

PORTFOLIO

ROY LUO | 03/25/2013

Build an intelligent **platform** for flexible **roadtrip**



Morningstar Project **InvestMe**

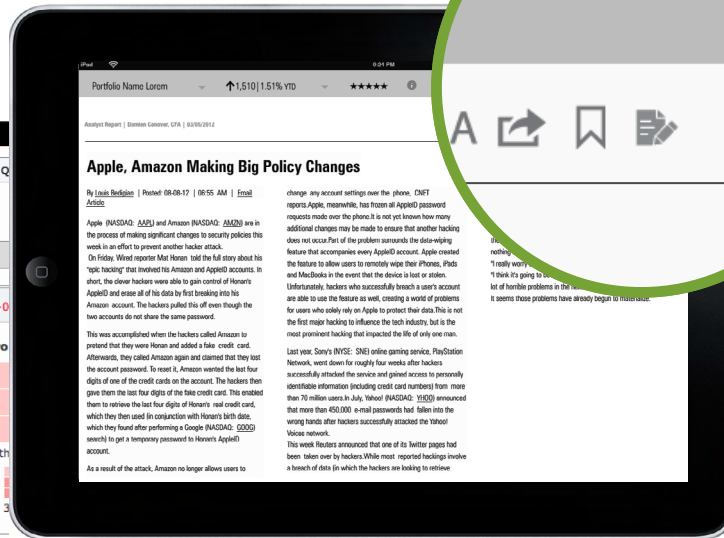
NOTE SYSTEM

Objective of project: Conduct **research** and design **wireframes** for note system

morningstar.com



investme

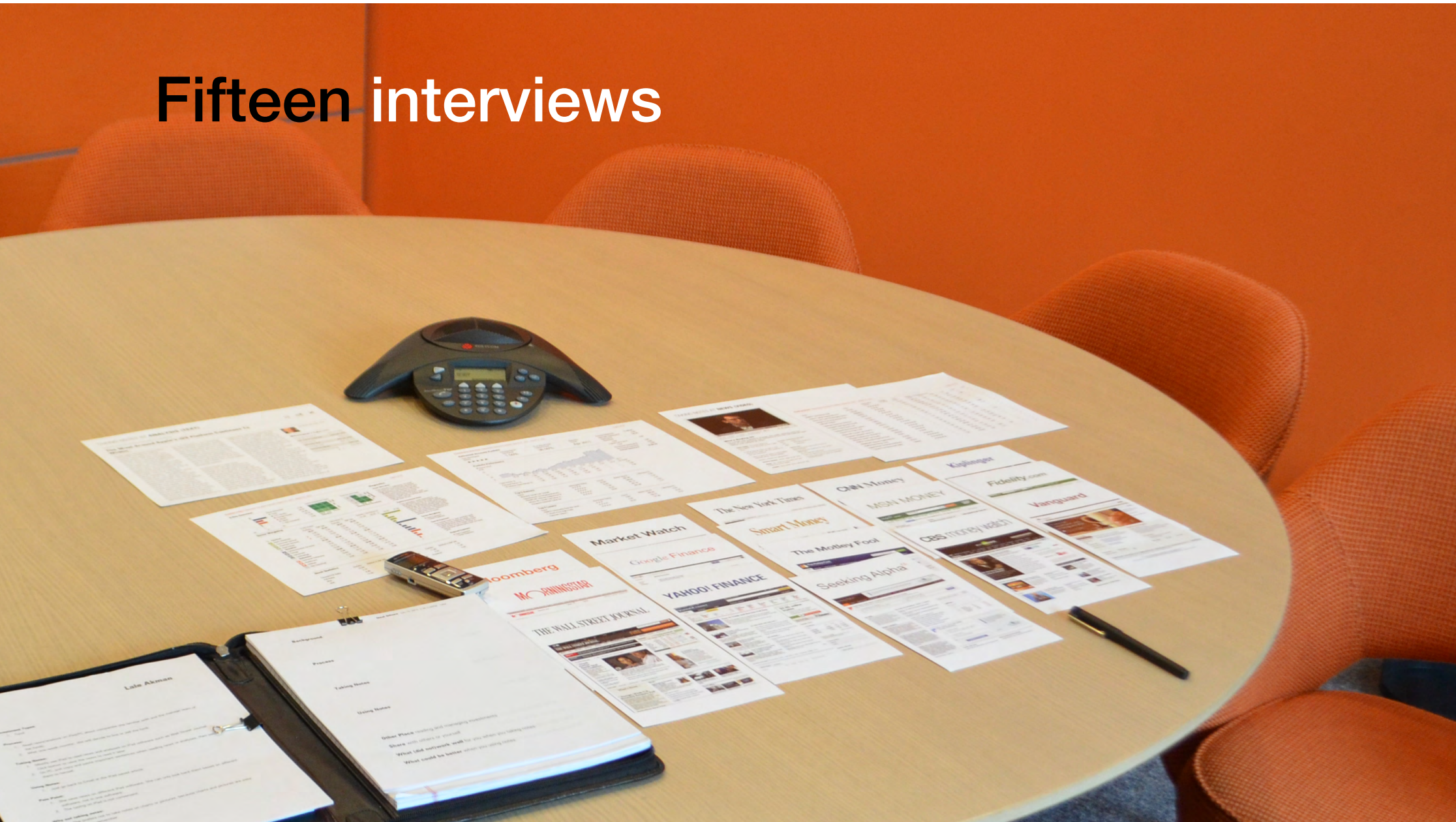


note system



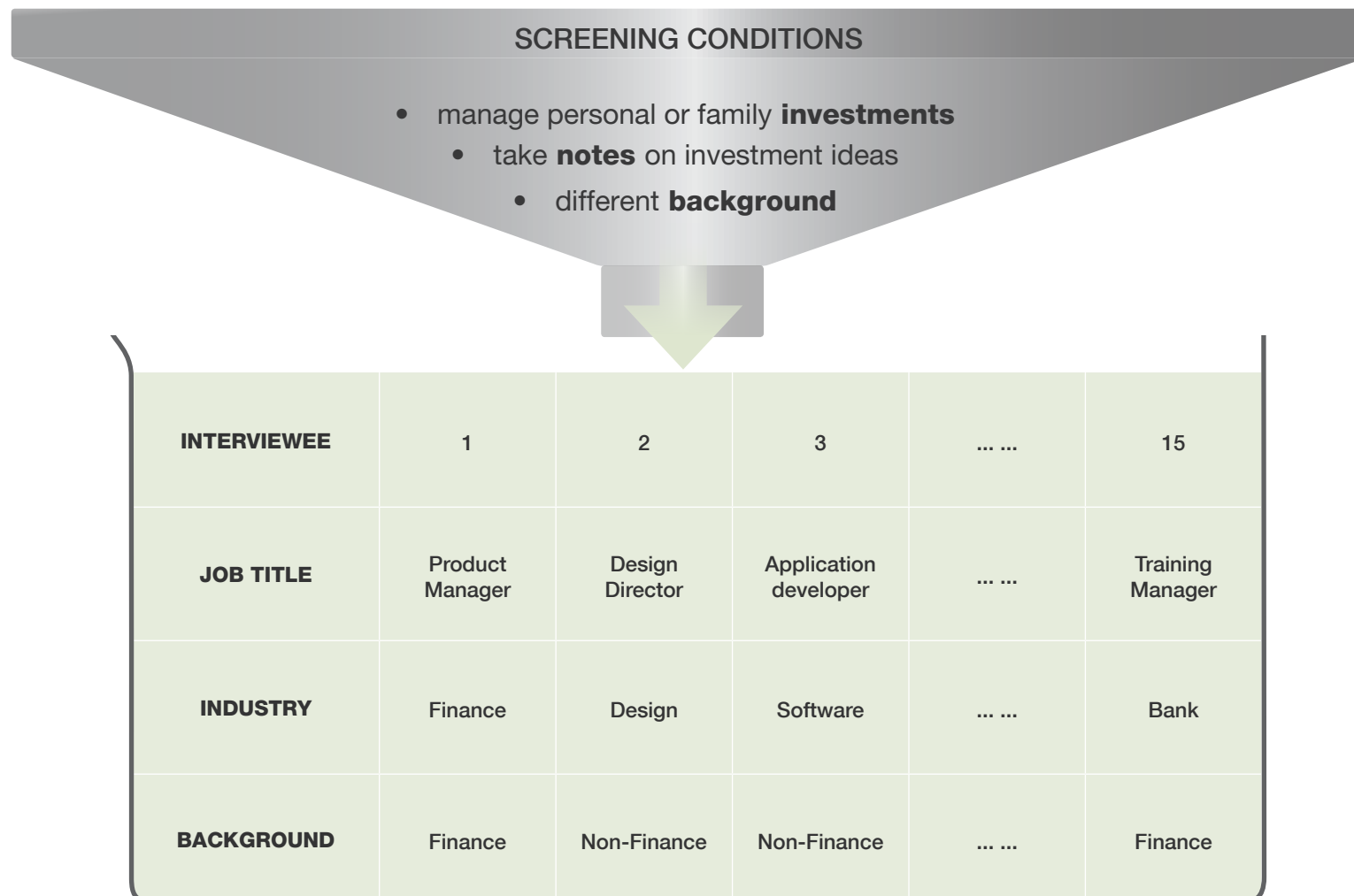
METHODOLOGY

Fifteen interviews

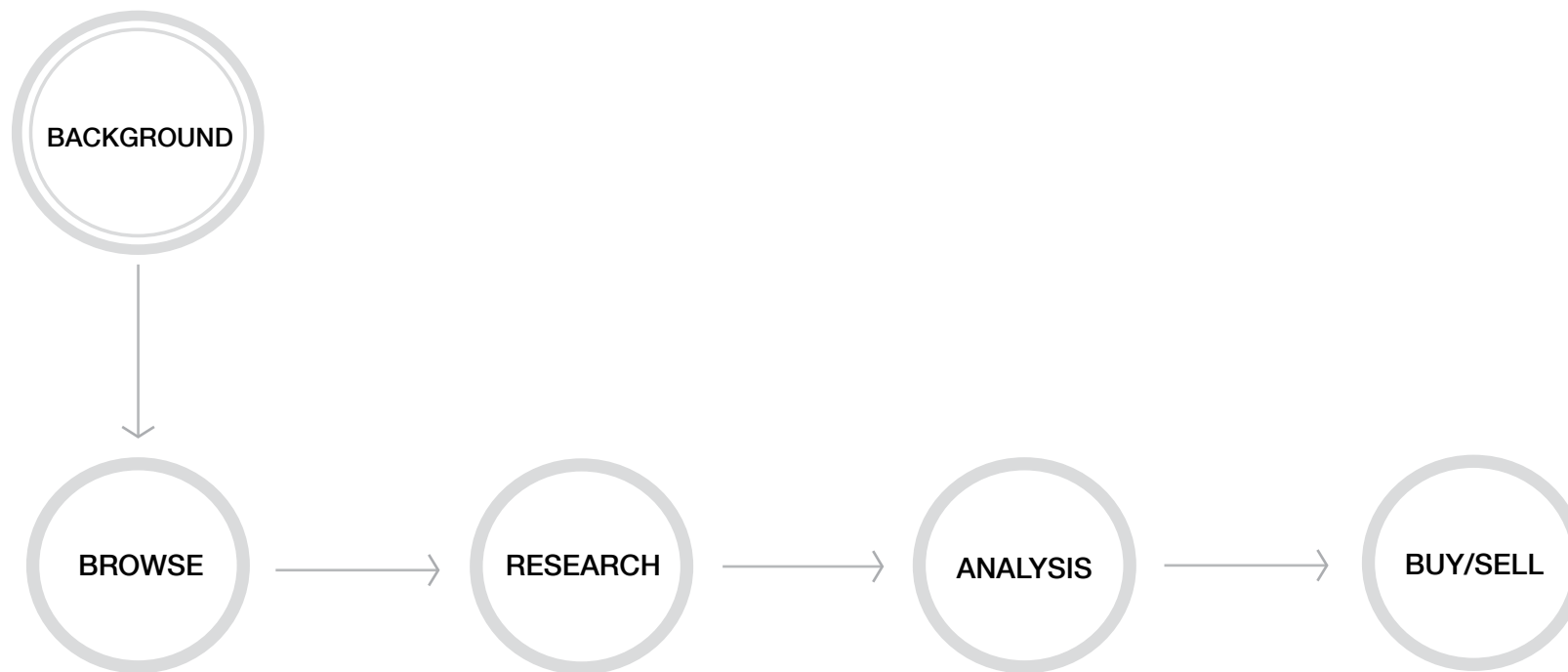


SCREENING

We chose fifteen interviewees based on the three conditions



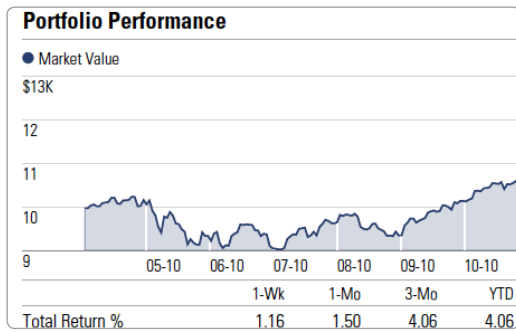
SEMI STRUCTURED PROTOCOL



How to **take** and **use** notes, and **why**?

PROVOTYPE

The provotype cards below are used to **provoke** participants to remember how they take notes



Chart



News

Contents

Analysis

Summary

Worried About a Rise in Rates? Consider These Bond Funds

Some analyst-approved intermediate-term bond funds are keeping durations on the short side.

When it comes to owning bonds these days, many experts agree it's best to keep things short, as in avoiding bonds with longer durations. That's because the longer a bond's duration, the more sensitive it is to interest rate movements. So if—or should I say when—rates begin to rise from today's historic lows, bonds with longer durations are likely to lose more in value than those with shorter durations.

Some investors confuse duration with maturity, but they are not the same. A bond's maturity simply refers to the length of time until the bond matures, which is to say until it no longer pays interest and the investor's principal is returned. Average duration is a more complex metric that factors in interest-rate movements and other variables. For more on the

Fidelity Freedom Funds
Professionally managed all-in-one retirement option.

Find a Fund

Learn how

Free Cash Options (FCSOX)

Securities mentioned in this article

Ticker	Price(\$)	Change(%)	Morningstar Rating	Morningstar Analyst Report
FTHSX	11.12	-0.20	★★★★	U
FRMFX	13.32	-0.07	★★★★★	
FRSFX	11.58	-0.26	★★★★★	
FRSFX	32.60	0	★★★★★	

With Morningstar Analysis reports you can get our expert Buy/Sell ratings on over 3,000 Stock and Funds. **Alert!** Call does not even show in any of the securities mentioned above. Find out about Morningstar's [QESSE](#) [PESSE](#).



TAKE NOTES ON 4 DIFFERENT CONTENTS



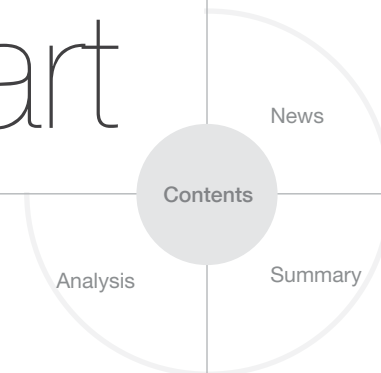
INSIGHT ABOUT CHART

Users only care about the **trends** behind charts, they do not care about the charts' **data** so much.

INSIGHT

Users prefer **not** to **write** or **type** notes about **charts**.

Chart



4 METHODS TO TAKE NOTE

The chart shows the **traits** about 4 methods to take notes.

FAST & EASY METHOD

SLOW & TEDIOUS METHOD



Click button

Copy/Paste

Type

Write

- Tag bookmark on App
- Highlight sentences
- Save to read later
- Save URL as bookmark

- Email to myself
- Copy/Paste data to Excel
- Email to myself
- Share URL to friend
- Copy/Paste to Word

- Edit copied sentences
- Use app to take notes

- Write notes on notebook

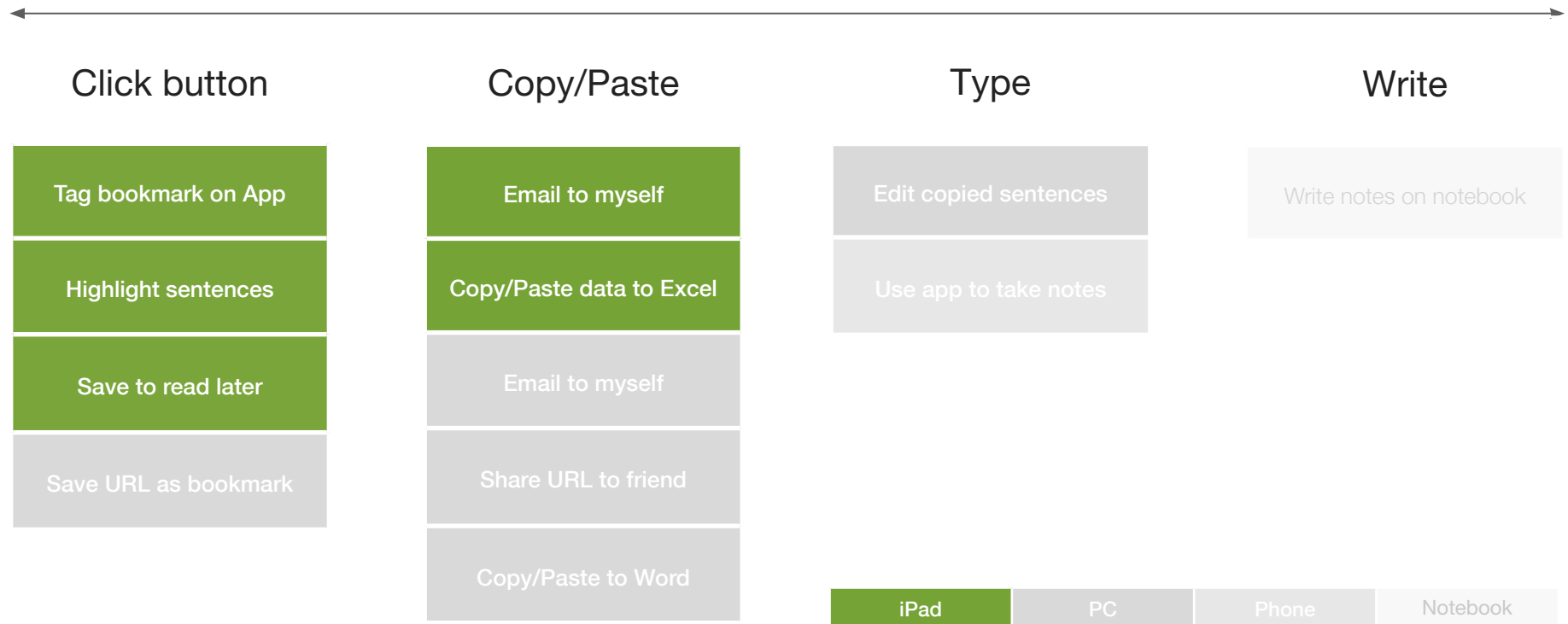
- iPad
- PC
- Phone
- Notebook

INSIGHT ABOUT METHODS

It is not easy to **customize** their notes on iPad using existing apps which they are familiar with.

FAST & EASY METHOD

SLOW & TEDIOUS METHOD

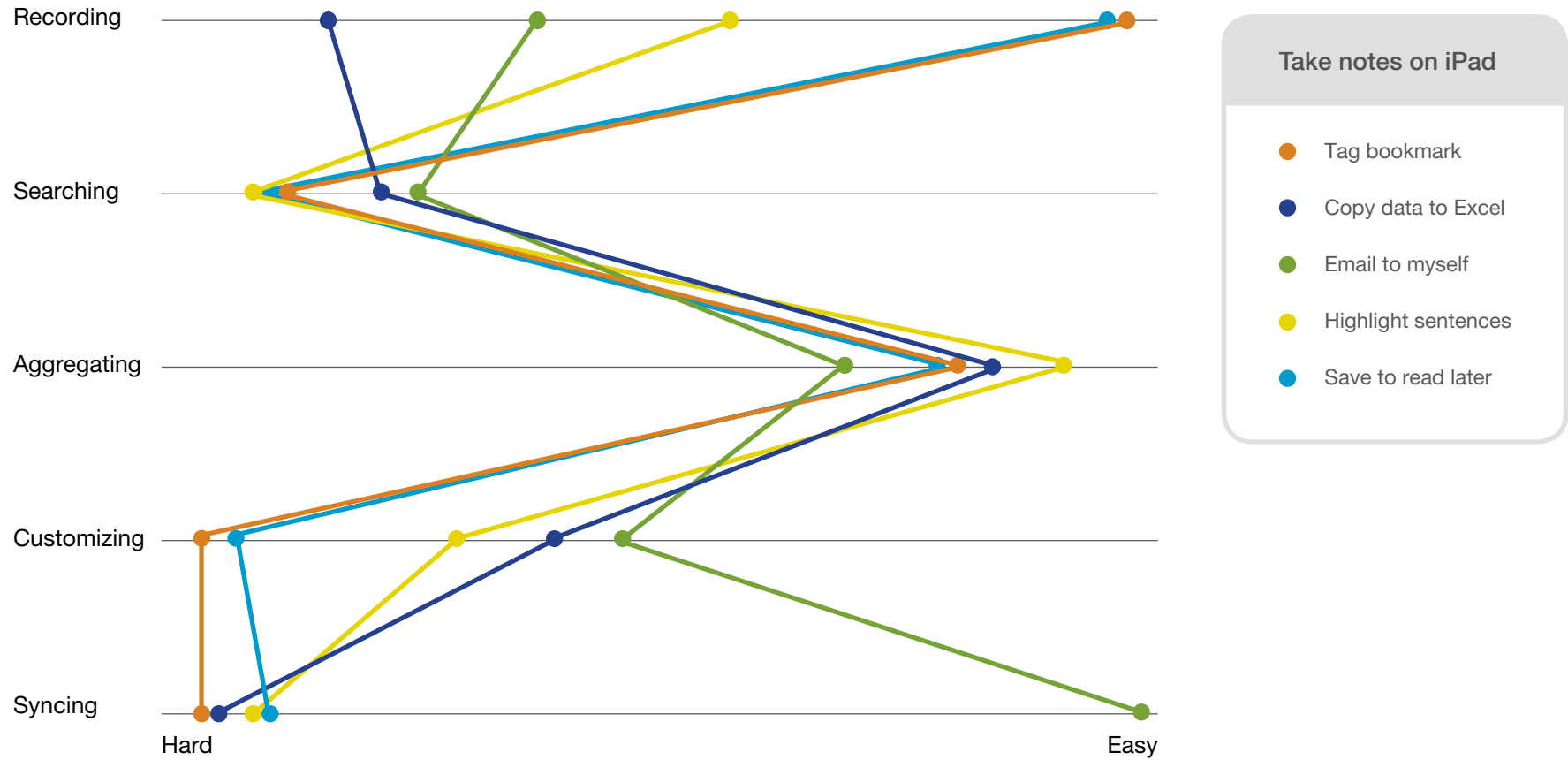


INSIGHT

Users prefer to use **faster** way to take notes on iPad, but **not type** words.

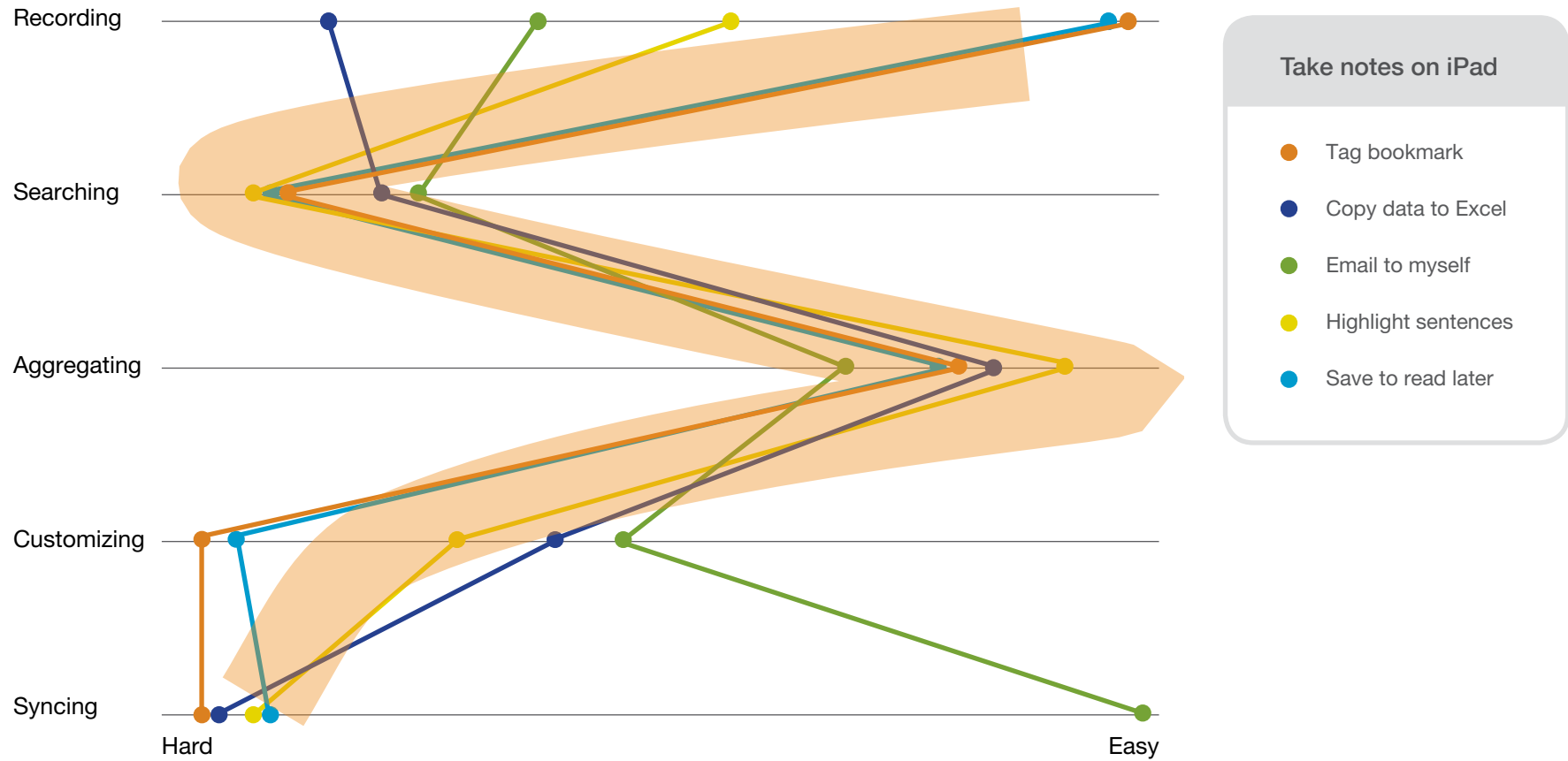
NOTE-TAKING ON IPAD

The chart below shows the **performances** of **five ways** to take notes on iPad.



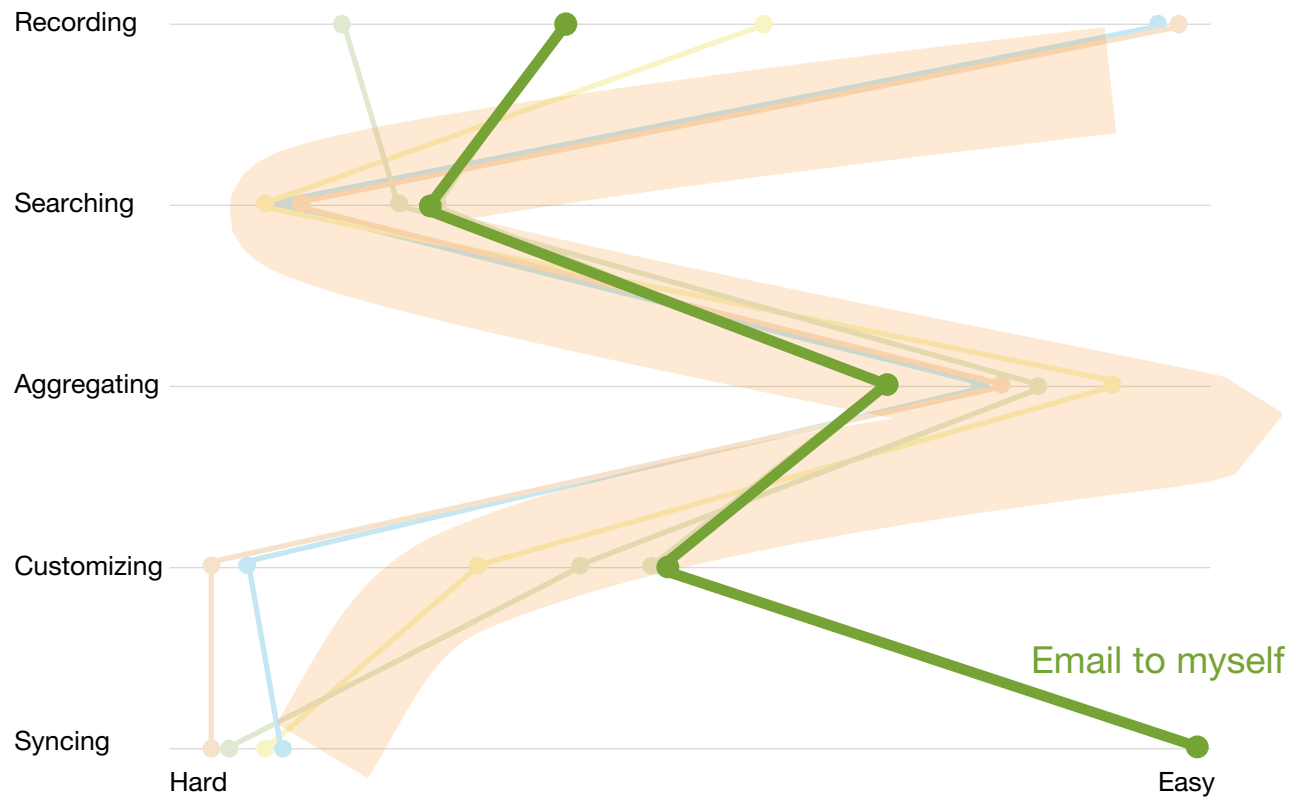
NOTE-TAKING ON IPAD

The chart below shows the performance **trend** of five ways to take notes on iPad.



DESIGN PRINCIPLE

Users can customize and read their notes on **multi-platforms** using **E-mail**



PRINCIPLE

Improve E-mail's weakness on **search** and take advantage of its strengths on **syncing**

SOLUTION

The new **E-mail function** is the solution based on the **insight** and **principle** mentioned before.



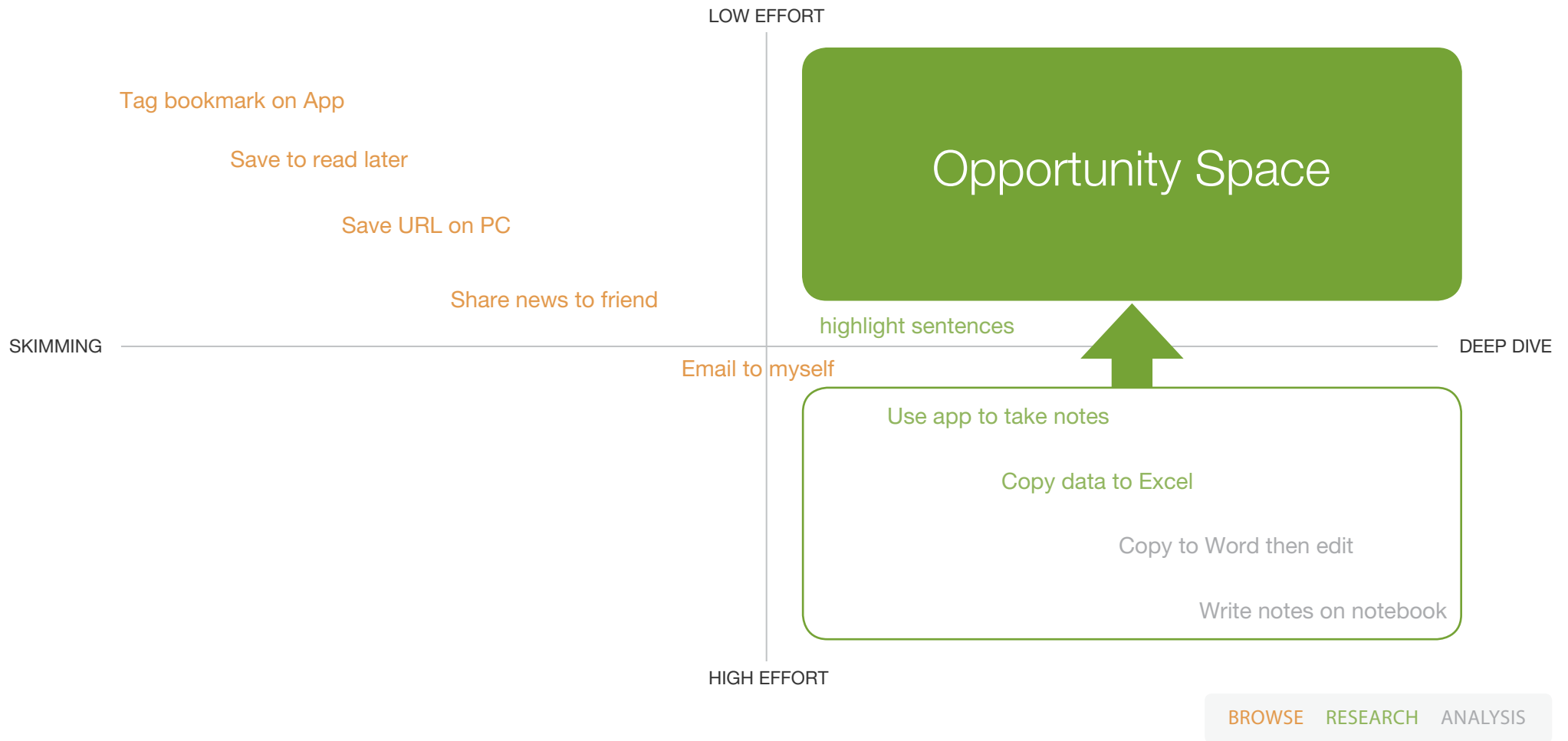
BOOKMARK & E-MAIL TO MYSELF

E-mail title format

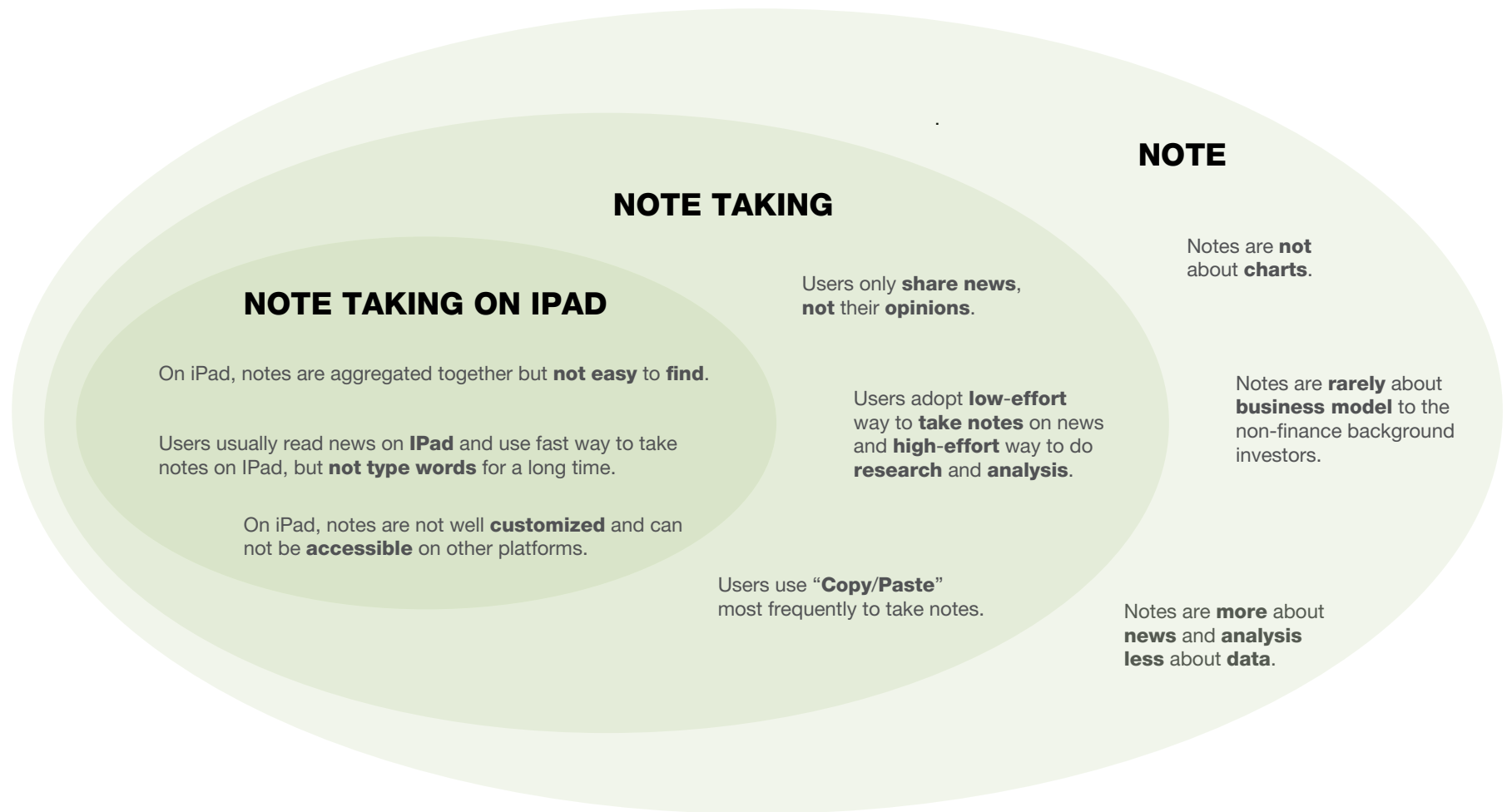
[Morningstar Notes] + [News name] + [Securities] + [Date]

OPPORTUNITY

Opportunity: **low-effort** way to take notes at “**Research and Analysis**” step.



INSIGHTS



DESIGN PRINCIPLES

Provide **low-effort** way to take notes at “**Research and Analysis**” step.

Search function is most important function, **more important** than **Customization** function.

Take advantage of Email’s strong points: “Easy to access”
and Improve Email’s weak point: “Hard to find”.

Search and Customization functions need to be improved.

Share is **less important** function for users.

WIREFRAMES

76 pages of wireframes are designed based on the insights and design principles.



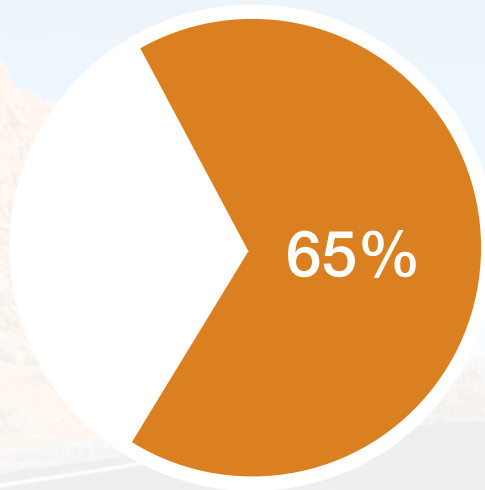
ID Project Roadhop

Individual project

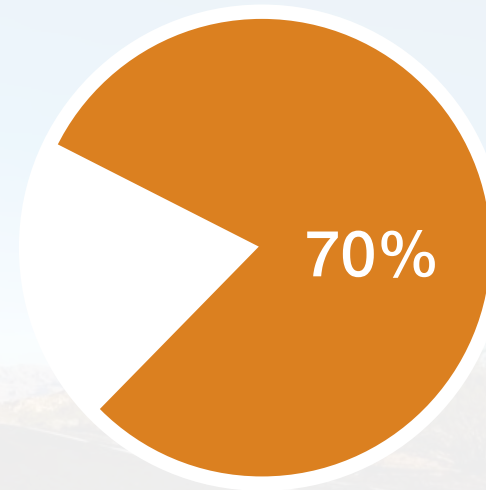
MINTEL SURVEY

The survey below from Mintel shows that road trip is a **big market** in USA

MINTEL ROAD TRIP SURVEY IN USA (2010)



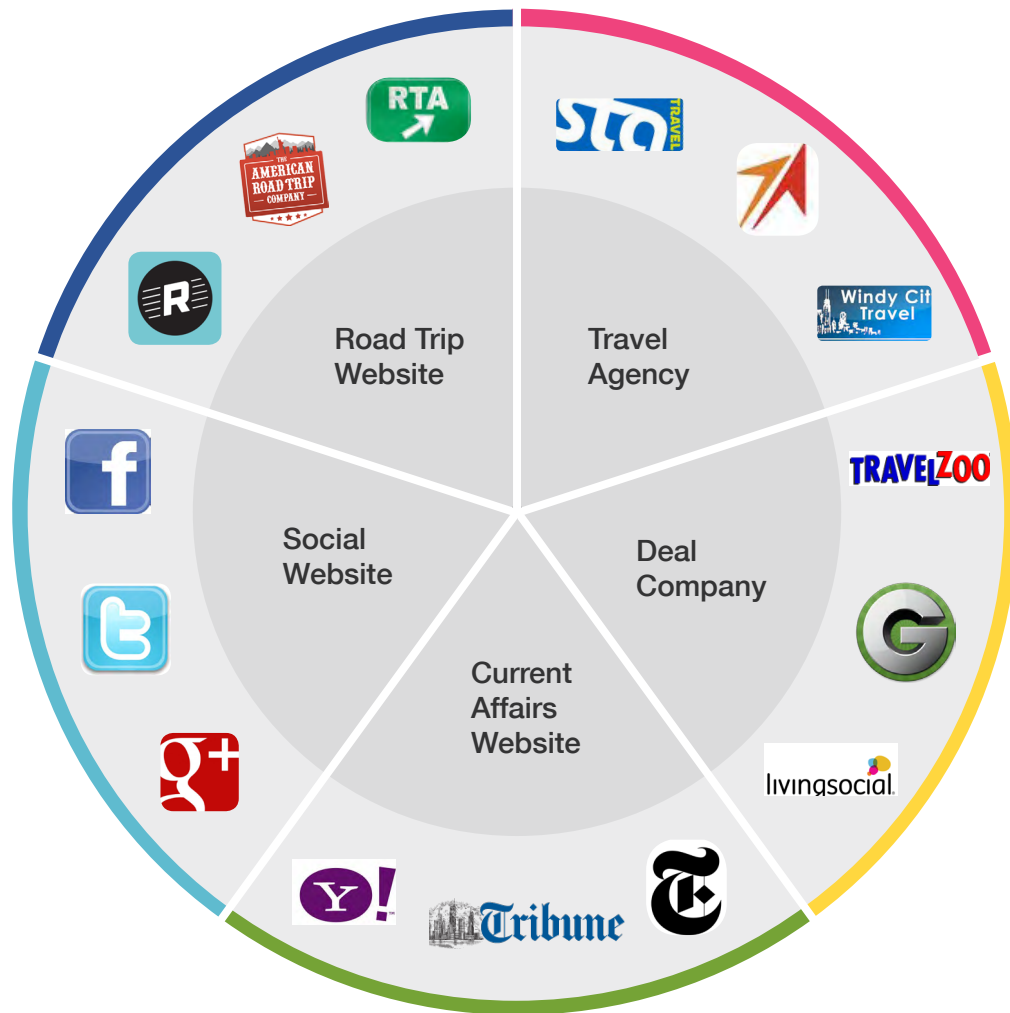
Took a road trip
last year



Cite road trip as the most popular
mode of domestic travel


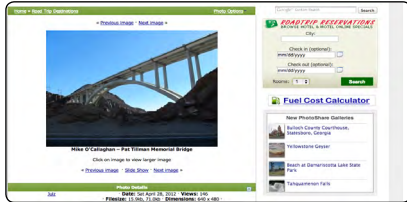

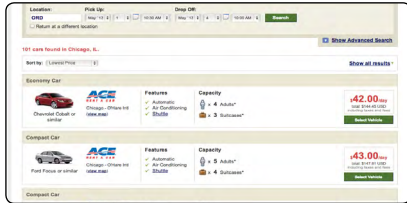

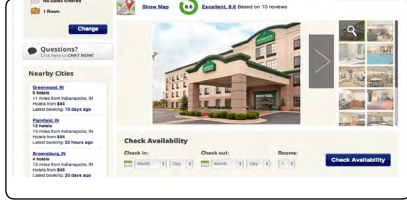

COMPETITOR LANDSCAPE

In the market, there are five group competitors **provide services for road trip especially**



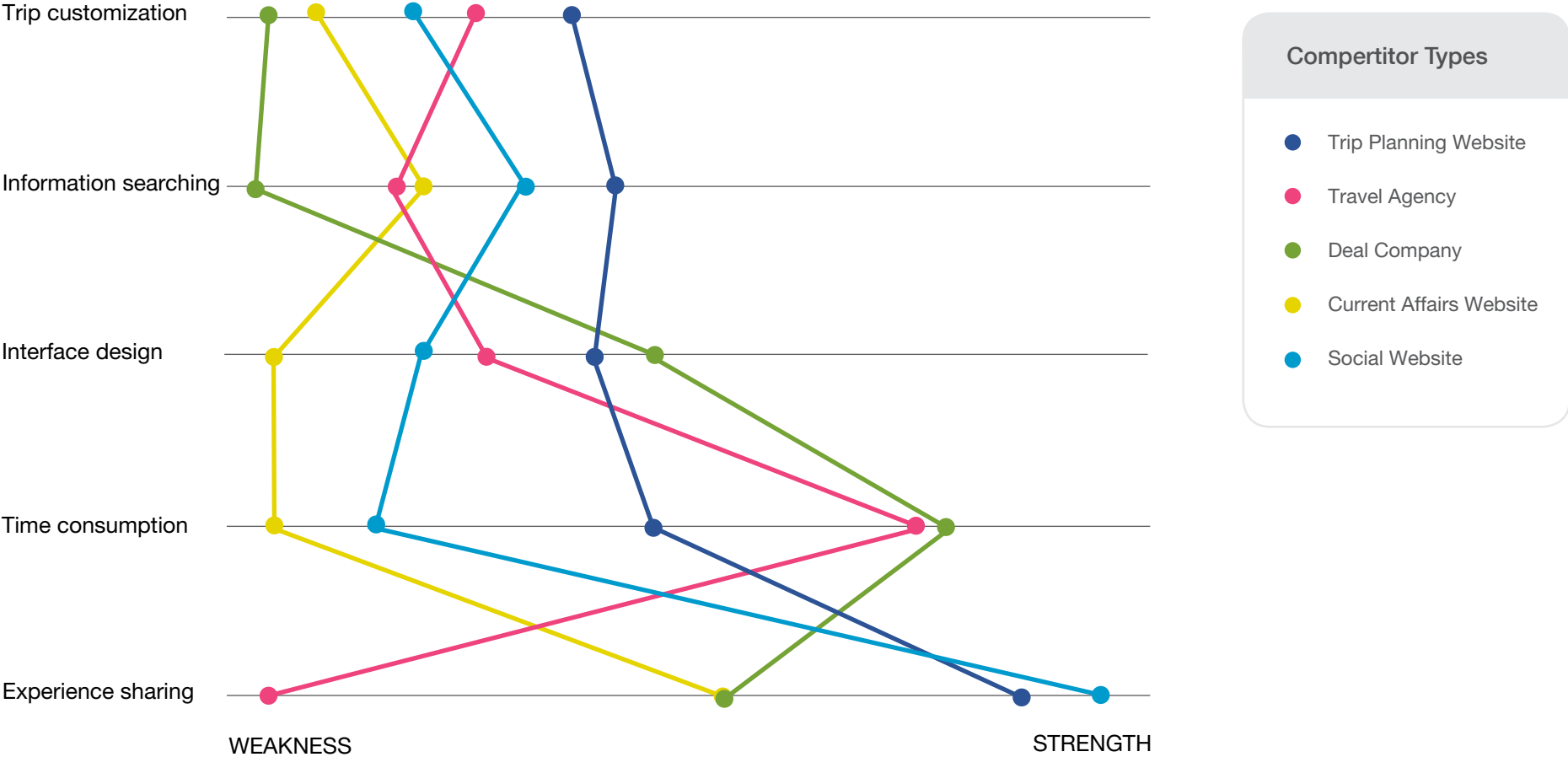
COMPETITOR PERFORMANCE

The chart below analyses competitors based on their **strength** and **weakness**

COMPETITOR	STRENGTH	WEAKNESS
<p>Road Trip Website</p> 	 <p>Experience Sharing Users can upload their photos, videos and comments to the Forum on this website easily.</p>	 <p>Information Searching The website provides too much information in one page. Users will feel overwhelmed by the information.</p>
	 <p>Car Renting Users can find and rent the car for the road trip based on the price and location.</p>	 <p>Attractive Recommendation The attractive and their information provided by the website are so limited.</p>
	 <p>Hotel Renting Users can find and book the hotel for the road trip based on the price and location.</p>	 <p>Interface Design The interface design needs to be improved. Especially the layout and hierarchy.</p>

COMPETITOR ANALYSIS

The chart below shows the competitors' performances on services in five categories.



COMPETITOR ANALYSIS

The orange part shows the opportunity area



COMPETITOR ANALYSIS

The opportunities are “Trip customization”, “Information searching” and “Interface design”



PRIMARY RESEARCH

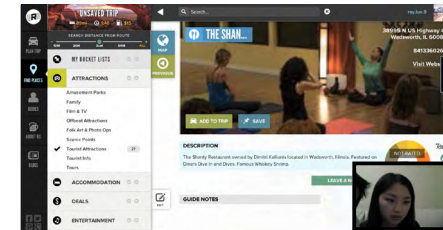
The primary research includes four **observations**, eight **interviews** and four **usability testings**



● VIDEO



● NOTE



● SILVERBACK

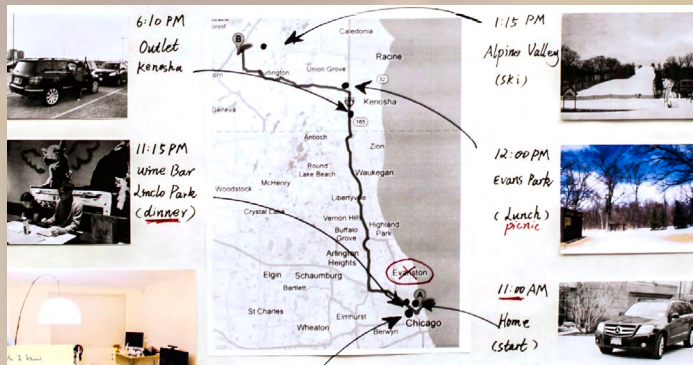
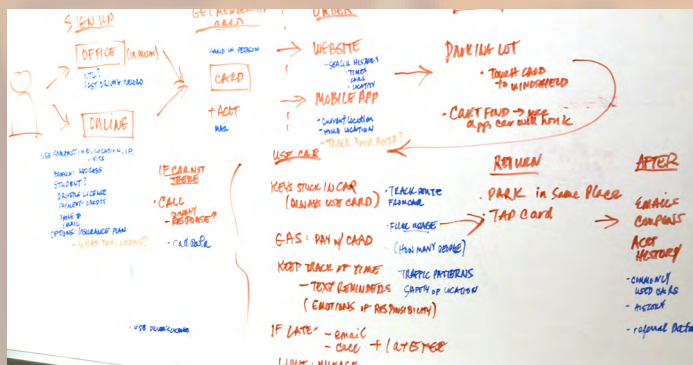


AN EXAMPLE OF OBSERVING USER

● PICTURE

ANALYSIS

Use **5E framework** to organize and analysis the raw data



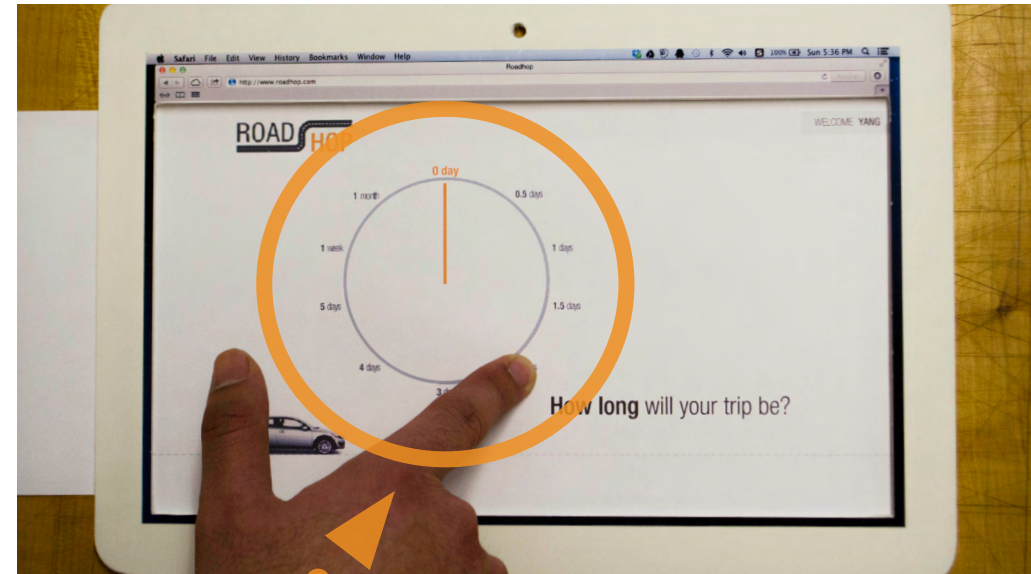
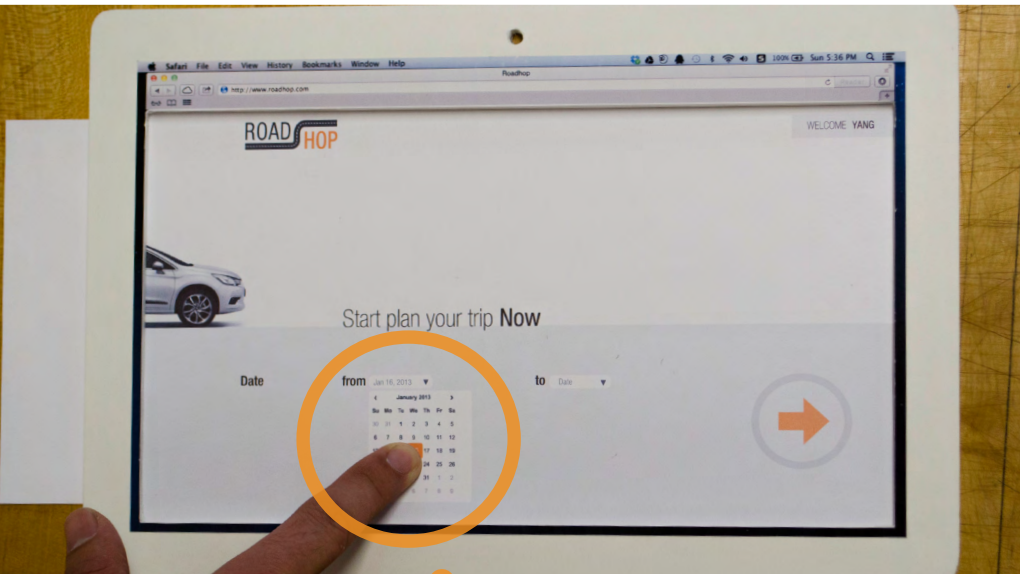
ANALYSIS

INSIGHT

The **best** and **worst** thing about a road trip is the **spontaneity**.

PROTOTYPE

The pictures show the paper prototypes of original and redesigned interfaces



LUDIC
DESIGN

ROADTROP FEATURES

The chart below shows the five features of Roadhop



DESIGN TARGET

Yang is one example of our design targets

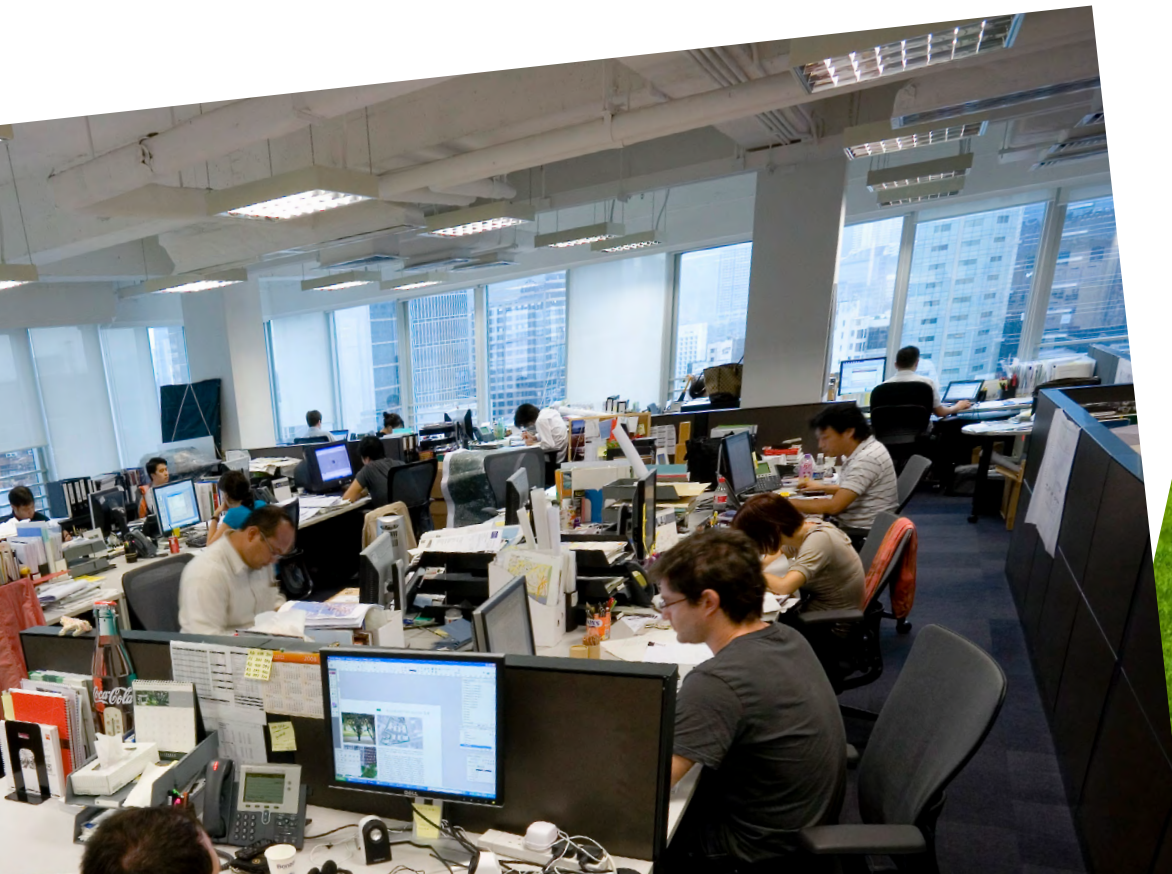


Hi, I'm Yang

I have worked for Morningstar as an Operation Analyst for more than one year. Last month I was transferred from my hometown Beijing to Chicago with my girl friend for business reason. Now we live at South loop. My workload is not that heavy, so I always try to spend more time to have fun with my girl friend after work.

LIFESTYLE SNAPSHOT

The pictures below are the snapshots of Yang's lifestyle



Routine Work

Yang works at office from 9:00AM to 6:00PM. He does not like that the life has no change at all. So sometime he wants to experience something special.



Road Trip

Yang loves travel. During the weekend, he would like to take road trips and have fun with his girl friend.

CONCEPT VIDEO

Click the “▶” to play the **concept video** of Roadhop platform

Build an intelligent **plan** for flexible **roadtrip**



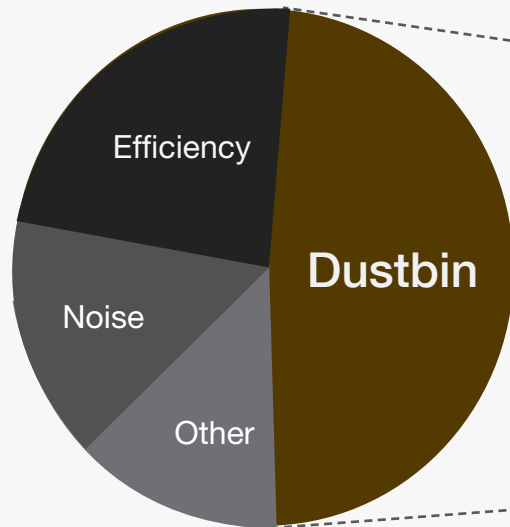
ID Project **Irobot**

Individual project

IROBOT

Irobot is an intelligent **vacuum cleaner**

RESEARCH BASED ON 60 IROBOT USERS



Irobot Issues

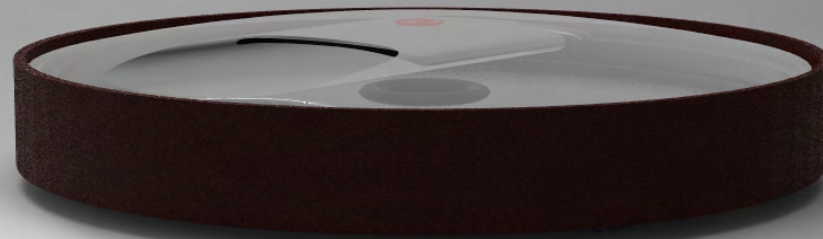


Dustbin Issues



EXPANDABLE DUSTBIN

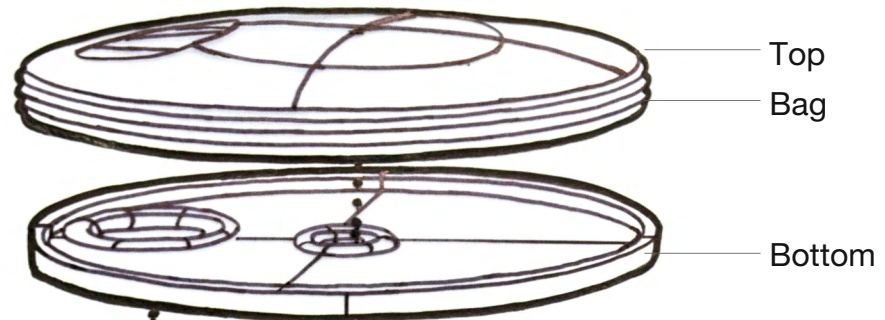
The new expandable dustbin design can solve all of these three issues.



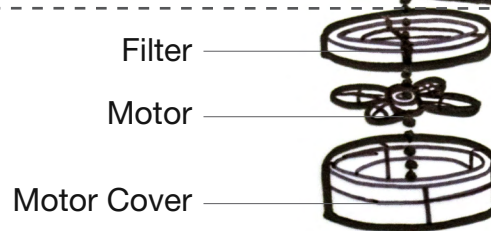
EXPLODED VIEW

The new irobot is composed of three main parts: dustbin, motor and base.

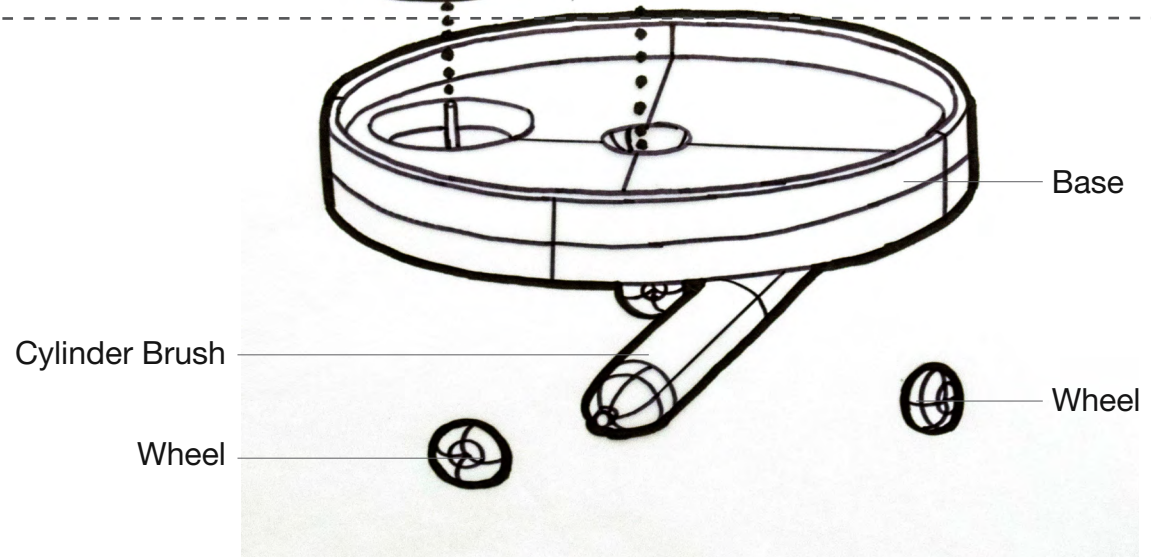
Dustbin



Motor



Base



TRANSPARENT & EXPANDABLE DUSTBIN

New dustbin design makes it easy for the user to know how much dust is

Transparent

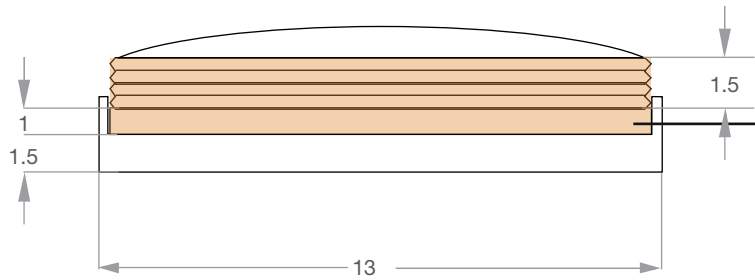


Expandable

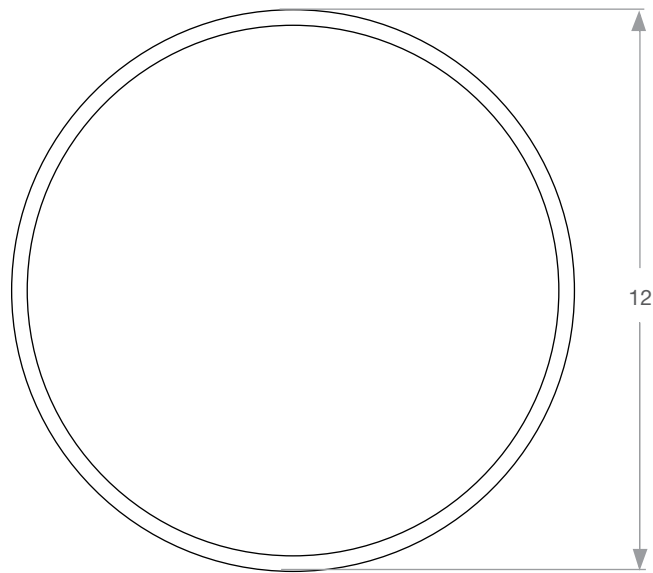


LARGE VOLUME DUSTBIN

Dustbin volume **Now:** 200 inch³ **Before:** 30-40 inch³



Dustbin Volume **5** times larger than before



EASY TO CLEAN

The dustbin is just a big empty container, which is **easy to clean** under running water.



Hold the handle



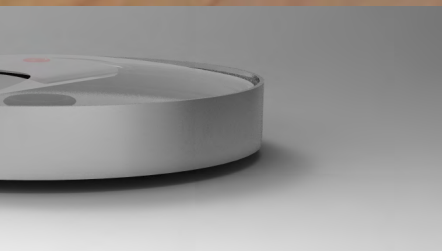
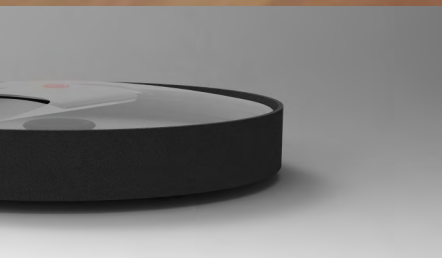
Take dustbin out



Throw dust away



Wash dustbin



Userbility Testing Bloomberg.com

Team members: Aaron Otani, Kunitake Saso, Roy Luo

PROJECT OVERVIEW

Conduct usability sessions of the Bloomberg.com website

Bloomberg is a leader in the financial data market, providing investment news and tools to over **20 million web visitors** monthly.

We will conduct usability sessions to measure the usability experience of **creating** and **managing** an online portfolio

The screenshot displays the Bloomberg.com website interface. At the top, the Bloomberg logo is followed by navigation links: "Our Company", "Professional", and "Anywhere". Below this is a main navigation bar with categories: "HOME", "QUICK", "NEWS", "OPINION", "MARKET DATA", "PERSONAL FINANCE", "TECH", and "POLITICS". A secondary navigation bar lists "Stocks", "Commodities", "Currencies", "Rates & Bonds", "ETFs", and "Mutual Funds".

The "Markets Overview" section features four market indicators:

- DJIA** (Dow Jones Industrial Average): 13,093.16, down 139.46, -1.05%
- FTSE 100** (FTSE 100 Index): 5,868.55, up 6.63, +0.11%
- OIL (WTI)** (Oil (WTI) Price): 84.86, down 2.23, -2.56%
- GOLD** (Gold Price): 1,675.20, down 40.30, -2.40%

The "World Markets" section is currently set to "INDEXES" and displays a table of market indices:

Index	Value	% Change	Open	High	Low
Americas Indexes >>					
Dow Jones Industrial Average	13,093.16	-1.05%	13,233.39	13,289.45	13,076.57
S&P 500 Index	1,414.20	-0.94%	1,427.59	1,434.27	1,412.91
NASDAQ Composite Index	2,982.13	-1.26%	3,033.85	3,033.85	2,981.69
Europe, Middle East & Africa Indexes >>					
EURO STOXX 50 Price EUR	2,547.15	+0.52%	2,535.08	2,557.03	2,523.00
FTSE 100 Index	5,868.55	+0.11%	5,861.92	5,890.11	5,844.30
Deutsche Borse AG German Stock Index DAX	7,363.85	+0.38%	7,336.52	7,391.04	7,314.68
Asia-Pacific Indexes >>					
Nikkei 225	9,051.22	+1.17%	9,049.22	9,072.39	9,031.43
Hong Kong Hang Seng Index	22,111.33	+1.33%	22,066.29	22,149.70	22,019.65
Shanghai Shenzhen CSI 300 Index	2,306.77	+0.39%	2,297.90	2,309.67	2,284.72

Below the index table, there are sections for "Industries" and "Commodities".

Industries

Sector	% Change	1 Yr Change
Basic Materials	-0.61	-8.03

Commodities >>

Future	% Change 1 Yr
Energy >>	

METHODOLOGY

6 Diagnostic Usability Interviews



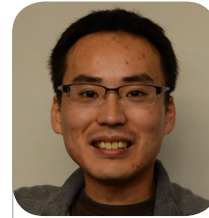
Lily Yang

Manager at Deloitte
Master of Product
management and
accounting



James

Law Practice
Professional at Siprut PC
Juris Doctor



Namkyu

Graphic Designer at
Morningstar
Bachelor of Fine Arts



Jansen Wu

Operation Analyst at
Morningstar
Master of Finance



Mito Yuan

Financial Advisor at
Taos Global group
Master of Finance



Yan Chu

Intern at CHINA
CITIC BANK
Master of Finance

SCHEDULE

Introduction

2 mins

Background
Interview

2 mins

Test
Overview

1 mins

Task
Completion

11 mins

Wrap-Up
Interview

4 mins

TESTING SOFTWARE

We used TechSmith Morae as the usability testing software

The screenshot shows the Bloomberg website interface. At the top, there is a search bar and navigation tabs for HOME, QUICK, NEWS, OPINION, MARKET DATA, PERSONAL FINANCE, TECH, POLITICS, SUSTAINABILITY, TV, VIDEO, and RADIO. Below these are sub-tabs for Stocks, Commodities, Currencies, Rates & Bonds, ETFs, Mutual Funds, Economic Calendar, Watchlist, and European Debt Crisis. The main content area displays a 'Selected Watchlist' for 'Portfolio A' with a total value of 191,628.08 USD and a day gain of 746.08 USD (+0.39%). A welcome message states: 'Welcome to the new portfolio Watchlist. We've taken your portfolio tools and made them easier to use. Keeping track of your investments is now quicker and more intuitive. For a full description of changes, visit the Watchlist FAQ page.' Below this is a navigation bar with 'SUMMARY', 'FUNDAMENTALS', 'EARNINGS', 'HOLDINGS', and 'EDIT'. A search bar for adding symbols is also present. The bottom section shows a table of market data for AAPL:US (Apple Inc) with a price of 527.678 and a 2-day performance of +0.39%. A small chart shows the price movement. To the right, there is an advertisement for Merrill Lynch Wealth Management.

ist - Bloomberg

View Favorites Tools Help

Bloomberg

 Our Company | Professional | Anywhere

Search News, Quotes and Opinion

HOME QUICK NEWS OPINION **MARKET DATA** PERSONAL FINANCE TECH POLITICS SUSTAINABILITY TV VIDEO RADIO

Stocks ▾ Commodities ▾ Currencies ▾ Rates & Bonds ▾ ETFs ▾ Mutual Funds ▾ Economic Calendar **Watchlist** European Debt Crisis

Selected Watchlist: Portfolio A

Total Value (USD): 191,628.08

Day Gain (USD): 746.08 | +0.39%

Total Gain (USD): 0.00 | 0.00%

Data as of: 18:52:53 EST on 11/16/2012

Welcome to the new portfolio Watchlist

We've taken your portfolio tools and made them easier to use. Keeping track of your investments is now quicker and more intuitive. For a full description of changes, visit the **Watchlist FAQ** page.

SUMMARY FUNDAMENTALS EARNINGS HOLDINGS EDIT

Add Symbol - Stocks, Funds, Indexes or Currencies

Symbol	Last Price Time (ET)	2 Day Performance	%Change Day Change	Volume 30 Day Average	52 Week Range
AAPL:US Apple Inc	527.678 17:20		+0.39% 2.06	45.23 M 21.35 M	

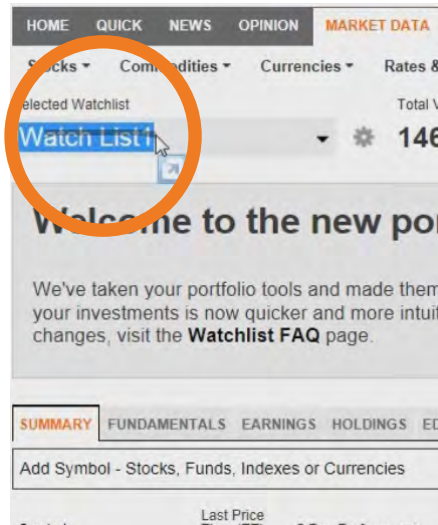
Advertisement: AN ADVISOR WHO KNOWS YOU WANT TO GROW YOUR PORTFOLIO, BEST EGG AND SOMEDAY, YOUR OWN BLUEBERRIES. SEE HOW THE GREERS DID IT. Merrill Lynch Wealth Management. THE POWER OF THE RIGHT ADVISOR.

MARKETS NEWS MARKET VIDEOS

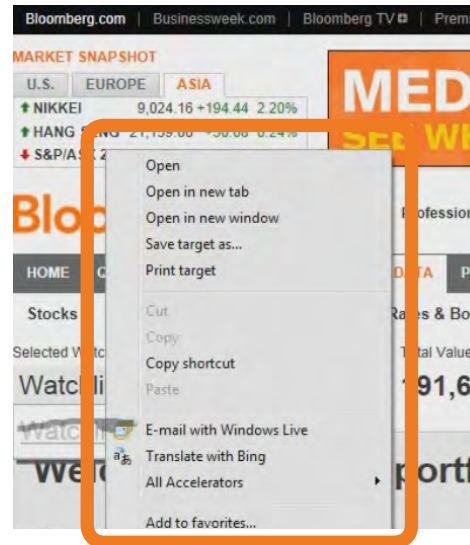


FINDINGS

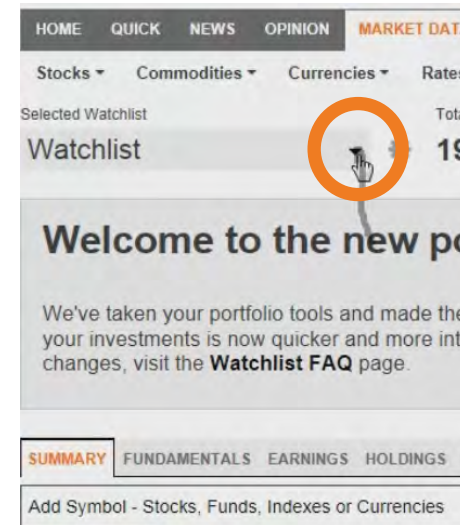
Users can not change the portfolio name based their initially expectation.



Most of users try to click the character of “watchlist” but it did not work.



The user tries to right click the character of “watchlist A” but it did not work.



Most of users clicked on the drop-down, couldn't do anything

ISSUES LIST

We found 50 issues based on our findings.

ISSUES TASK1 CREATE PORTFOLIO	PRIORITY
Crowded top page made it difficult for users to find important information	HIGH
Users ignored "Watchlist (Portfolio Tracker)" under Personal Finance dropdown	HIGH
Users who visited the Watchlist didn't think they were in the correct location	HIGH
Users did not notice "Watchlist" on the site's top bar	MED
Users attempted to find the portfolio section using the search bar, but it did not help	HIGH
Users clicked "Portfolio Impact" in an attempt to find the portfolio tracker	HIGH
When clicking Personal Finance, the secondary navigation was hidden in the "More" section	MED
One user was confused by "Tracker"; they thought this was different from "Create" portfolio	LOW
Users were focused on finding the term "portfolio" on the website	HIGH
Users think that "Portfolio" and "Watchlist" are two very different things	MED
Pop-up advertisement on bottom of page interfered with user tasks	MED
Users found the calendar widget slightly tedious, and did not always realize they could type in the date	MED
Holdings Tab: To edit stocks, users need to click "1 lot," which is difficult to find	HIGH
Users were confused by AAPL:AR vs. AAPL:US, others didn't realize they chose the wrong ticker	HIGH
Users were confused by the term "Add new lot"	HIGH

MAJOR RECOMMENDATIONS

WATCHLIST PAGE	PRIORITY
Provide hover-over information for specialized terminology and important icons	HIGH
Offer editing options that are easily located, clearly identified, and visually consistent	HIGH
Provide additional guidance to prevent user errors	HIGH
Include overall performance totals in all the tabs of the Watchlist page	HIGH
Eliminate the “Welcome to the new portfolio“ banner, helping users locate the performance summary at the top of the screen	MED
Improve the help functionality on the website	MED
WATCHLIST PAGE	PRIORITY
Reduce clutter and provide greater organization on the top of the page, to better enable users to locate important information.	HIGH
Give greater prominence to the “Watchlist“ section by highlighting the link on the top right of the home page, or creating a separate section on the main navigation bar.	HIGH

OPPORTUNITIES

TERMINOLOGY

Terminology used is not familiar for users (especially novice users)

LAYOUT

Layout problems prevented users from finding the information that they needed

SITE CONSISTENCY

Lack of visual and structural consistency hindered their ability to perform certain tasks

HELP SYSTEM

The site does not have a strong enough help system to support users when they encounter problems

MSKCC Project **UNA**

Team members: Kyle Duke, Knowl Baek, ChihTing Li, Roy Luo

PROJECT OVERVIEW

Sponsored by Memorial Sloan-Kettering Cancer Center (MSKCC)

Our team's **objective** was to develop a **system** that will motivate cancer survivors to lead a healthy lifestyle, through facilitating more direct **communication** with the family members and friends.



Memorial Sloan-Kettering
Cancer Center

“Every operation here is done by a surgeon who is truly an expert in the field.”

JONATHAN COLEMAN, SURGICAL ONCOLOGIST



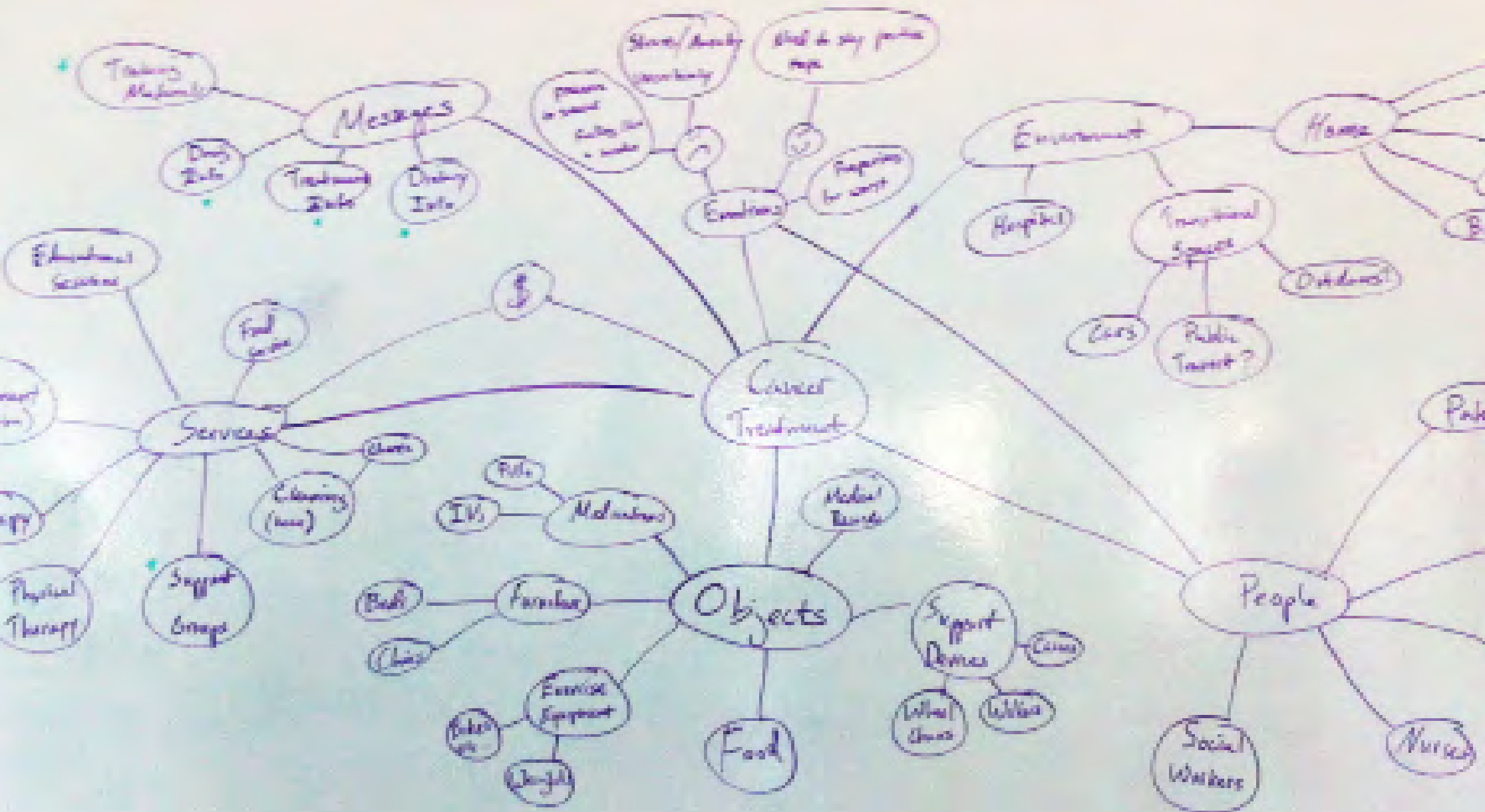
Cancer Care

We offer patients the best available treatments and compassionate care.

Research

Our scientists' in advance the und

ECOSYSTEM



INTERVIEWS



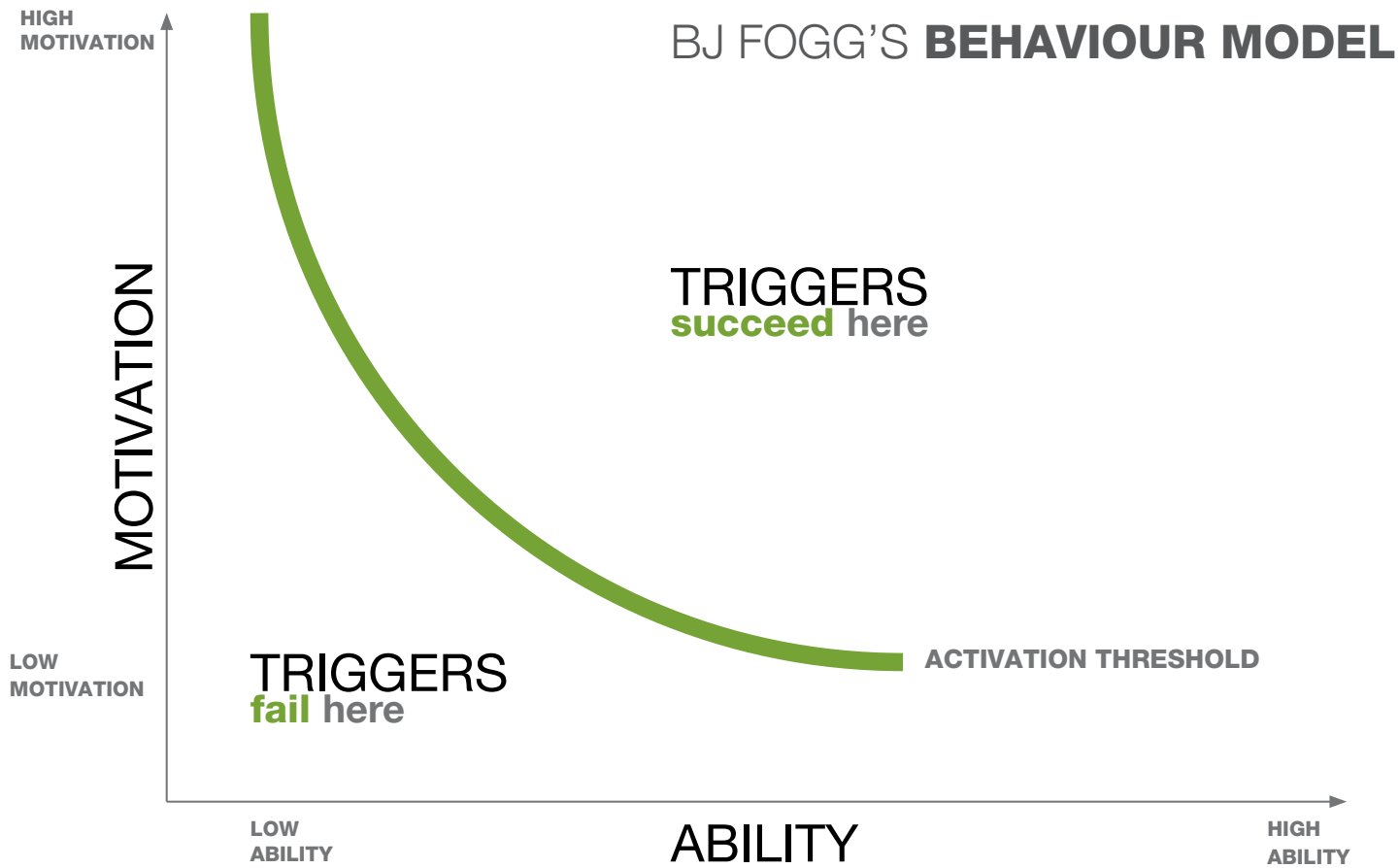
PROVOTYPE



PROVOTYPE



BEHAVIOR MODEL



INSIGHTS

Communitication

Patients need an effective and easy way to record and capture their symptoms and questions.

Unconsolidated records prevent fluid communication between members of the medical team.

Adopting to the “New Normal” makes it challenging for patients to know if and when they should contact someone regarding physical or psychological changes.

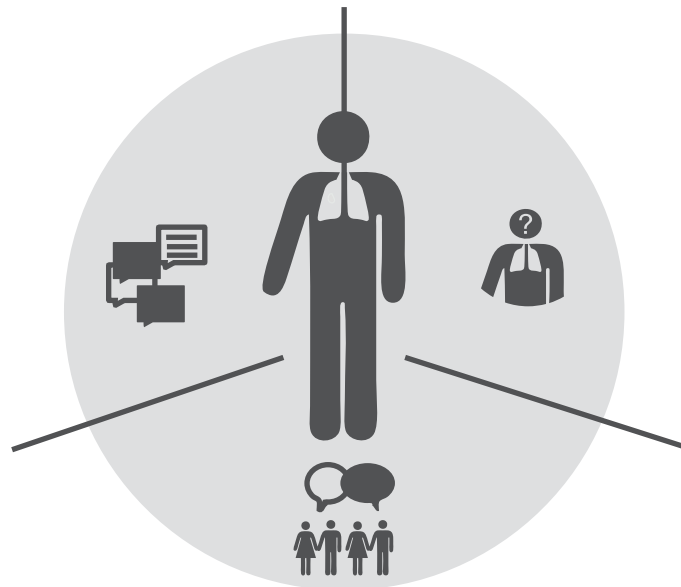
Information

It can be challenging for patients to recognize reliable, scientific data when doing research online.

There is too much information for patients and caregivers to remember.

Unreliable, incomplete, or misinterpreted information can be harmful and counterproductive for patients.

The uniqueness of each lung cancer case makes it difficult for patients to set accurate expectations.



Psychologic

The fear of appearing weak prevents some patients from getting the emotional support they need.

Usually something must be at stake to quit smoking.

Patients must adopt to the “New Normal,” and prioritize which elements of their old life they want to keep.

DESIGN PRINCIPLES

Help patients access **reliable** data and establish more **accurate expectations**.

Provide a **holistic view** of patient data to the medical team.

Let patients track **emotional** and **physical** data.

Identify the emotional and physical issues **not shared** by patients.

Help patients set **realistic goals** and **expectations** for their “**new normal**” life.

Consider the **characteristics** of **older** patients.

Provide a **supportive network** that allows varied levels of **involvement**.

Help patients and family members communicate their **emotions effectively**.

Help patients understand **fear** and **anxiety** are normal.

CONCEPT VIDEO

Click the “▶” to play the **concept video** of UNA

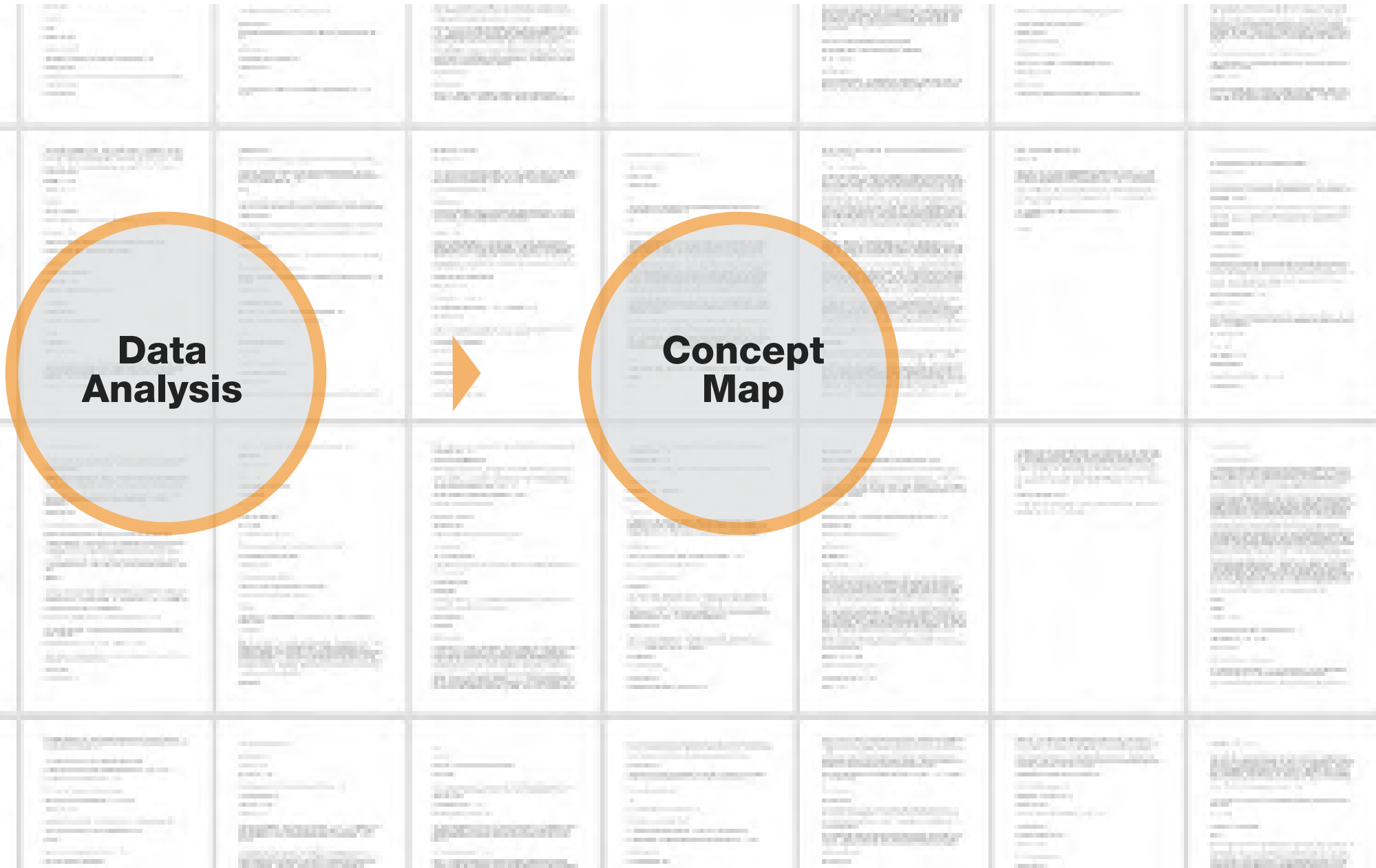


ID Project **Data Visualization**

Individual project

QUAKER

Based on analysis of the data gathered from focus group, I generated the concept map for client Quaker.





SUPPORT EATING WISELY

Nowadays people would like to live a better life and eat healthier, but most of time they are faced with so many food choices which are limited by their knowledge. How to eat wisely is a big issue to them and also is a big opportunity to Quaker Oats. We interviewed four participants ages 25-39 in health segment to understand their mental models of healthy food.

What foods help people to **Build** healthy diet?

"Your body is able to use it quickly."

"That lets me know that once it has that stamp on there, it really does truly mean that it's at least 80% real."

"It's means that's actually been grown..."

"I'm grateful for the restaurants in Seattle which have Slow Food."

"All free-range chicken means as far as I understand it is that they live in a tiny coop, but the doors are open."

"I know it's better in the long term, but it also makes me feel better in the short term."

"The less processed the food are, in general, the better it is for you."

"Avoiding sugar, especially early in the day."

"Eating less sugar food will help you to keep good body shape."

"My older son really hasn't been sick. He's maybe had two or three colds in his life."

"My number on, at least right now, is keeping hydrated."

"Fresh means that it's in its organic state. It's in its normal state."

"We're healthier and our skin looks better."

Non-genetically modified food

Slow food

Less processing food

Less fat food

Hydrated food

In five steps

Food Source

Biological Growth

Food Processing

Food Quality

Eating Habit

What foods **hinder** healthy diet?

Genetically modified food

Fast food

More processing food

More fat food

Dehydrated food

"I avoid genetically modified foods which pretty much for me says anything that doesn't say it isn't..."

"So that they could grow enough soy beans and maximize their profits."

"Well, almost any food today is genetically modified."

"The fast food is the whole idea that we're going to maximize the potential of profit in whatever way we need to do."

"We're going to process beef so quickly that people are going to get carpal tunnel syndrome."

"Farm-raised fish is supposed to have so many drugs"

"Your body doesn't really know what to do with hydrogenated oils because they're so artificial."

"So it's supposed to be cancer-causing and heart disease promoting."

"I realize that it makes me feel ill when I have them."

"The higher the fat content in the milk product, the higher the hormone that's in that product."

"It seems to directly impact me in half my energy level more than any other aspect of my eating."

"I read somewhere that lettuce that you buy in the grocery store doesn't have any nutritional value."

"I read a book that this guy talks about hydration and he actually thinks that it's our number one health issue."

"It's a preservative and it's pretty dirty there. It's gross."



In an era of increasing health consciousness, Quaker believes it is failing to connect to a growing market segment that is shopping smaller, niche brands for breakfast solutions. What would be the right market segment and what should be first thing to understand? The **healthy segment** participants who are all woman ages 25-39 will help us to find the answer.

First, we need to know what **healthy food** is in our customers' eyes

step:
research
the definition
of "healthy
food"
and its
importance,
so that
Quaker is a bona fide heritage brand with fairly consistent profile among
can expand
its food
market

has different meanings

In fact,
consumers
have the
power to
choose
a healthy diet,
which includes
7 Key guidelines

- 1** Limit your intake of sugary foods, refined-grain products such as white bread, and salty snack foods.
- 2** Cut down on animal fat. It's rich in saturated fat, which boosts blood cholesterol levels and has other adverse health effects.
- 3** Eat more fish and nuts, which contain healthy unsaturated fats. Substitute olive or canola oil for butter or stick margarine.
- 4** Keep portions moderate, especially of high-calorie foods. In recent years serving sizes have ballooned, particularly in restaurants.
- 5** Keep your cholesterol intake below 300 milligrams per day. Cholesterol is found only in animal products.
- 6** Eat a variety of foods. Don't try to fill your nutrient requirements by eating the same foods day in, day out.
- 7** Maintain a desirable weight. Balance energy (calorie) intake with energy output. Exercise and other physical activity are essential.

1



Non-genetically modified food is natural organism, not a novel organism created by scientists.

"Any studies that were done like with Monsanto and stuff have been pushed down into non-existence since then started to genetically modify the soy beans which was their biggest thing which started in about 1996 coming on to the shelves. There's a real problem with that because is your number one ingredient in foods today. So pretty much everything is genetically modified on that level and it was made genetically modified to become Round Up-resistant, Round Up being the weed killer."

2



Organic food is produced using methods of organic farming that do not involve modern synthetic inputs

"Slow Food book is a book about a whole movement to get away from fast foods. The whole idea of connecting with the farmers, but also being connected with your friends and families. Slow food is the opposite of fast food. Fast food is the whole idea that we're going to maximize the potential of profit in whatever way we need to do that whereas slow food means growing chickens in little tiny boxes where they actually can't move around or we're going to process beef."

3



Less processed food is produced by less deliberate processing before it's available for us to eat

"I realize that it just makes me feel ill when I eat too many processed foods such as fried food. I mean, I'm not saying that I'll never eat anything that's fried in a restaurant or something. But so many times when I went to my favorite Thai restaurant, I'd get rice noodles with Chinese or Thai broccoli and tofu and they've always just and I didn't think twice about it and then I realized that it just sort of made me feel ill. My stomach sort, and then I asked them to start steaming it instead and they do it happily and it's just so much better."

4



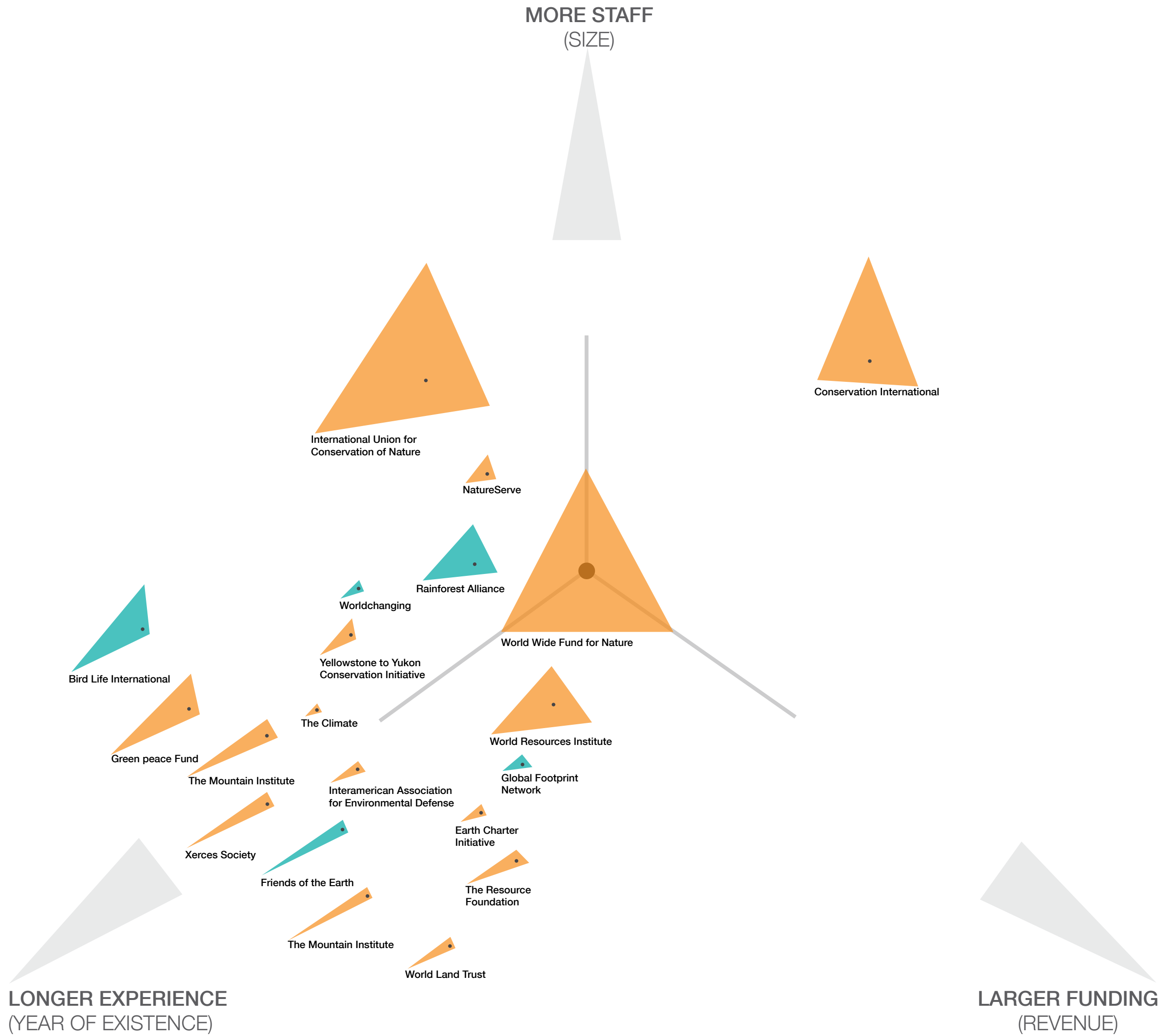
Well-balanced food has a balance of fats, proteins, and carbohydrates

"It's important to make sure that your diet is well balanced in order to achieve good health, and avoid long term diseases and illnesses. As our lives become busier, this can become more difficult, however we still need to understand the components of a balanced diet, why it's important, and how to apply this information to your every day life."

GROUPING

Work from the xls dataset to cluster the organizations into meaningful interesting groups

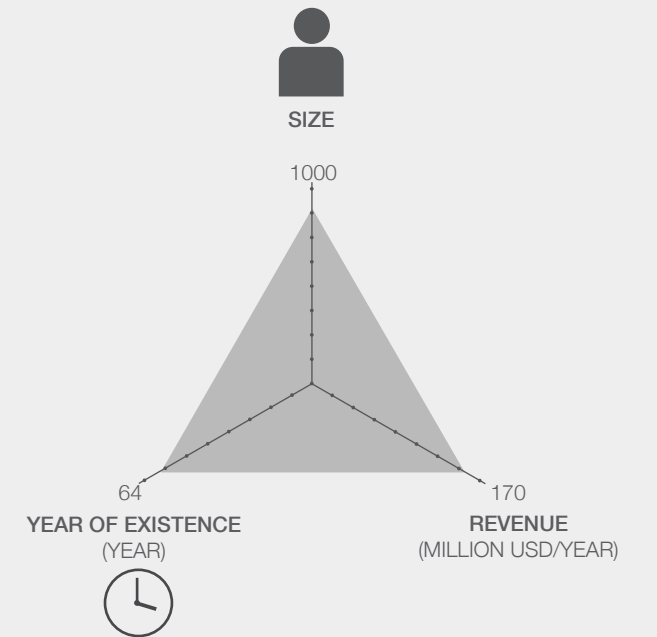
Org name	URL	HQ Location	Year	Area of focus, structure, notes	Mission statement	Size	Revenue / Funding source
BirdLife International Conservation International	http://www.conservation.org	Cambridge, UK	1993	BirdLife International is a global Partnership of conservation organisations that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources. BirdLife Partners operate in over one hundred	BirdLife's aims are to: > prevent the extinction of any bird species. > maintain and where possible improve the conservation status of all bird species. > conserve and where appropriate improve and enlarge sites and habitats important for birds. > help, through birds, to Building upon a strong foundation of science,	The BirdLife Global Partnership has: > More than 4,000 staff working for conservation. > Over 2,500,000 members worldwide. > 10,000,000 worldwide supporters. > Over 2 million children involved annually. > 900	1.16mill Euros ('09)
Earth Charter Initiative		Arlington, VA	1987	Ecosystem & diversity. CI's work focuses on six global network of people, organizations, and institutions who participate in promoting the Earth Charter	The stated mission of the Earth Charter Initiative is to promote the transition to sustainable ways of living and a global society founded on a shared ethical framework that	21 Advisors, 23 Council (Board of Trustees) members, 116 international affiliate organizations, 25 strategic partner organizations,	\$63.6 million ('09)
Friends of the Earth International	foei.org	Costa Rica	2004	address the economic and development aspects of sustainability. international network of	All FoE International campaigns incorporate elements of three core themes which are: >	76 national member groups, 5000 local activist, over 2 million	\$1.65 mill ('10)
Global Footprint Network	www.foei.org	Amsterdam, the	1969	think tank: tools for advancing sustainability, developers of Ecological Footprint — a resource accounting tool that measures how evolved from the peace movement and anti-nuclear protests, uses direct action, lobbying and research to achieve its goals.	Global Footprint Network's goal is to create a future where all humans can live well, within the means of one planet Earth. Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace by:	76 national member groups, 5000 local activist, over 2 million	1.422 mill Euros (2010)
Greenpeace Fund	www.footprintnetwork.org	Oakland, CA	2003	non-profit international environmental law organization aim to improve and protect human	1. Encourage Transnational Collaboration 2. Protect human rights 3. Cultivate the power of	21 Advisors, 23 Council (Board of Trustees) members, 116 international affiliate organizations, 25 strategic partner organizations,	\$2.16 mill ('09)
Interamerican Association for Env	www.GreenPeace.org	Amsterdam	1971	Conserving biodiversity and ensuring that any use of biological resources is sustainable. Global environmental network - a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists in more	Helps the world find pragmatic solutions to our most pressing environment and development challenges. It supports scientific research, manages field projects all over the world and brings governments, non-government organizations, United Nations agencies	2.8 million individual supporters. Present in 40 countries across Europe, the Americas, Asia, Africa and the Pacific	Revenue \$7.5mill ('09) funding from 2.8 million individual supporters and foundation grants. Does
International Union for Conservati	www.aida-americas.org	Oakland, CA	1998	support for traditional cultures, as well as the conservation of natural resources in the world's	Mountains sustain life on earth. In a world facing unprecedented change, The Mountain	9 participating organizations, 10 board members, 11 staff members	Revenue \$588k ('09) Grants, contributions
The Mountain Institute	www.iucn.org	Gland, Switzerland	1948	provide the scientific basis for effective conservation action. Represents the most comprehensive database of scientific information about the nation's rare and threatened plants, animals, and ecosystems. Represents an international network of	Approach: The Rainforest Alliance uses the power of markets to arrest the major drivers of	More than 1,000 member organizations in 140 countries including 200+ government and 800+ non-government organizations. (1022 staff,	113mill CHF ('09) governments, bilateral and multilateral agencies, foundations, member organizations and associations
NatureServe	www.mountain.org	Washington D.C.	1972	With the published aims of working to conserve biodiversity and ensure sustainable livelihoods		International staff of more than 55 people, largely local residents who	Revenue \$3.12 ('09)
Rainforest Alliance	www.natureserve.org	Arlington, VA	2001	dedicated to calling attention to what it believes are global problems associated with climate change. It is a separate environmental	The Climate Reality Project is bringing the facts about the climate crisis into the mainstream and engaging the public in conversation about how	15 Board of Directors, Network of member programs comprising 82 independent centers that collect and analyze data about the plants, animals, and ecological communities of the Western Hemisphere. 83 staff	Revenue \$7.7 mill ('09)
The Climate Reality Project	www.rainforest-alliance.org	New York, NY	1987	cultivates productive relationships between sustainable private development organizations	Approach: Regional Expertise, Geographic Scope in Latin America and Carribeans,	20 Board of Directors, experts in 14 distinct areas, 146 employees	Revenue \$32.8 million ('09)
The Resource Foundation (TRF)	climateralityproject.org	Nashville TN	2006	Worldchanging.com is a nonprofit media organization dedicated to solutions-based journalism about the planetary future	Powerful new ideas and innovations are springing forth in everywhere. But few realize what's happening outside their own fields	2800+ individual and corporate donors, supports 198 effective and	Revenue \$1.6 million ('09)
Worldchanging (Acquired by Archi	www.resourcefnd.org	New York, NY	1987	Its primary aims are to ensure conservation of plants, animals and natural communities in areas at risk. For this purpose, it privately	Our mission is to move human society to live in ways that protect Earth's environment and its capacity to provide for the needs and aspirations of current and future generations. The Worldwatch Institute helps to inform	11 Board members, 25 worldwide correspondents	Revenue \$253k ('09)
World Land Trust	www.worldchanging.com	Seattle, WA	2003	environmental thinktank. an independent, non-partisan and nonprofit organization with a staff of more than 100 scientists, economists, policy experts, business analysts, statistical analysts, globally focused environmental research		29 staff members, 11 Board of Trustees, 17 Council members, 2 Patrons	Revenue 2.4mill Pounds ('09)
World Resources Institute (WRI)	www.worldlandtrust.org	Suffolk, UK	1989			204 employees, 34 Board of Directors	Revenue \$27 mill ('09)
	www.wri.org	Washington D.C.	1982				
	www.worldwatch.org	Washington	1974			40 employees, 18 Board of Directors	Revenue \$2.4 mill ('09)



Selected ENVIRONMENTAL ORGANIZATIONS

Where are they now?

DEVELOPMENT MODEL



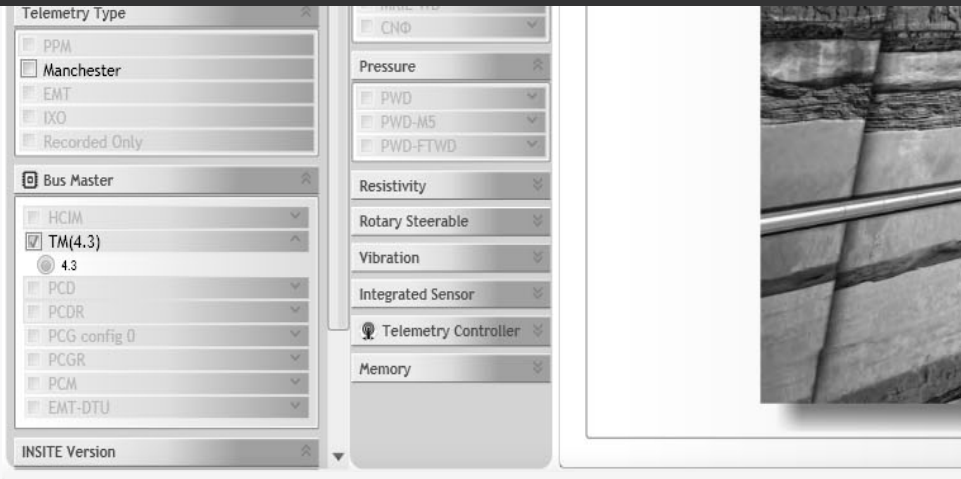
AREA OF FOCUS



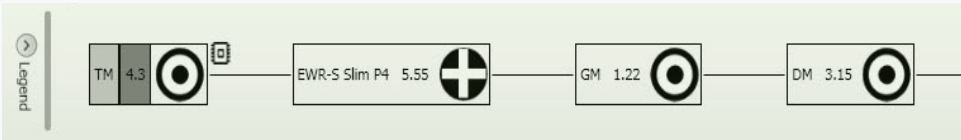
Halliburton Project **EToolVerifier**

ETOOLVERIFIER

The app can generate correct sensor connection of string based on choice to help engineers assemble really sensor string.



Use
EToolVerifier



Generate
sensor string



Assemble
a real sensor
string

ISSUES:
The sensor string is **abstract**
and does **not** show the connec-
tors which **compose** the sensor.

SOLUTIONS

SOLUTION1
3D IMAGE



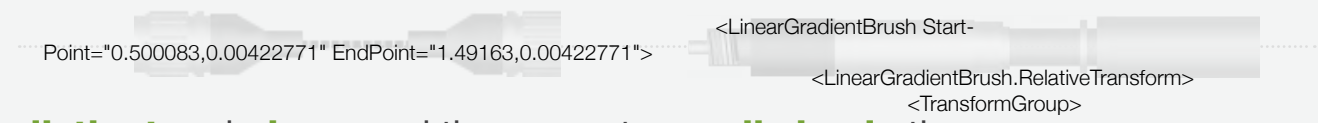
distinct, but **not clean**

SOLUTION2
2D IMAGE



distinct and clean, but the computer spends **a long time loading** them

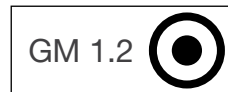
SOLUTION3
XML FILE



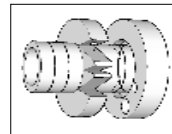
distinct and **clean**, and the computer **easily loads** them

COMPARISON

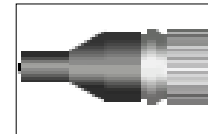
SYMBOL



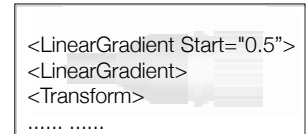
SOLUTION1
3D IMAGE



SOLUTION2
2D IMAGE



SOLUTION3
XML FILE



High Level of Detail?

No

Yes

Yes

Yes

Clean?

No

No

Yes

Yes

Distinct?

No

Yes

Yes

Yes

Time-Saving?

Yes

No

No

Yes

Space-Saving?

Yes

No

No

Yes

ETOOLVERIFIER

Sensor string is **distinct, clean** and computer requires **little time to load** the xmal files.

The screenshot displays the ETOOLVERIFIER software interface. On the left, there is a configuration panel with several sections:

- Telemetry Type:** Includes checkboxes for PPM, Manchester, EMT, IXO, and Recorded Only.
- Bus Master:** Includes a dropdown for HCIM and a checked item for TM(4.3) with a sub-option of 4.3.
- Other Sensors:** Includes checkboxes for PCD, PCDR, PCG config 0, PCGR, PCM, and EMT-DTU.
- INSITE Version:** A dropdown menu.
- Right-side Configuration:** A vertical list of sensor categories with dropdown menus: CNΦ, Pressure (with sub-options PWD, PWD-MS, PWD-FTWD), Resistivity, Rotary Steerable, Vibration, Integrated Sensor, Telemetry Controller, and Memory.

On the right side of the interface, a 3D perspective view of a sensor string is shown, featuring a red cone representing a sensor's field of view.

At the bottom of the interface, there is a horizontal diagram of the sensor string assembly, showing three main components labeled DM, HCIM, and PWD. To the left of this diagram is a legend area with a 'Legend' label and a downward arrow. Above the diagram are tabs for 'Chart' and 'Logs'. At the very bottom, there is a footer bar containing icons for home, folder, printer, document, and other functions, along with language and unit settings: 'Metric' and 'English'. A disclaimer on the right side of the footer reads: "For software compatibility only. This program is not designed for building a BHA".

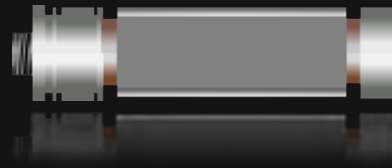
CONNECTORS

Below are the different connectors that compose different sensors.

BATTERY



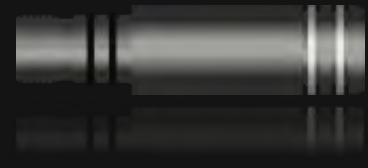
INSITE



PIN END AC



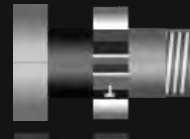
CIM TIP



HARD CONNECTOR



BOX END AC



ADAPTER



HANGER



SOUNDERS



PLATE



7-10PIN COILCORD



USABILITY TESTING

Engineers from different oil fields use two versions of EToolVerifiers to finish the testing tasks.

24 engineers from **8** main oil fields



Original EToolVerifier: **60** min to finish task

New EToolVerifier: **20** min to finish task, **easier** to **recognize** the connectors and sensors