



16 35 53



prism

The Box That Cares

Our Team: *Protect This Home*



Brian Freeman



Nick Goneconto



Braeden Callis



Brooke Nesselt



Gabrielle Bianchi



Drew Hamroff



Conrad Hong



Contemplation

Common Values



Safety

Focus on using
innovative
technology to
reduce tragedies



Health

Desire to
enhance health
and wellness to
improve lives

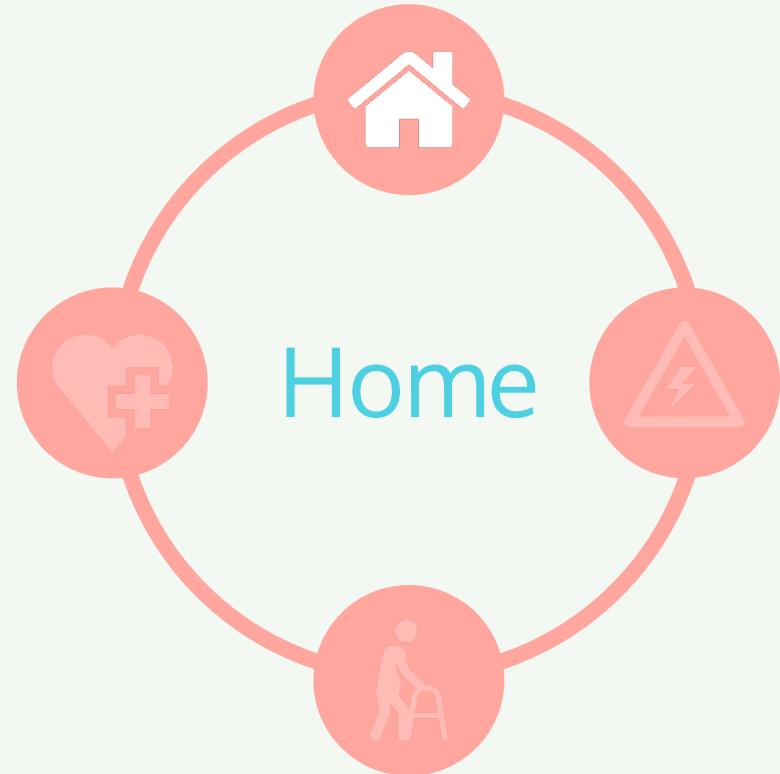


Helping Others

Passion for
helping those
who could not
help themselves

Our Purpose

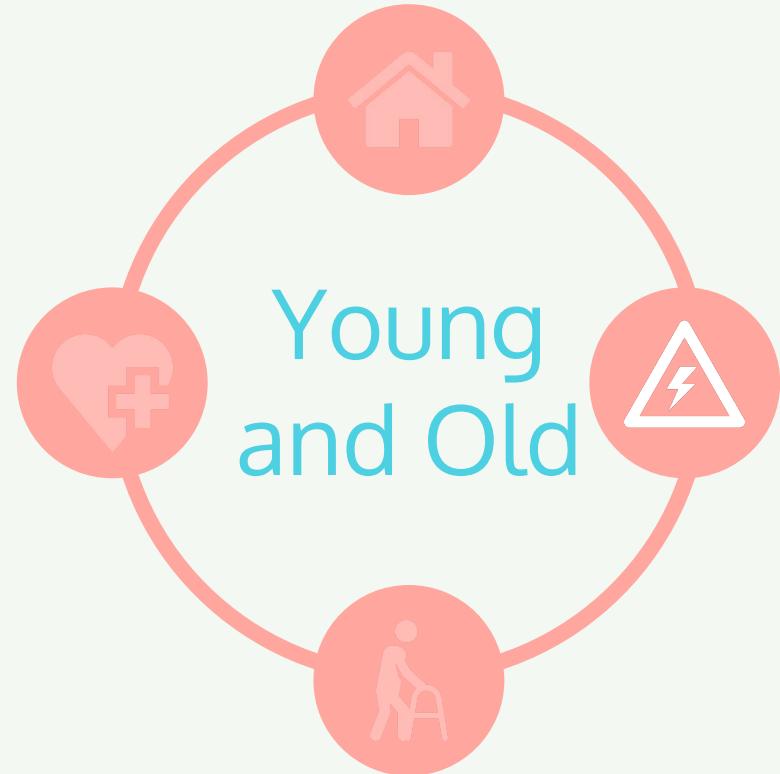
Where do you **feel safest?**



Our Purpose

Where do you feel safest?

Who is most at risk?

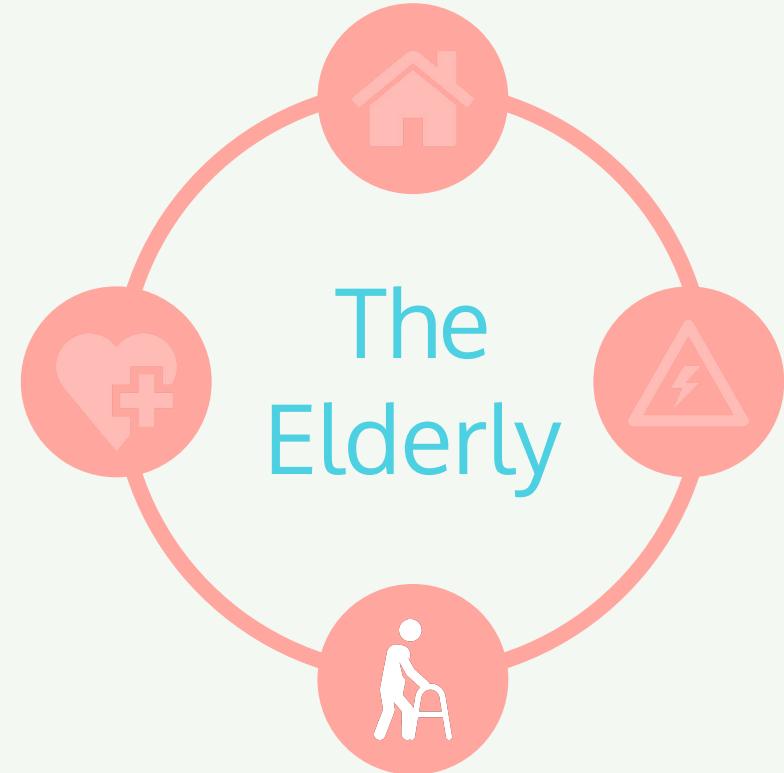


Our Purpose

Where do you feel safest?

Who is most at risk?

What group should we **focus** on?



Our Purpose

Where do you feel safest?

Who is most at risk?

What group should we focus on?

Where can we **improve health and safety?**



A close-up photograph showing a person's hands and arms. One person is wearing a light-colored shirt and is holding the hand of another person who is wearing a dark-colored shirt. The person in the dark shirt is holding a yellow cane. The background is blurred.

Design a system for elderly individuals in assisted living facilities to improve the ***wellness*** and ***safety*** that will help to promote peace of mind.



Desire



40%

Have reported abuse



90%

Have reported neglect



25%

Will fall in the next year



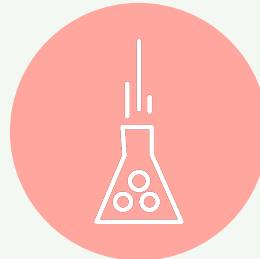
Every
19 minutes

A fall becomes fatal



Problem Dissolution

Addressing
Symptoms

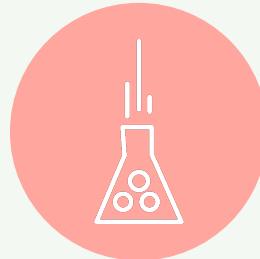


Stagnation

Reactive Planning

Problem Dissolution

Addressing
Symptoms



Stagnation

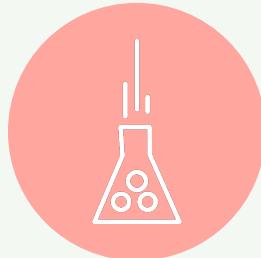
Reactive Planning

Stepping outside of
current system



Problem Dissolution

Addressing
Symptoms

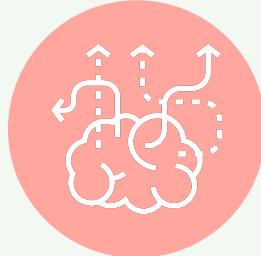


Stagnation

Reactive Planning

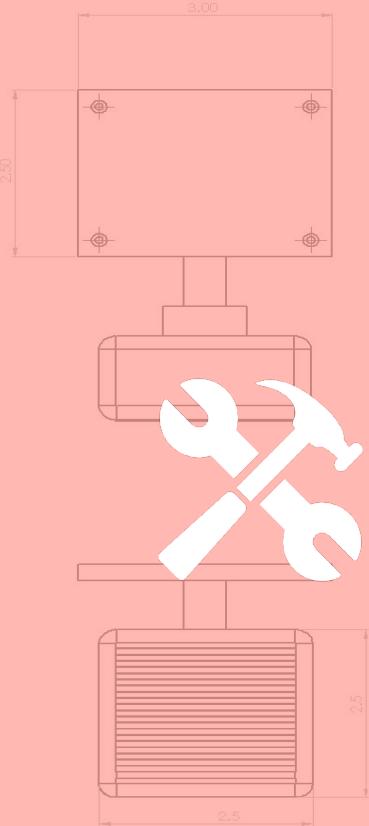
Stepping outside of
current system

Collect and
Analyze Data

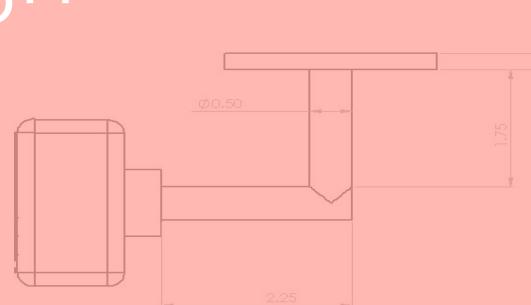
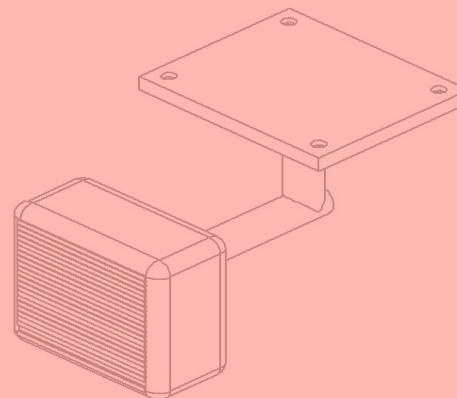


Quality of Care
Improve

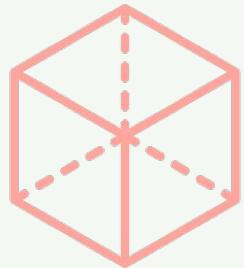
Interactive Planning



Design



ALL DIMENSIONS SPECIFIED IN INCHES			INCHES	DETAILED DRAWINGS IN INCHES	DO NOT SCALE DRAWINGS	REVISED
NAME	SCALE/UNIT	DATE				
C.H.D.						
APV/D						
NPC						
QA						
APPROVED:			RELEASER:	APPROVED:	RELEASER:	
PRINTED ON:			100%	PRINTED ON:	100%	
PRISM			100%	PRISM	100%	
Prototype			100%	Prototype	100%	
A2			A2	A2		
SHEET 1			SHEET 1	SHEET 1		



Prism



Motion Sensor



Design



Light Sensor



Sound Sensor

Team

Contemplation

Desire

Creation

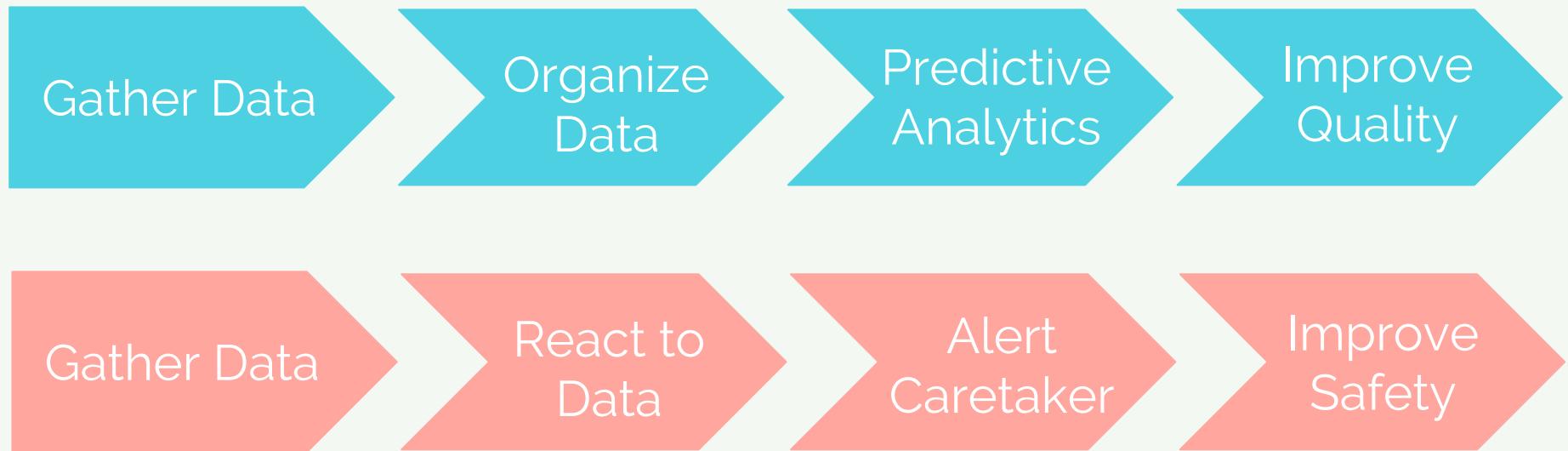
Conclusion

Questions

Our System



Our System





Improve Quality



Enhance Safety

Domains of Thinking



Emotional

Target complex emotional problems like abuse and safety



Logical

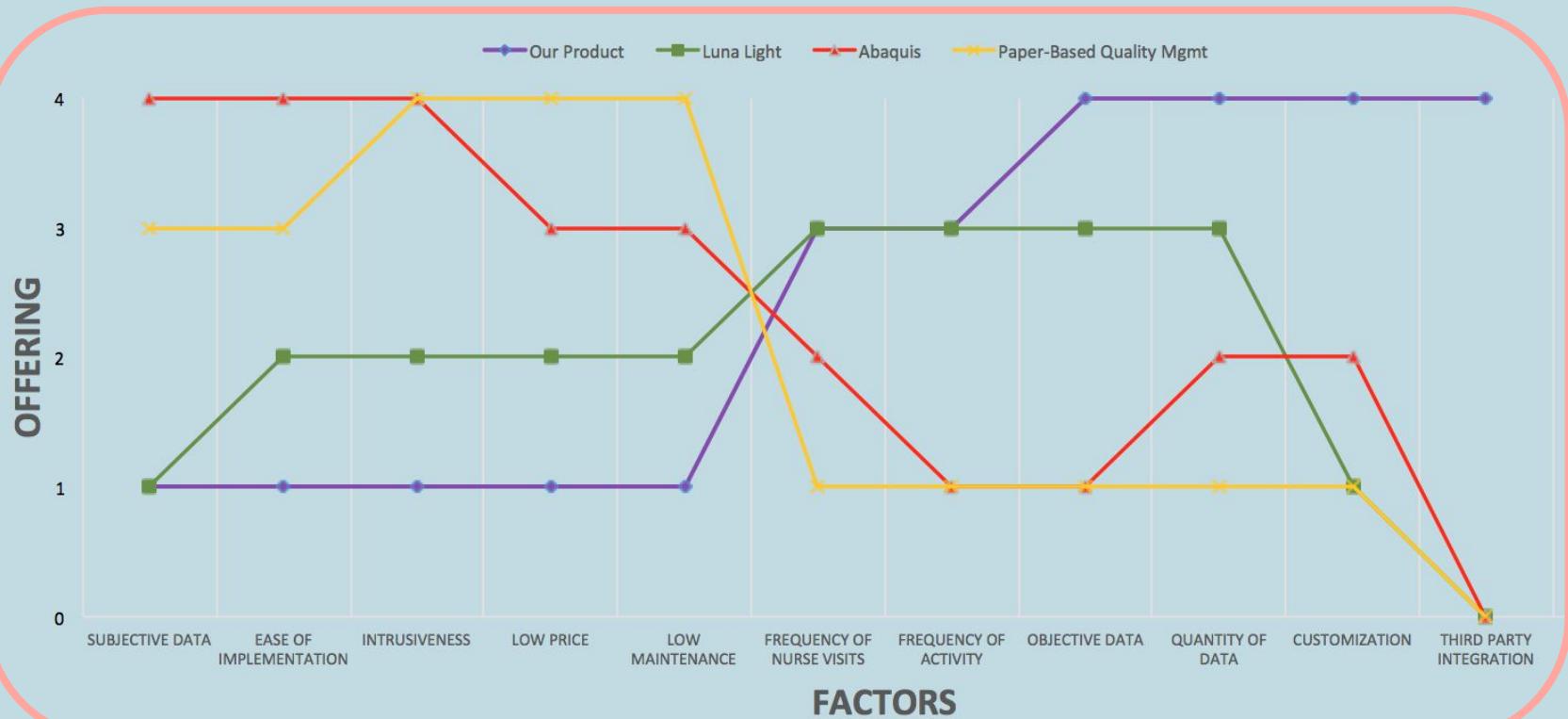
Use data to make informed conclusions on care metrics



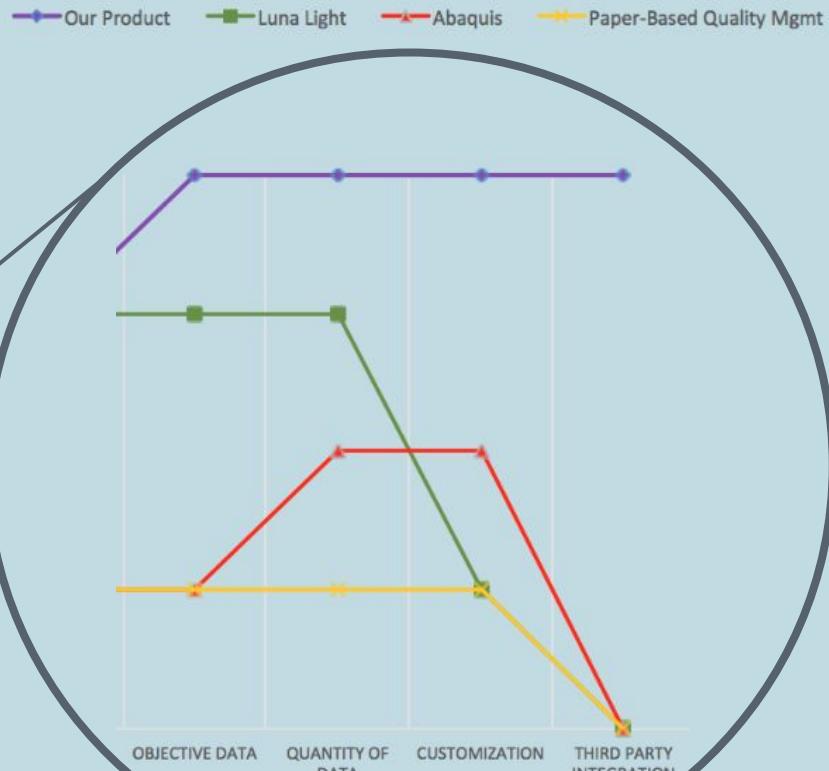
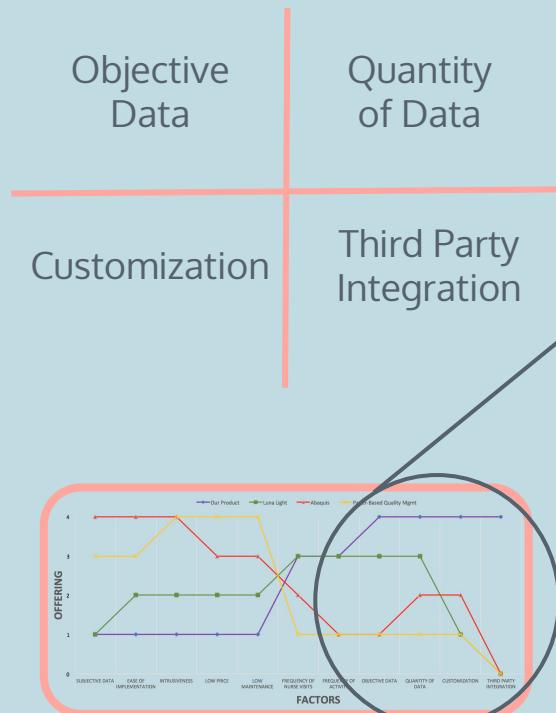
Physical

Take real measurements to supplement subjective data

Blue Ocean

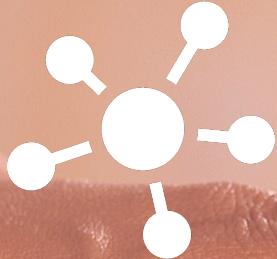


Blue Ocean

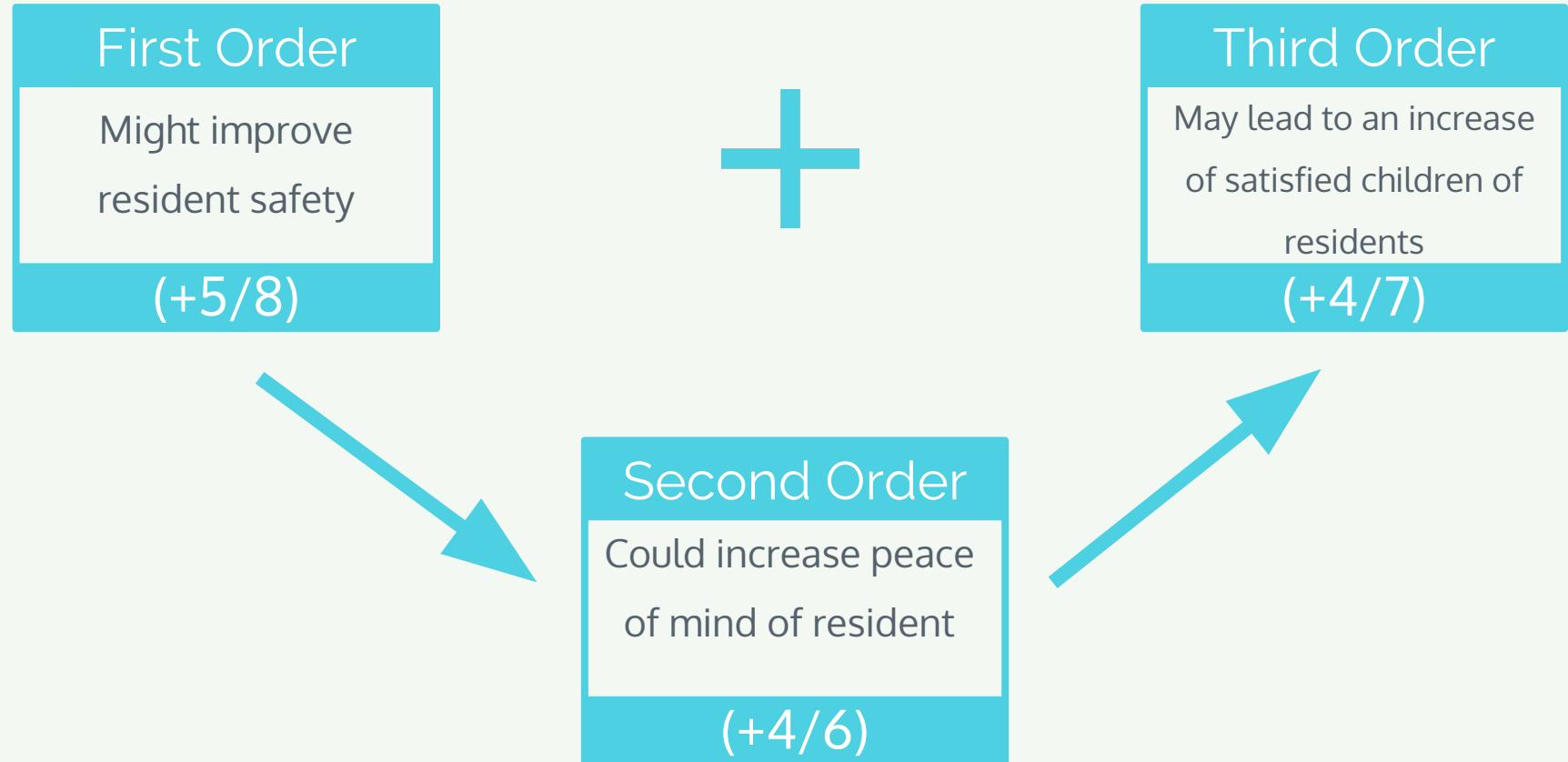


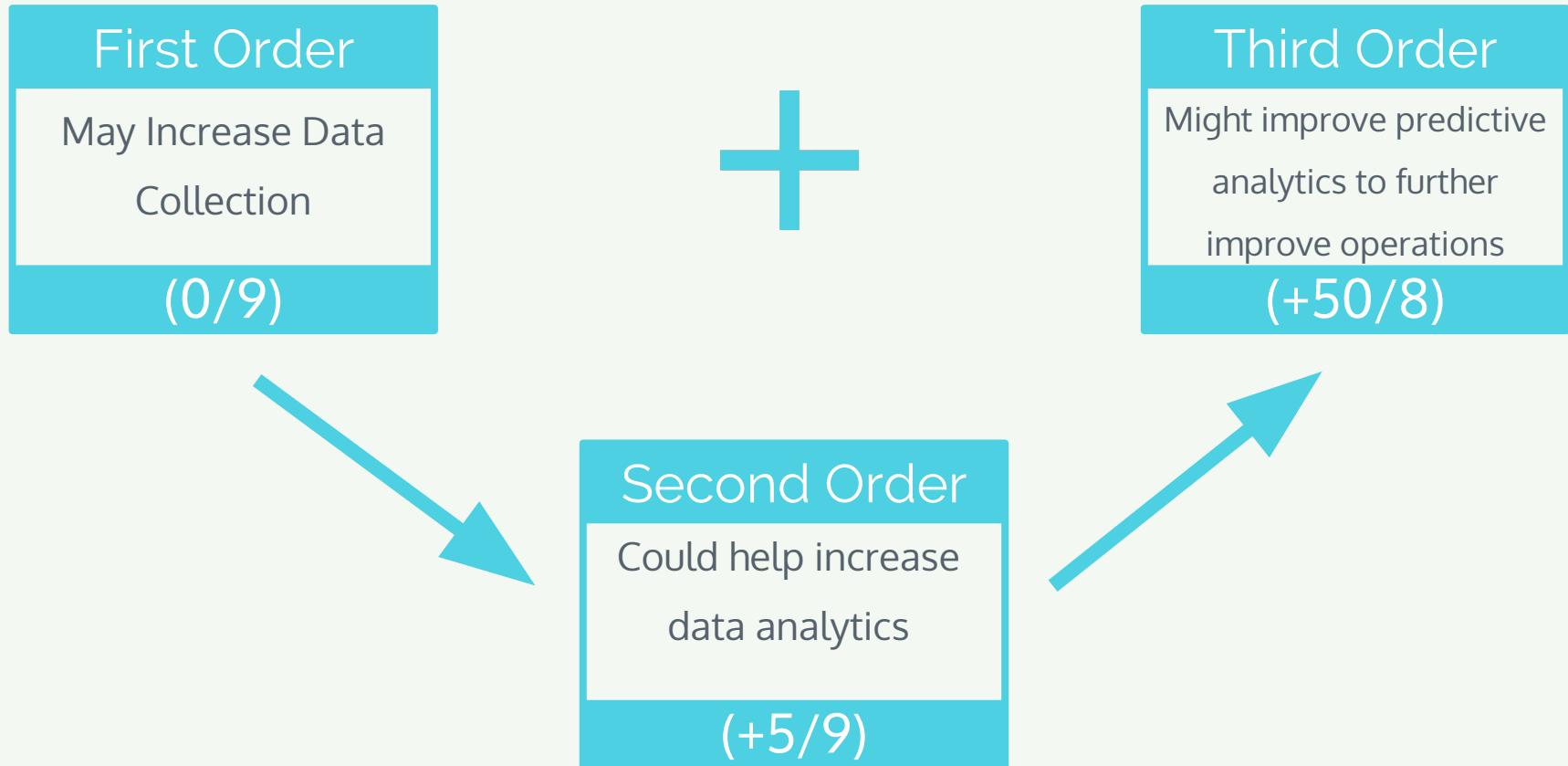


Creation



“What implications would occur if we implemented a total quality of care management system in assisted living homes with customized care situations within the next 6 months?”





Ensuring Positives



Feedback for Reliability



Maintain Customer Relationships



Communicate Benefits to Stakeholders

First Order

Could increase human resistance to implementation

(-4/6)

Third Order

Could decrease worker productivity

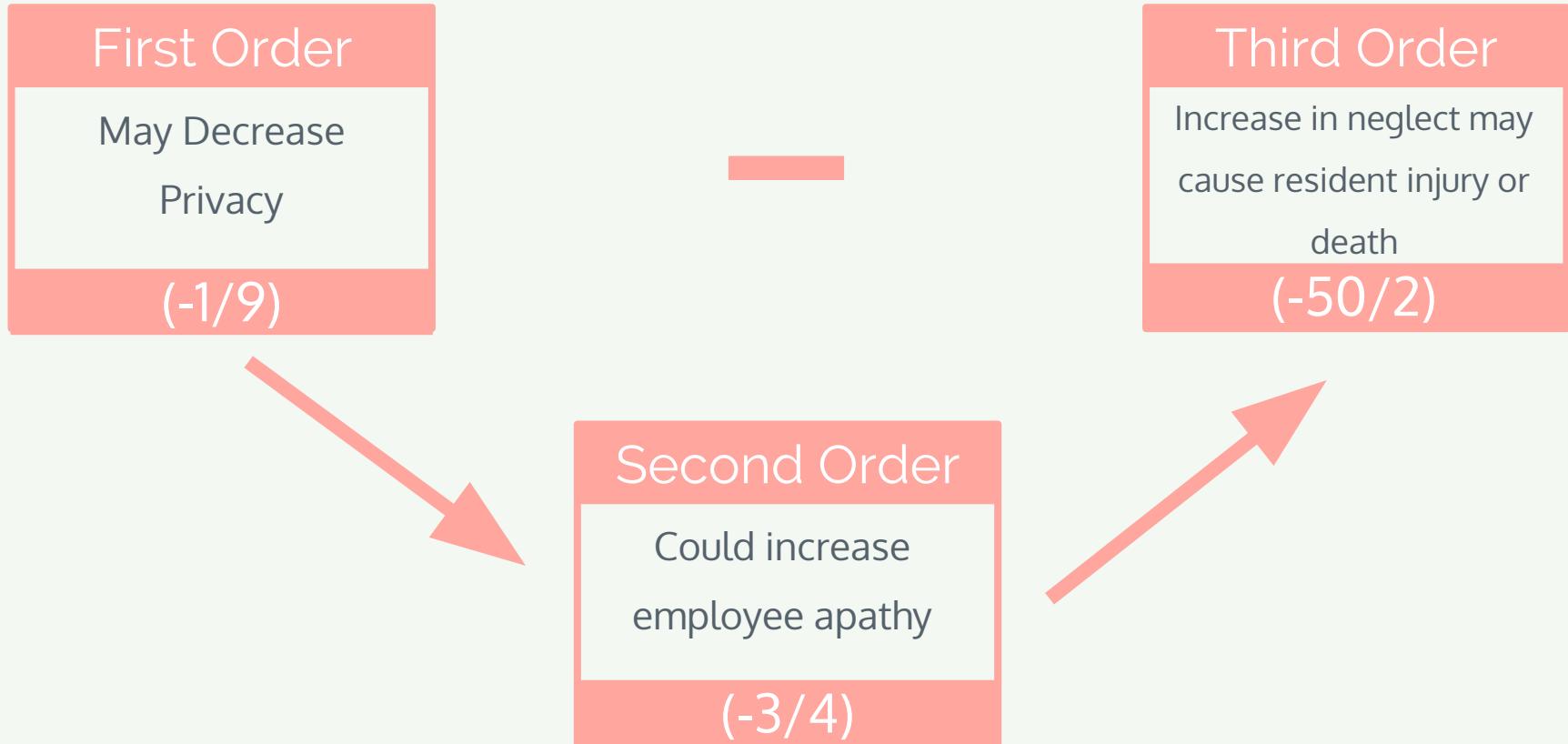
(-5/6)

Second Order

May increase lag time to learn a new system

(-2/9)





Preventing Negatives



Training Modules



Use as a tool

16 35 53



Target Market



1 M

Facility Residents



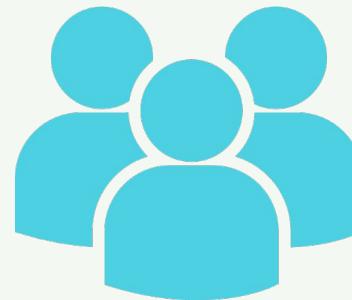
77 M

Baby Boomers

Stakeholders



Residents



Residents' Children



Assisted Living Homes

Stakeholders



Residents



Residents' Children



Assisted Living Homes

"Prism would 100% improve and satisfy current safety issues related to providing quality care for Cardinal Village's residents."

Maria Canosa (Marketing Manager at Cardinal Village Assisted Living Facility)

Finances



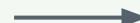
$$\begin{array}{r} \$46,000 \\ + \\ \$6,000 = \\ \hline \$52,000 \end{array}$$



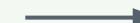
\$230,000

Total Annual
Revenue

Finances



$$\begin{array}{r} \$46,000 \\ + \\ \$6,000 = \\ \hline \$52,000 \end{array}$$



\$230,000

Total Annual
Revenue

Estimated First Year Costs: \$228,000



Conclusion

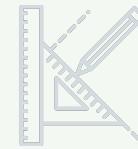
Summarizing Our Process



Contemplation



Desire



Design



Creation

We formed based on our common passion.
Our purpose is a reflection of that.

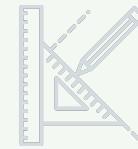
Summarizing Our Process



Contemplation



Desire



Design



Creation

We desired to address the need of improving the lives of the elderly through a system of quality improvement.

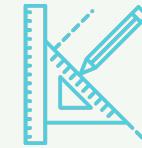
Summarizing Our Process



Contemplation



Desire



Design



Creation

The Prism increases quality of care through data metrics and efficient use of existing resources.

Summarizing Our Process



Contemplation



Desire



Design



Creation

Mapping out implications allowed us to envision real-life application of the Prism.

Moving Forward



App for
Parents



Smart pill box
integration



Improving
sensors

Pursuing Our Idea



“Design must reflect the practical and aesthetic in business, but above all, good design must primarily serve people.”

-Thomas Watson, Founder of IBM





Thank you!
Questions?

Appendix A

Prism Estimated Expenses

Direct Materials					
Material	Unit Price	Number of Units per Resident	Materials Cost per Resident	Materials Cost per Assisted Living Facility (Assuming 100 Units)	
Housing	\$1.30	3	\$3.90	\$390.00	
Stand	\$1.30	3	\$3.90	\$390.00	
PCB	\$0.85	3	\$2.55	\$255.00	
Photosensor	\$0.05	3	\$0.15	\$15.00	
Decibel Sensor	\$0.60	3	\$1.80	\$180.00	
Motion Sensor	\$0.85	3	\$2.55	\$255.00	
Wifi Transmitter	\$0.81	3	\$2.43	\$243.00	
MicroController	\$1.00	3	\$3.00	\$300.00	
Total:	\$6.76	24	\$20.28	\$2,028.00	
<i>Direct Labor Cost per Assisted Living Facility (Assuming 100 Units)</i>					
Direct Labor					
General Labor Costs per Unit	\$10.00	3	\$30.00	\$3,000.00	
Total:			\$30.00	\$3,000.00	
<i>Total DM and DL Cost per Facility</i>					
Manufacturing Overhead					
Equipment and General Maintenance			\$15,000.00		
Factory Rent per Year (Utilities Included)			\$63,000.00		
Integration Costs with Abaqis			\$40,000.00		

Manufacturing Overhead		<i>Total DM and DL Cost per Facility</i>
Equipment and General Maintenance	\$15,000.00	
Factory Rent per Year (Utilities Included)	\$63,000.00	
Integration Costs with Abaqis	\$40,000.00	
Total:	\$118,000.00	\$5,028.00
Nonmanufacturing Overhead		<i>Total Nonmanufacturing Cost per Facility</i>
Installation	\$50.00	\$5,000.00
Software Development Fees		\$100,000.00
Total:	\$50.00	\$105,000.00
*Square footage of warehouse Property = 5,000 SF	<i>Total Production Cost per Facility</i>	
Quoted Base Rental Rate = \$0.85 sf/mo		
Estimated operating expenses (NNN) = \$.25 sf/mo	\$110,028.00	
Total asking lease rate = \$1.05 sf/mo		
Monthly Rent = 5,000 x \$1.05 = \$5,250		
Total Costs for Year 1	\$228,028.00	
Sources:		
https://www.austintenantadvisors.com/blog/how-to-calculate-the-monthly-cost-of-leasing-warehouse-space/		

Prism Expected Revenues

Revenues/Sales:

Selling Price per Hardware System (3 Units)	\$350.00	\$35,000.00
Selling Price per Hardware Unit	\$116.67	
Installation Training Fee		\$5,000.00
Monthly Software Fee per Year (Updates)		\$6,000.00
Estimated Revenue per Facility		\$46,000.00
Amount of Facilities Sold To (Risk Averse Goal)	5	
Total Expected Revenue per Year		\$230,000.00

Appendix B

Assisted Living Facilities

[Download article as PDF](#)

By Jesse Ortiz

The assisted living industry is made up of a variety of senior care services, including assisted living facilities (ALFs). The Census divides the ALF industry into two major categories: continuing care retirement communities (NAICS 623311) and homes for the elderly (NAICS 623312). The primary distinction between the two is the presence of nursing care: continuing care retirement communities provide on-site nursing facilities, while homes for the elderly do not.¹



Assisted living facilities provide excellent services for seniors who wish to remain independent but still need some assistance with daily living. Types of assistance offered in ALFs include help with bathing, dressing, eating, grooming and getting around. There are a variety of options available in the ALF industry, making them popular with seniors. ALFs can be located in high rise apartment buildings, converted Victorian homes, or even renovated schools.²

Future industry growth will be spurred by the 77 million Baby Boomers planning to retire over the next two decades. With life expectancy continuing to increase in the U.S., many individuals who retire at 65 will have to decide where to spend the remaining twenty or more years.³ This is expected to increase demand for assisted living services, and provides an exciting opportunity for entrepreneurs.

Assisted Living Facilities Industry Overview

Roughly one million Americans reside in senior care facilities.¹ This number is expected to almost double by 2030.² However, the current economic climate has caused the industry's growth rate to dwindle. A drop in housing values across the country, coupled with losses in stock prices and 401(k) accounts, has caused millions of Americans who are nearing retirement to lose a substantial portion of their planned retirement income. A recent AARP poll found that 25% of Baby Boomers plan to postpone their retirement because of the effect the economy has had on their income and assets.⁴

Appendix C

<https://www.ncoa.org/news/resources-for-reporters/get-the-facts/falls-prevention-facts/>

The Challenge

According to the U.S. Centers for Disease Control and Prevention:

- One-fourth of Americans aged 65+ falls each year.
- Every 11 seconds, an older adult is treated in the emergency room for a fall; every 19 minutes, an older adult dies from a fall.
- Falls are the leading cause of fatal injury and the most common cause of nonfatal trauma-related hospital admissions among older adults.
- Falls result in more than 2.8 million injuries treated in emergency departments annually, including over 800,000 hospitalizations and more than 27,000 deaths.
- In 2013, the total cost of fall injuries was \$34 billion.
- The financial toll for older adult falls is expected to increase as the population ages and may reach \$67.7 billion by 2020.

Appendix D: Implications Wheel

http://prezi.com/a9szltnrbe5/?utm_campaign=share&utm_medium=copy