

Worksheets

from

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Connected Strategy

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Chapter 3

(Rewards of Connected Strategies)

Firm Description

- *Traditional Lock Company:*
 - *One-time interaction: customers install locks when doors are installed / upgraded*
 - *Customers do not interact with locks thereafter, unless they are locked out and need to call a locksmith or they need a new lock*
- *Traditional Security System:*
 - *Traditional security systems are motion-triggered, only alerted home owners of an issue after an intruder has entered*
- *Connected Lock / Security System Start-up:*
 - *Two main features: 1) Smart Lock and 2) AI Security System*
 - *Lock and unlock doors from anywhere using iOS or Android app*
 - *Customers will never have to call the locksmith or be locked out again*
 - *Customer can also have peace of mind, knowing they can lock and unlock their doors remotely*
 - *Security systems detect motion when people / animals come on to property and alerts home owners through the app*
 - *High quality camera allows home owners to have high-quality, wide-angle view of home*
 - *Over time, the security system software will be trained to recognize faces as well as routine, daily activity, so as to only prompt home owners when there is suspicious, non-routine activity*
 - *Once suspicious activity is detected, home owners have the opportunity to communicate through a two-way speaker, hopefully prevent a break-in or other nefarious activity—the security system becomes the first line of defense that prevents intruders, rather than just alerting home owners of intruders*
 - *Once these connected locks / security systems across an entire neighborhood, we can create a virtual map that allows law enforcement officials and home owners to more effectively monitor security*

Step 1: Diagnostic questions concerning your current connections with customers

Questions	Answers
How often do you currently connect to your customers?	<ul style="list-style-type: none"> - Lock: Only once when the lock is installed; in fact most consumers are unaware of the name of the lock, as it is often installed with the door by contractors - Security Camera: At regular intervals when payment is required / there is an upgrade to the service; when there has been a security breach
What kind of information do you receive about your customers' needs?	<ul style="list-style-type: none"> - Lock: Little to no information - Security Camera: Robust data collection, but very little reflects information about customer needs
How does information flow from the customer to you? For instance, does the information flow rely on the customer taking the initiative, or does the information flow happen in more a continuous and autonomous manner	<ul style="list-style-type: none"> - Lock: No information flows; once a lock is installed, lock maker has no information flow from customers - Security Camera: Information regarding security flows continuously and is monitored to detect security breaches
How long does it take for a customer need to reach you?	<ul style="list-style-type: none"> - Lock: Unknown - Security Camera: Instantly
How long does it take for you to react once you have a customer need?	<ul style="list-style-type: none"> - Lock: Extended period of time - Security Camera: Instantly in response to a security breach
What do you learn each time a customer connects to your firm? How are you integrating these episodic interactions into a single connected experience for your customers?	<ul style="list-style-type: none"> - Lock: Product is deficient / not working - Security Camera: Learn about a security breach; company response is to contact police; episodic interactions are not integrated into a connected experience for customers

Step 2: Brainstorm the effects of a Connected Strategy could have for your organization

Imagine a world in which customers could instantaneously communicate their needs to you. You are by their side as they go through life, anytime and anywhere. How would this increase in connectivity allow you to improve how you serve your customers? More specifically:

Questions	Answers
How could you use this information to increase the willingness-to-pay of your customers?	<ul style="list-style-type: none"> - Lock: Design locks for customers who are locked out because they forget their keys / need to let someone in without keys - Security Camera: Alert customers before suspicious activity, rather than after someone has broken in
How could you use this information to decrease your fulfillment costs?	<ul style="list-style-type: none"> - Lock: High costs vs. status quo - Security Camera: High fulfillment costs to design, manufacture, market, and continue to update technology

Next, imagine a world in which you know a customer need even before the customer knows this need itself.

Questions	Answers
How could you use this information to increase the willingness-to-pay of your customers?	<ul style="list-style-type: none"> - Lock: Design and sell locks that can be controlled remotely - Security Camera: Alert customers of suspicious activity to give customers an opportunity to prevent a break-in
How could you use this information to decrease your fulfillment costs?	<ul style="list-style-type: none"> - Lock: High costs vs. status quo - Security Camera: High fulfillment costs to design, manufacture, market, and continue to update technology

Step 3: Start identifying drivers of willingness-to-pay

Willingness to Pay

Consumption Utility: How happy is the customer with the product or service?

Accessibility: How easy is it for the customer to get the product or service?

Cost of Ownership: How much does it cost for the customer to use and maintain the product?

Performance

- Increased efficiency and convenience
- Increased usage / additional use cases
- Increased security for everyday use, as well as during travel

Fit

- Alignment with smart home trend
- Alignment with mobile trend

Location

- Locks are installed in existing doors
- Security camera / doorbell to be located near front door / back door

Timing

- Easy to order online
- Easy installation, with streamlined instructions that allows setup within 30 min.
- Once app is installed on mobile, easy to access and use product

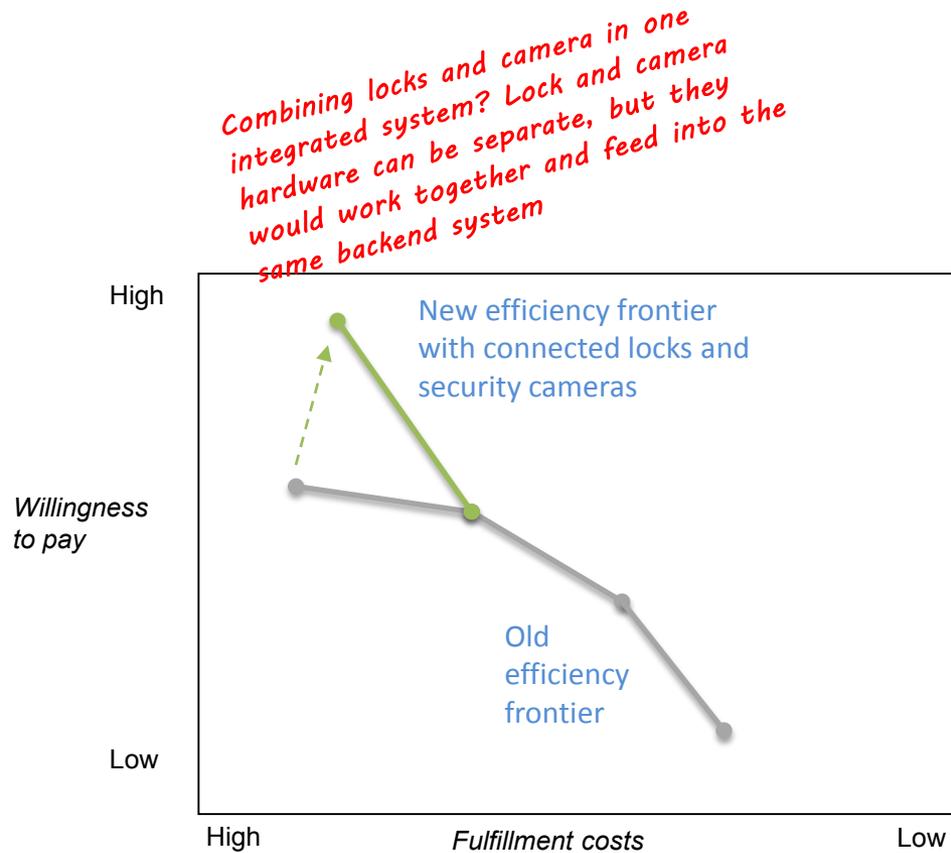
Usage cost over product life

- Large payment upfront for hardware and potentially installation
- Minimal maintenance costs
- Updates to software pushed to mobile app

Maintenance cost over product life

- Minimal maintenance costs

Step 4a: Sketch the efficiency frontier for your industry that reflects the trade-off between willingness-to-pay and fulfillment costs



Step 4b: Follow-up questions after sketching the efficiency frontier

Questions	Answers
Where are you relative to the efficiency frontier?	<ul style="list-style-type: none"> - Lock: on the efficiency frontier - Security Camera: on the efficiency frontier
If you are not on the efficiency frontier, what efficiency improvements do you plan to pursue in order to reduce your fulfillment costs?	
Assuming you are on the efficiency frontier, do you feel that you are in the right spot on the frontier?	<ul style="list-style-type: none"> - Lock: No; low cost and low WTP - Security Camera: Yes; low cost and medium-level WTP
What are the trends in your industry? Is there pressure on lowering costs or do you see your firm win over its rivals by providing products and services with a higher willingness-to-pay?	<ul style="list-style-type: none"> - Lock: No innovation / major trends - Security Camera: Pressure to offer services that increase WTP
Are there new technologies that have allowed some of the firms already in the industry or potentially new entrants to push out the frontier? Do you see new business models breaking the trade-off between willingness-to-pay and fulfillment costs?	<ul style="list-style-type: none"> - Lock: several smart lock companies in the market that offers remote access to open and close locks—increased cost and WTP - Security Camera: several connect security cameras on the market that increased cost and WTP

Chapter 6

(Creating Connected Customer Relationships)

Step 1: Map the current customer journey of one customer experience

Customer Journey

Why does the customer engage in the interaction?

How does the customer go about identifying, ordering, and paying for the desired product?

What products and services are provided to the customer?

Latent need

- Customers want convenient and effective home security monitoring

Awareness of need

- Customers become aware of the need when 1) they forget their keys / need to let someone in to their home and 2) when there has been a security breach in their home or neighborhood

Search for options

- Customers work with home repair store / builders or can simply search online for security options

Decide on options

- Customers weigh convenience, effectiveness, ease-of-installation + use, and price

Order & pay

- Customers generally purchase products online; products are then delivered

Receive

- Customers receive products and can easily install thereafter

Experience good/ service

- Customers will have a seamless experience through the service

Post-purchase experience

- Customers will continue to use / experience updates and recommend to network

Step 2: Identify customer willingness-to-pay drivers and pain points

Willingness-to-Pay Drivers and Pain Points

Why does the customer engage in the interaction?

How does the customer go about identifying, ordering, and paying for the desired product?

What products and services are provided to the customer?

Latent need

- Customers are not aware of the need often, unless there is a trigger, e.g. break-in or keys left behind or someone needs to be let in remotely

Awareness of need

- Customers become aware of the need when 1) they forget their keys / need to let someone in to their home and 2) when there has been a security breach in their home or neighborhood

Search for options

- Customers generally rely on specialists for information and guidance when searching for options
- Customers will need to balance use-case and functionality

Decide on options

- Customers weigh convenience, effectiveness, ease-of-installation + use, and price

Order & pay

- Customers generally buy products online; products are delivered to home
- Products are preconfigured with features to meet customers' needs

Receive

- Customers receive products and can easily install thereafter

Experience good/service

- Customers will have a seamless experience through the service

Post-purchase experience

- Customers will continue to use / experience updates and recommend to network

Step 3: Capture the information flows for this customer experience

Information Flows

Why does the customer engage in the interaction?

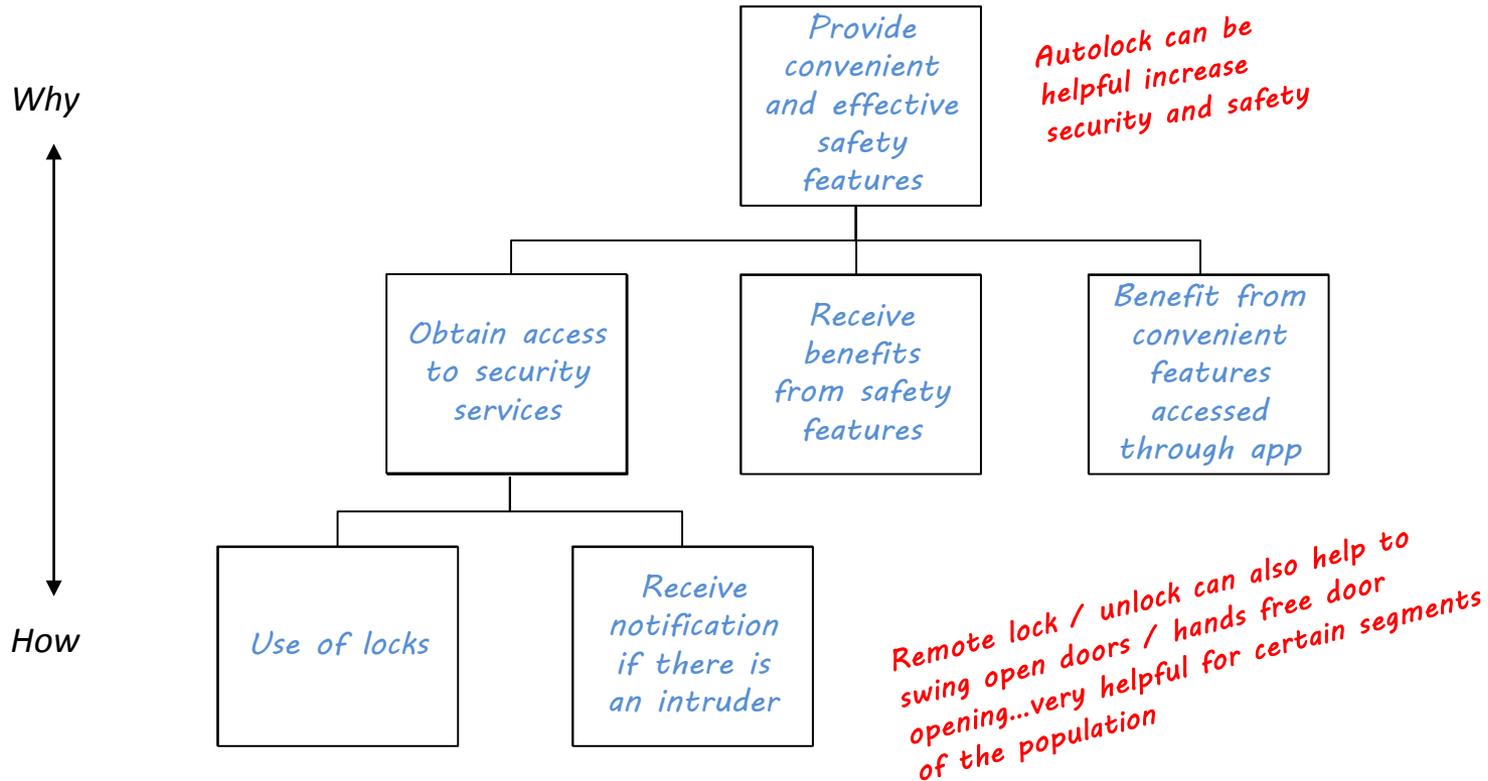
How does the customer go about identifying, ordering, and paying for the desired product?

What products and services are provided to the customer?

	Latent need	Awareness of need	Search for options	Decide on options	Order & pay	Receive	Experience good/ service	Post-purchase experience
Description of Information	<ul style="list-style-type: none"> Customers are not aware of the need, unless there is a trigger 	<ul style="list-style-type: none"> Trigger event drives awareness of need 	<ul style="list-style-type: none"> Rely on specialists or through internet search 	<ul style="list-style-type: none"> Weigh use-case and convenience 	<ul style="list-style-type: none"> Order and pay online 	<ul style="list-style-type: none"> Receive shipment at home 	<ul style="list-style-type: none"> Customers will have a seamless experience with service through the mobile app 	<ul style="list-style-type: none"> Ongoing updates to be provided via mobile app
Trigger	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer
Frequency	<ul style="list-style-type: none"> Ad hoc 	<ul style="list-style-type: none"> Ad hoc 	<ul style="list-style-type: none"> One time 	<ul style="list-style-type: none"> One time 	<ul style="list-style-type: none"> One time 	<ul style="list-style-type: none"> One time 	<ul style="list-style-type: none"> One time 	<ul style="list-style-type: none"> Continuous
Richness	<ul style="list-style-type: none"> Limited 	<ul style="list-style-type: none"> Limited 	<ul style="list-style-type: none"> Detailed 	<ul style="list-style-type: none"> Detailed 	<ul style="list-style-type: none"> Detailed 	<ul style="list-style-type: none"> Limited 	<ul style="list-style-type: none"> Detailed 	<ul style="list-style-type: none"> Rich info flow
Customer effort	<ul style="list-style-type: none"> Moderate 	<ul style="list-style-type: none"> Substantial 	<ul style="list-style-type: none"> Substantial 	<ul style="list-style-type: none"> Substantial 	<ul style="list-style-type: none"> Substantial 	<ul style="list-style-type: none"> Substantial 	<ul style="list-style-type: none"> Substantial 	<ul style="list-style-type: none"> Substantial
Action by	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Specialist / Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer 	<ul style="list-style-type: none"> Customer
Improvement Ideas	<ul style="list-style-type: none"> Monitor activity consistently, in order to alert customers of suspicious activity before it even happens 	<ul style="list-style-type: none"> Alert customers of suspicious activity before trigger event for added safety 	<ul style="list-style-type: none"> Customers do not have to be dependent on specialists; can learn about options through a simple web search 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Guided installation process using mobile app, which will also be used once installed 	<ul style="list-style-type: none"> Experience with the product is controlled through app 	<ul style="list-style-type: none"> Real-time data sharing and recs for improvements to safety

Step 4: Identify the deeper needs of the customer

In the eyes of the customer, the purpose of the relationship with our firm is to...



Step 5: Understand the current relationship with your customer across separate (repeated) customer experiences

A) Identify the customer and retrieve data

Questions	Answers
How do you identify the customer and connect him or her to prior customer experiences?	<ul style="list-style-type: none"> - New home owners / home owners looking to renovate - Home builders (another group of customers)
Is this identification requiring time and effort from the customer?	- No
Is this identification costly to your firm?	- Yes—marketing and sales efforts to build campaigns that target consumers and sales efforts targeting builders
What organizational incentives are in place (or what disincentives need to be removed) so that various parts of your organization share the information they have about a particular customer?	<ul style="list-style-type: none"> - Macro sales target goals / sales target goals by channel and customer type - R&D target goals

B) Customization

Questions	Answers
How do we improve customization for a particular customer based on information that we have gathered about this customer?	- Learn to recognize familiar faces in the home, as well as timing of routines by day
What feedback do we gather from the customer to understand whether a particular solution worked well?	- Record when the customer logs on to the app and what commands the customer takes
Can the customer make direct suggestions to us of how to improve our product or service?	- Yes, through the app or calling customer service

Step 5: Understand the current relationship with your customer across separate (repeated) customer experiences

C) Population-level insights

Questions	Answers
How do we currently use population (or market-segment) level data to improve our product assortment?	- Population level data used for marketing and R&D
How do we currently use population (or market-segment) level data to refine features of existing products?	- Population level data used to brainstorm and beta-test new features
How do we currently use population (or market-segment) level data to create entirely new products?	- N/A

D) Why-How ladder questions

Questions	Answers
At what level in the Why-How ladder are most of our transactions currently taking place?	- HOW interactions are most common
What would be alternative value propositions to the customer that are either more focused (HOW) or broader (WHY)?	- Interactions with companies should continue to help them understand WHY home security provides more than just an alert when there has been an intruder, but it provides convenience and peace-of-mind / safety

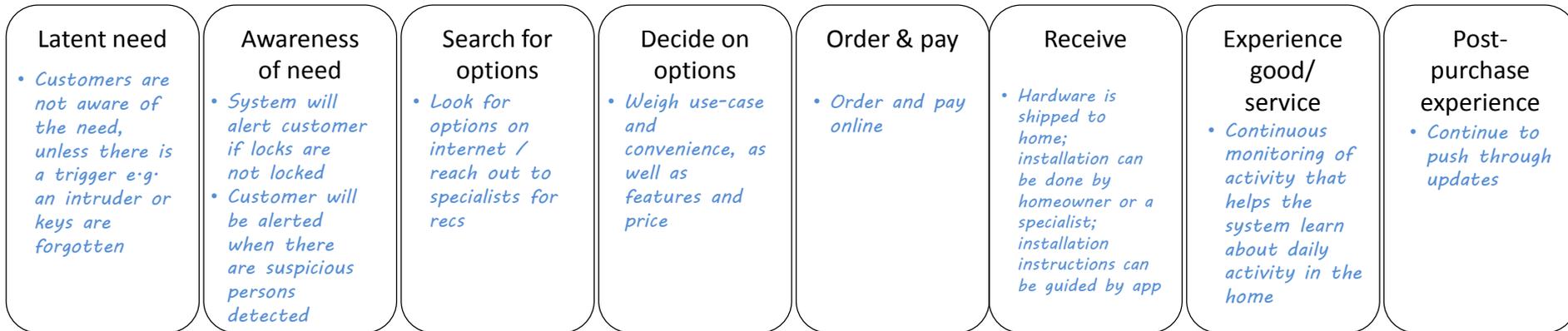
Step 6: Identify new opportunities associated with connected relationships

Automated Execution

Coach Behavior

Curated Offering

Respond-to-Desire

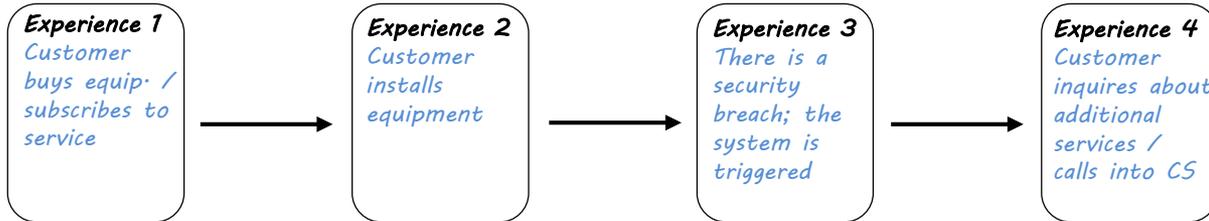


Responses to Pain Points

Required Information



Step 7: Find ways to utilize information gathered from repeated interactions to improve the Recognize-Request-Respond cycle



Customization Improvements

- Ability to customize on app after 5 - 7 days of usage; security system has built a memory of daily activity and familiar faces and can begin to recommend / detect suspicious activity / persons
- Feedback provided by pop-up questions

Optimization of Product and Service Offering

- App and recognition software continues to learn about daily activity, as well as daily users in order to provide accurate recommendations on suspicious activity
- If multiple homes in the neighborhood have the monitoring service, we can build a map of activity that helps us better understand suspicious activity / alert others of suspicious activity

Creation of New Products and Services

- Since security monitoring is continuous, the video software can learn to recognize faces and recurring activity, so as to build a schedule for the home, e.g. same Fedex delivery driver comes at 11am everyday

Efficiency Improvements

- Software updates to be pushed to the app that improves facial recognition and ability to see when dark

Fulfillment of deeper customer needs

- It is not enough to just be alerted of an intruder; security systems should be able to alert home owners of suspicious activity before it happens by detecting suspicious persons and allowing the home owner a prevention opportunity

Step 8: Assess your data-protection policies to maintain trust with your customers

Questions	Answers
What procedures do we have in place to stay informed about data protection and privacy regulations in all the geographies in which we are active?	- <i>Dedicated team of lawyers and compliance officers focused on protecting customer data across various jurisdictions</i>
How do we keep up with how public opinion is changing with respect to these issues?	- <i>Continued efforts to understand (changing) customer needs and use cases</i>
How do we currently obtain customer consent? How transparent is it to our customers what happens to their data?	- <i>Customer consent needs to be absolutely transparent during 1) installation process and 2) app installation and usage</i>
What do we do to keep the data current and accurate?	- <i>Continue to maintain strong R&D team focused on security and pushing updates</i>
What are our activities to keep the data safe and under what conditions do we notify customers of any breaches?	- <i>Private data center</i> - <i>Strong R&D team that maintains</i>

Chapter 10

(Creating Connected Delivery Models)

Step 1: Use the Connected Strategy Matrix to map your own activities and the activities of your competitors

	Connected Producer	Connected Retailer	Connected Market Maker	Crowd Orchestrator	P2P Network Creator
Respond-to-Desire	<ul style="list-style-type: none"> - Buy security device - Subscribe to monitoring service 	<ul style="list-style-type: none"> - Smart lock that can control door remotely 			
Curated Offering	<ul style="list-style-type: none"> - Data collected from individual homes 				
Coach Behavior	<ul style="list-style-type: none"> - Prevent intruders before they enter by warning them off through two-way speaker 				
Automatic Execution	<ul style="list-style-type: none"> - If there is an intrusion, police is alerted - Let someone in to the house remotely 				<ul style="list-style-type: none"> - Create map of activity in a community based on what is detected in cameras

Step 2: Use the empty cells in the Connected Strategy Matrix to create new ideas

	Connected Producer	Connected Retailer	Connected Market Maker	Crowd Orchestrator	P2P Network Creator
Respond-to-Desire	<ul style="list-style-type: none"> - Designing new connected lock / doorbell hardware with a camera / monitoring feature 				
Curated Offering	<ul style="list-style-type: none"> - Offering face recognition - M / L of unique daily activity 				
Coach Behavior	<ul style="list-style-type: none"> - Installing connected devices across a neighborhood 			<p><i>Use the data collected from cameras throughout the community or apartment building to create a virtual map of activity that can be used by authorities</i></p>	
Automatic Execution	<ul style="list-style-type: none"> - Predicting security breaches based on learnings and understandings of unique daily home activity - Alerting home owners of suspicious activity before it occurs and providing an opportunity for prevention 				<ul style="list-style-type: none"> - Building a map of activity in a neighborhood that can be shared, so all home owners in the neighborhood can benefit from information

Step 3: Understand your existing revenue model, identify its main limitations and consider alternatives for your current activities as well as for the ideas created above

Questions	Answers
What does the customer pay for?	- <i>Customer pays for equipment and service</i>
What are your different revenue streams?	- <i>Upfront revenue for equipment and ongoing payments for monthly security / monitoring service</i>
Who is paying?	- <i>Direct customer is paying</i>
When does payment occur?	- <i>Large upfront investment in equipment and ongoing service payment</i>

Questions	Answers
Next, look for inefficiencies in your revenue model. Do you use this revenue model because you believe it is the right one, or are you constrained by connectivity to the customer?	- <i>Upfront revenue + ongoing payments is healthy and sustainable,</i> - <i>However the value-add for ongoing service payments is not obvious unless there is an intruder</i>
Now that you understand the current revenue model, consider ways for considering these inefficiencies	- <i>New service can address “intruder” threat even before it occurs, because the facial recognition technology can detect strangers and suspicious activity</i> - <i>Send weekly report to customer to continue to demonstrate “value”</i>

Step 4: Deconstruct your Connected Strategy into technological sub-functions and then catalogue currently used technological solutions for each sub-function

	Recognize	Request		Respond			Repeat	Connection Architecture	Revenue Model	
	<i>Become aware of the need</i>	<i>Search and decide on option</i>	<i>Order</i>	<i>Pay</i>	<i>Receive</i>	<i>Experience</i>	<i>After sale</i>	<i>Learn and improve</i>	<i>Connect parties in ecosystem</i>	<i>Monetize customer relationship</i>
Sense	<i>Locked out of house / lost keys / need to let someone in / forgot to lock the doors</i>	<i>Search online for smart lock options / new-age security options, eg Nest, Ring</i>	<i>Order smart lock and cameras online; installation and managed service options may be through a local provider</i>	<i>Pay online for hardware and pre-pay for service capabilities</i>	<i>Receive at home; simply installation</i>	<i>Customers interact through app</i>		<i>Motion detection</i> <i>Face recognition</i> <i>Night Vision</i>	<i>Sense security alerts at homes in the neighborhood</i>	<i>Negotiate special rates for neighborhood or large apartment buildings to manage security and lock systems</i>
Transmit	<i>App sends commands to lock and unlock doors</i>			<i>Account information on location, type of home, etc is recorded</i>	<i>Send identity information to central system</i>		<i>Customers interact through app</i>	<i>Two-way talking capabilities</i> <i>Learn about preference and daily patterns</i>	<i>Consolidate security information of neighborhood into a central location</i>	
Analyze				<i>Idea 1: Connected / smart lock and security system, with ML technology that learns patterns / behaviors through facial recognition and motion detection, to detect when there are suspicious persons around the home</i>				<i>ML to minimize false alerts; app allows users to determine what is false alert</i>	<i>Cloud computing</i>	
React						<i>Door can be locked and unlocked remotely</i> <i>Detection of suspicious activity</i>		<i>Machine learning results continue to learn and improve the quality of alerts</i>		

Step 5: Identify new technological solutions and how those might enable further innovations in your Connected Strategy not identified so far

	Recognize	Request			Respond			Repeat	Connection Architecture	Revenue Model
	<i>Become aware of the need</i>	<i>Search and decide on option</i>	<i>Order</i>	<i>Pay</i>	<i>Receive</i>	<i>Experience</i>	<i>After sale</i>	<i>Learn and improve</i>	<i>Connect parties in ecosystem</i>	<i>Monetize customer relationship</i>
Sense						<ul style="list-style-type: none"> • Light bulb camera • Solar power tech • Works in hard weather • Can physically open and close door • Integration with face-recognition technology on phone to lock / unlock doors in app, further enhancing security • Voice commands to control lock 	<i>Security and lock integrated; when people are not moving in house, doors automatically lock for safety</i>	<ul style="list-style-type: none"> • Audio sensors • 360* or 180* field of vision • wifi-based detection • Data can be stored and analyzed for longer periods of time • Detection improves with ML tech, so we have less false alerts like sensing a squirrel • Motion sensor can detect if movement is suspicious vs casual gait of mailman 		
Transmit									<i>Share information about community data (only if users agree to sharing)</i>	
Analyze							<i>Push through software updates on app</i>		<i>Build a map using facial recognition of bad actors that authorities can access</i>	
React									<i>ML technology that detects bad actors and shared across community</i>	