was amazing. In practice, the suit failed to provide more gains than the pains were being relieved. The importance to this test is that we did not bulk up a huge fleet of exoskeleton suits that are now just filling storage. Another key lesson taken from this test was making sure we selected the right Partners able and willing to go through the test. Would it have made a difference to select a Partner with a stronger presence that would not have been bothered by the social pressure? At this point, we have captured what we learned and will evaluate future options to iterate and test again later.

Failure

Don't be afraid of failure. Share what you learn from failure. Just like success can prevent us from a willingness to change, failure can prevent us from a willingness to continue trying. Take an honest look at what happened in the testing and talk about it.

> *FAILURE IS SIMPLY THE OPPORTUNITY TO BEGIN AGAIN, THIS TIME MORE INTELLIGENTLY. -HENRY FORD*

Keep in mind that businesses are made of people. Failed businesses will cause people to lose jobs and investments. That is why it is important to test quickly and cheaply before committing significant investments into an idea.

Differentiate between processes and tools

People, Process & Technology

Every task involves people, process and technology. A hammer is a tool that does nothing on its own. Its process involves driving a nail into a board. It is the person that defines how well that hammer is used to drive a nail. Now introduce a pneumatic nail gun. The tool is improved only because is makes the necessary process of driving the nail into the board easier for the person responsible for the task. A pneumatic system is more complex, but the execution of the tool is simple. The nail gun is an easy example of a tool that makes improvements to a process.

Don't overlook the quality of a process being used. Developing a better tool for a bad process, still makes the bad process perform bad, but maybe just a little better.

STORY: TDIndustries has been using Virtual Reality for over two years. It is a tool that we simply have not found a definitive process to improve upon, nor the right Customer to seek to use it. This has led to a stagnation in its demand and use. Essentially, we have not been able to move over the Chasm or Tipping Point. The tool has been used in Marketing, Recruiting, Engineering, Estimating and VDC Coordination. Showcasing Virtual Reality has benefited our project teams, yet they are not asking to use it on subsequent jobs. The technology is not necessary for the process to be successful and we have not found proof that it will substantially improve performance. The next opportunity may be to work with our Facility Partners that provide customer support for building systems and see if the models of their customer's buildings will help them gain experience on the systems. We are committed to the success of Mixed Reality platforms and continue to test and seek Customer Discovery across different groups within TD and our customers.

Innovation Program thoughts

Want to develop a program to drive innovation within your company? What is the best solution for your company that fits in your culture? How will you gather ideas from colleagues? How will you foster a culture to create ideas? How will you not be a barrier or gate keeper to ideas? How will you communicate to the company the vision of the program? What stories will you tell to inspire your colleagues? How will you train and mentor colleagues that are brave enough to present ideas? How will you incentivize the participation in your program? Be a fast follower. Look at other companies and develop based on what is successful and fits best for your needs.

Why is Innovation so Important?

Innovation is essential for the growth of a company. Innovative companies attract innovative people to work there. Innovation helps a company stay competitive in their market and serve their customer better. Innovation helps the company's value go up by being able to change to market needs. Innovation is exciting and fun!

Resources

The Tipping Point: How Little Things Can Make a Big Difference by Malcolm Gladwell
The Mom Test by Rob Fitzpatrick

Tools from Strategyzer.com

- *Testing Business Ideas* by David Bland & Alex Osterwalder
- *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers* by Alex Osterwalder & Yves Pigneur
- Value Proposition Canvas (Copyright Strategyzer AG)
- Business Model Canvas (Copyright Strategyzer AG)

Customer Discovery question analysis

1. **Do you think my idea is a good idea?**

   This is a bad question. The person has no factual knowledge about the idea and the answer will be based on opinion. There is a high risk of false information.

   Instead, discuss what they like or dislike. Have they tried other tools or processes? Are they looking to replace the existing tool or process?

2. **Would you buy this product that does X?**

   This is a bad question. The answer will not be based on fact, but mostly from opinion in a manner to try and please you.

   Instead, ask how much it costs with the current solution. Ask for the story on what happened the last time the current solution was done. If they had not solved the issue, then ask why not.

3. **How much would you pay for X?**

   This is a bad question. Answers will most likely trick you into believing a certain price range that will be hard to move.

   Instead, ask how much is spent to currently solve their problem and if they are willing to share their budget for the current solution.

4. **Talk me through the last time X happened?**

   This is a good question. Stories are a great way for the customer to show how they are dealing with an issue rather than just being told. The customer is more likely to share more detailed information about their day than just the process itself. Understanding this environment can help you better understand how your idea can fit their needs.

5. **What else have you tried?**

   This is a good question. This will help you understand what other solutions the customer is using and their view on those other solutions. If a customer hasn't looked for other solutions to their problem, there is a good chance they won't be buying yours.

6. **How are you dealing with it now?**

   This is a good question. It may even be the best indicator of your eventual price point. Seek to understand how they are currently dealing with a problem and understand what it is costing them. A customer may not tell you what they are willing to pay for a product, but they will probably show what that product is worth to them.

7. **Who else should I talk to?**

   This is a good question to ask towards the end of your time. This could create opportunities to talk to other customers through introductions. If no suggestions are made, then focus on the nice points made in your current conversation. People want to be helpful, and this is an easy way to let them help you.

8. **Is there anything else I should have asked?**

This is a good question that gives the customer a chance to fix any mistakes or omissions in your line of questions. A good conversation will end with the customer wanting to help and not leave out thoughts they have been wanting to share.