

# Family Hub

Design Thinking Workshop Summary

7 – 8 December 2017



What is this document?

1.

Samsung engaged IBM to help envision the future of the Family Hub for 2019.

2.

IBM conducted a two-day workshop centered around customer and business needs.

This is the summary.

3.

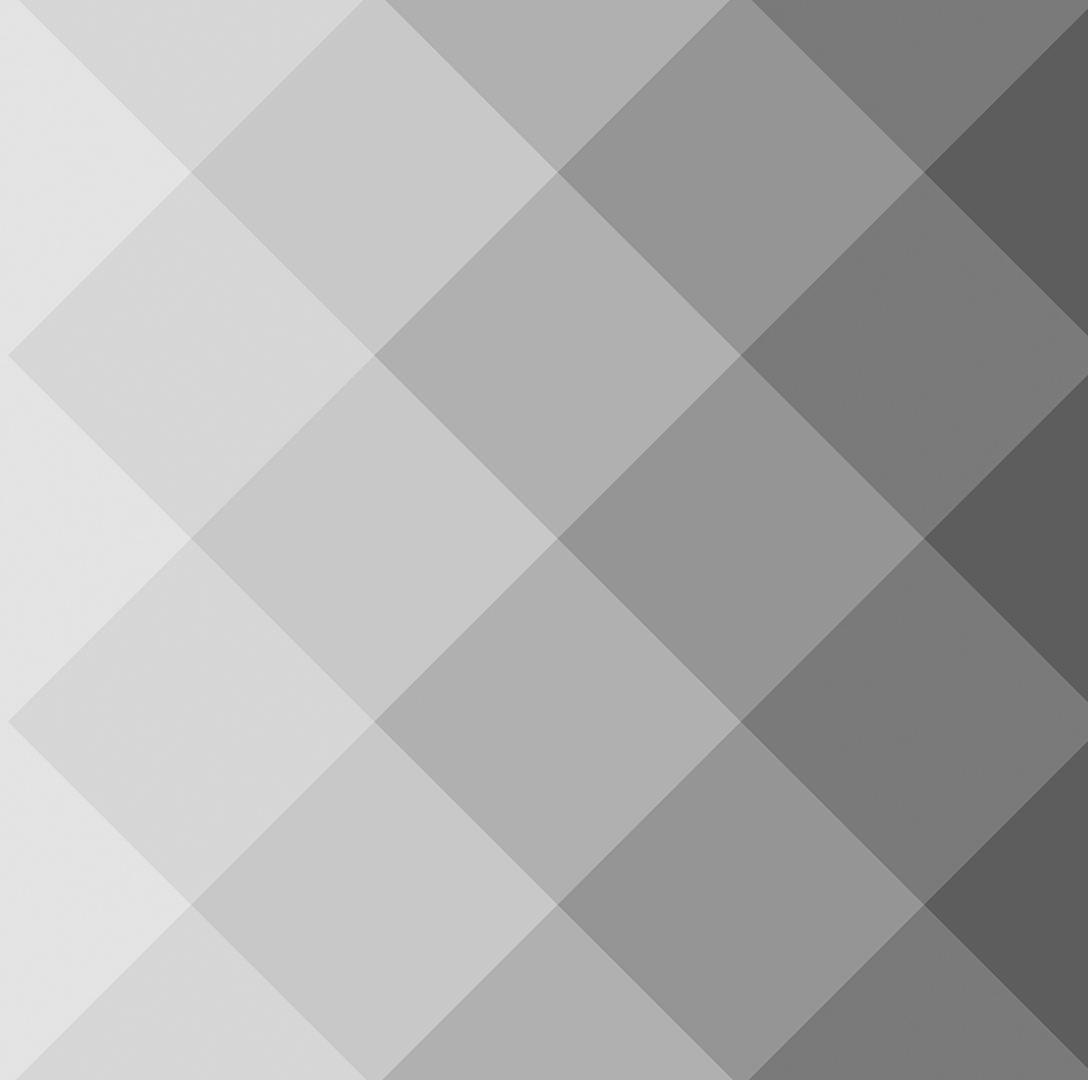
IBM will continue work on the final deliverables, including additional research and insights.

“The last best experience that anyone has anywhere becomes the minimum expectation for the experience they want everywhere.”

— Bridget van Kralingen  
Senior Vice President,  
IBM Industry Platforms



# Introduction to IBM Design Thinking



**de·sign** | də'zīn |

*noun*

purpose, planning, or intention that exists  
behind an action, fact, or material object

This isn't a client experience...



A close-up photograph of a woman with long brown hair, wearing a light-colored knit beanie and a matching scarf. She is holding a white coffee cup with both hands, wrapped in the same knit fabric. Her eyes are closed, and she has a gentle, content smile on her face. The background is a soft-focus autumn scene with yellow and orange foliage. The text "This is a client experience!" is overlaid on the left side of the image in a white, sans-serif font.

This is a client experience!

# Problem Statement Validation







Identifying a specific problem or opportunity is the single most important factor for success.



If you're addressing the wrong issues, you're not giving your customers what they need.

## Problem Statement

“How might we create an experience for families in the kitchen that is positively life changing?”

# Our Personas and Empathy Maps



# Overview

We need to factor empathy into the requirements gathering phase to develop actionable insights that help create a better product and provide users a positive, engaging experience.

Personas are typically created based upon a combination of segmentation data, surveys, interviews, and observations. They are used to help maintain empathy for the users, instead of just addressing them as abstract segments.

Empathy Maps are used to track both observed and inferred behaviors and emotions of users for the purpose of developing and framing actionable insights.



# The Berrys

- Matt and Sarah Berry
- Recently bought an apartment in Manhattan, NYC
- Newly married couple working in FinTech with a two year-old
- Food safety is important since they are attentive to their baby's health
- Since they are busy they also value convenience
- They order groceries online from Fresh Direct each week due to limited free time
- Their investment in premium appliances is based on quality and longevity before being tempted by the latest features
- They grew up in the age of technology and expect smart devices to be stable and continuously update (like their phones do)
- Connectivity is a given; streaming music on Spotify, sharing photos, and linking their smart home (baby monitor) and phone

# Young Couple with an Infant

- Value premium appliances for their quality and longevity
- Food safety is critical
- I need original and fresh recipes for the baby
- I am tired
- Go see if the baby is okay
- Let's get take-out tonight, I am too tired to cook
- What time was the baby's doctors appointment today?

- I wish I had time to go on a date with my hubby.
- Is that the baby crying again?
- I hope Matt picked up dinner.
- How do I organize my life?
- Did I buy enough baby food?
- We must plan out the baby's nutrition better.
- My apartment is just too small.

Says

Does

- Buys supplies for the baby
- Works long hours
- Hires a nanny/sitter for the baby
- Forgot to tell mom to change time of appointment
- Invites other young couple with babies over for dinner
- Takes baby to doctor's appointment
- Uses kitchen as productivity center
- Trusts reviews
- Enjoys streaming music
- Orders groceries online once a week



Thinks

Feels

- Loves family and baby
- Care about food safety
- Successful in life
- Stressed
- Exhausted
- Frustrated about left-over food being wasted
- Frustrated when technology does not work
- Time is scarce, hence valuable

# The Chans

- Young family living in suburbs of Chicago, IL
- Victor is a Senior software engineer and Michelle works a part-time marketing job, her parents sometimes help with child care
- The 7 year-old daughter plays piano and the 5 year-old son is actively involved in tennis, among a range of after school activities
- As extremely busy parents, they enjoy the convenience of delivery services for household goods to ensure their home is stocked with daily necessities
- They sometimes shop at the local farmer's market and will occasionally splurge on specialty items at Whole Foods
- Recently got an Amazon Echo to explore new music and the possibility of ordering conveniently online
- Very technologically savvy; rely on Google calendar to organize the family's activities

# Parents with Young Children

- Kids: I hate playing the piano
- Did I lock the garage door?
- When is the tennis game?
- I have a PTA meeting tomorrow
- Honey, you need to pick up Victor at 3:00 from school!
- Can we video conference grandma?
- There is nothing to eat! What is for dinner mom?
- I want my favorite yogurt.
- Mom, my friends are coming over and this leftover Chinese food smells!
- What is in the fridge? Do we need more butter?

Says

Does

- Victor: Eats lunch out everyday
- Grandma: Helps children get to tennis and piano
- Michelle: House chores
- Victor shares schedule in the family calendar
- Victor snacks late night
- Michelle loves to message Karen/Ken
- Michelle goes to the store to pick up milk because we ran out
- Eat whole foods on the weekends but less time to cook weekdays
- Parents will do absolute best for kid's education



- I want to know how to cook grandma's stew.
- I am spending too much money on the kids.
- Yay! Tennis lessons today!
- Wish I could watch a cooking video on TV.
- Are there any other education classes need for the kids? I need more information.
- I want to be with mommy, but it is boring sitting in the kitchen.
- The kids need help with homework.
- I am annoyed Victor is always working.
- I want the family to eat healthy, but we need to conserve money too.
- I am too busy to cook everyday.
- When could we go on vacation?

Thinks

Feels

- Victor: feels bloated
- Victor: I am not close enough with the kids lately
- I don't feel like cooking dinner today
- Disappointed the eggs expired and have to be thrown out
- Parents feel guilty about not spending more time with the kids
- We are too unorganized
- Hungry and nothing to eat
- Michelle is overwhelmed with her home life and managing kids

# The Golds

- Tom and Beth Gold live near Dallas-Fort Worth, TX
- Two kids, one 12 year-old and one 16 year-old
- Beth is an executive and travels a lot, so she tries to Skype into dinner when she is away
- Tom is a stay-at-home dad
- Tom drives an SUV and makes weekly shopping trips to Costco
- The family is always on-the-go
- Tom loves to cook and frequently searches online for new recipes
- The kids always want the latest mobile phones and gaming devices; are very protective of their personal devices and desire a layer of privacy from their parents
- They are enticed by innovative functions / features when purchasing technology, but still place a premium on durability and good value for their money
- They find it effective to leave memos on the fridge regarding the kids schedule and chores, as well as send updates in the family GroupMe
- The Golds often order food from GrubHub on busy days and when they are hosting their friends and kids teammates

# Parents with Teenagers

- I am really busy
- Children: I want more independence
- Children: Don't touch my phone
- What is for dinner tonight?
- There is never anything good to eat
- Tom: I love to cook, does anyone have meal requests?
- Parents: Do your homework!

Says

Does

- Kids play sports games
- Tom cooks new meals and orders food from Grub Hub
- Parents entertain friends
- Kids spend time with their neighborhood friends
- Tom helps with homework
- Tom goes shopping
- Family Skype's Mom during dinner when she is away



- Tom: I want some new recipes to try out
- Tom: The family needs to eat more healthy
- Are we budgeting correctly?
- Parents: We need to save for the kid's college fund
- Beth: The family needs to come together more often
- Beth: Nobody values my time!
- Beth: I miss out on so much with my family when I travel.
- What is quick for dinner?
- Why does mom never come to my sports games?

Thinks

Feels

- Beth: Guilty that the kids don't bond
- Beth needs tom to be more organized
- Tom needs more recommendations for food and people to appreciate his contributions
- Tom needs more access to know everyone's schedule to keep things on track, sometimes he can't keep up with the kids.
- Beth feels excluded by the family.
- Kids feel their mom cares more about work

# The Rodriguezes

- Kelly and Parker Rodriguez
- Reside in Los Angeles, CA
- Kelly and Parker are “empty nesters” with a 19 year-old son who recently moved away for college, returning home on weekends and holidays
- Kelly and Parker love to communicate with their son via Skype
- Kelly is a retired pharmacist and Parker owns a large construction company, leaving the couple with considerable disposable income
- Having an eye for quality craftsmanship, Parker places a premium on durability
- A passionate environmentalist with plenty of free time, Kelly focuses on finding products that help her reduce her carbon footprint and tries avoiding food wastage
- Both Kelly and Parker are early adopters who keep up with the latest technology in their upscale southern California neighborhood
- The couple owns a Tesla and were recently gifted a Google Home device by their son to try and start automating their home

# Empty Nesters with a Son in College

- I have to throw out these old veggies.
- Parker and I need to eat healthier now that we are older.
- We waste too much food and use too much energy.
- We make too many trips to the store.
- Parker eats way too much junk food.
- Google, what should I make for dinner?

- My food is just mediocre.
- Kelly is too worried about wasted food.
- I want to see/check status of our current food inventory before going to the grocery store
- I can't see anything when I go to the kitchen at 2am

Says

Does

- Skype with Sam frequently
- Shops mostly at whole foods
- Willing to spend on innovation
- Doesn't cook much; enjoys simple meals and eating out
- Asks google home for recipe, best music, and current weather
- Tries to make the home automatic
- Reads tech news about new devices

Thinks

Feels

- Afraid of health issues
- Frustrated when trying to decide on what to make for dinner
- Parker: Kelly is too worried about food waste





As Is  
Scenarios



# Overview

As-Is Scenario Maps helps us empathize with the user over a specific period of time or specific process.

An as-is scenario map is a timeline that portrays the user's current experience in detail. It is about capturing what the user is going through right now, today.

What makes a good as-is scenario map?

- Focuses on a single user
- Presents a detailed, honest picture of the present solution
- Exposes pain points and opportunities



# The Berrys



## As Is Scenario

	Waking Up	At Work	Prep Dinner	Dinner	After Dinner
Doing	<ul style="list-style-type: none"> <li>• Make to-do list for the day</li> <li>• Remind nanny what she needs to do</li> </ul>	<ul style="list-style-type: none"> <li>• Make a shopping list</li> <li>• View inside</li> <li>• Grocery shopping</li> </ul>	<ul style="list-style-type: none"> <li>• Receive groceries</li> <li>• Follow recipe instructions</li> <li>• Use timer on smart oven</li> </ul>	<ul style="list-style-type: none"> <li>• Catch up on day</li> <li>• Stream Spotify music</li> <li>• Watch movie with hubby</li> <li>• Take pictures of dinner and the baby</li> </ul>	<ul style="list-style-type: none"> <li>• Sharing weekend plans</li> <li>• Washing dishes</li> <li>• Getting rests</li> </ul>
Feeling	<ul style="list-style-type: none"> <li>• What's the weather like?</li> <li>• Too many lists... how do I make sure the whole family knows a task is complete?</li> </ul>	<ul style="list-style-type: none"> <li>• What ingredients do I have?</li> <li>• Meal planning- what to eat</li> <li>• What recipes can I use?</li> <li>• Should I cook or order in?</li> </ul>	<ul style="list-style-type: none"> <li>• Do I want more?</li> <li>• Is the baby OK?</li> </ul>	<ul style="list-style-type: none"> <li>• Why won't the baby eat this?</li> <li>• More baby monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Should we save that recipe?</li> </ul>
Thinking	<ul style="list-style-type: none"> <li>• Tired... not enough rest</li> </ul>		<ul style="list-style-type: none"> <li>• Hungry</li> <li>• Pressed for time</li> </ul>	<ul style="list-style-type: none"> <li>• It's good to be alive</li> <li>• Eat to live</li> </ul>	<ul style="list-style-type: none"> <li>• Excited for weekend plans</li> <li>• Sleepy</li> </ul>

# The Chans



# As Is Scenario

	Morning Routine	Day	Afternoon	Evening	Night
Doing	<ul style="list-style-type: none"> <li>Dad: checks email on phone on toilet</li> <li>Mom: wakes kids and organizes stuff for day</li> <li>Ken: checks school bag</li> <li>Grandma: checks kids' schedule</li> </ul>	<ul style="list-style-type: none"> <li>Check out Cyber Monday deals</li> <li>Gardening</li> <li>Cleaning house</li> <li>Work meetings</li> </ul>	<ul style="list-style-type: none"> <li>Grandma: Special treat with kids</li> <li>Mom: Meal plan and ordering</li> <li>Shower after practice</li> <li>Looking for ingredients</li> </ul>	<ul style="list-style-type: none"> <li>Dad: Helping with cooking</li> <li>Everyone on smartphone while eating</li> </ul>	<ul style="list-style-type: none"> <li>Having a beer or three</li> <li>Tinkering with Alexa skills</li> <li>Turn off every light</li> </ul>
Feeling	<ul style="list-style-type: none"> <li>Dad: I'm late again!</li> <li>too much chaos in morning</li> <li>Mom: what do they need today?</li> <li>Ken: What's for breakfast?</li> <li>Mom: Wish I could sleep in</li> </ul>	<ul style="list-style-type: none"> <li>Mom: misses the kids</li> <li>Dad: I want to excel</li> <li>Grandma: Where's Grandpa?</li> </ul>	<ul style="list-style-type: none"> <li>That new boy in class is so cute (daughter)</li> <li>What is for dinner? (son)</li> </ul>	<ul style="list-style-type: none"> <li>What is the next show I can binge watch?</li> <li>I could use a beer or three</li> </ul>	<ul style="list-style-type: none"> <li>Why is IoT such a pain in the ass?</li> <li>I wish there was an app that tracked how many beers Victor drinks every night</li> <li>What's the schedule for tomorrow?</li> </ul>
Thinking	<ul style="list-style-type: none"> <li>Dad: Ugh! I don't feel so good</li> <li>Ken: I can't wait to get to school</li> <li>Rushed</li> <li>Anxious about being late</li> <li>Mom: Doesn't feel like going to work</li> </ul>	<ul style="list-style-type: none"> <li>Stressed and overwhelmed</li> </ul>	<ul style="list-style-type: none"> <li>Confused on pickup time</li> <li>I will cook whatever I want</li> </ul>	<ul style="list-style-type: none"> <li>Bored! I need food variety</li> <li>Tired and exhausted</li> </ul>	<ul style="list-style-type: none"> <li>Finally... alone time</li> <li>Frustration with IoT</li> <li>Hungry for a snack</li> </ul>

# The Golds



## As Is Scenario

	Communication	Scheduling	Food Management	Cooking
Doing	<ul style="list-style-type: none"><li>• Family-wide communication via GroupMe</li><li>• Beth texts Tom, "Let's have dinner today"</li></ul>	<ul style="list-style-type: none"><li>• Checks schedule</li></ul>	<ul style="list-style-type: none"><li>• Search the refrigerator</li><li>• Decide on what food to cook</li><li>• Go to supermarket</li></ul>	<ul style="list-style-type: none"><li>• Pre-heat oven</li></ul>
Feeling	<ul style="list-style-type: none"><li>• It's been a while since we all spent time together</li><li>• I want to hang out with my friends (kids)</li></ul>	<ul style="list-style-type: none"><li>• Am I missing something?</li><li>• The kids have soccer practice and I'll have to pick them up</li><li>• Why can't the kids just Uber?</li></ul>		<ul style="list-style-type: none"><li>• Why don't the kids help me cook?</li></ul>
Thinking	<ul style="list-style-type: none"><li>• Excited for tonight!</li><li>• Frustrated by reluctance from kids</li></ul>		<ul style="list-style-type: none"><li>• I want a drink!</li></ul>	

# The Rodriguezes

## As Is Scenario



	Prep/Planning	Shopping	Cooking	Eat/Communicate	Clean Up	Replenish
Doing	<ul style="list-style-type: none"> <li>• Make/find healthy recipes that everyone will like</li> <li>• Call Sam to see if he is coming back</li> <li>• Check ingredients and create shopping list</li> </ul>		<ul style="list-style-type: none"> <li>• Sam helps out in the kitchen</li> </ul>	<ul style="list-style-type: none"> <li>• Enjoying peaceful music and good conversation</li> </ul>	<ul style="list-style-type: none"> <li>• Parker helps wash dishes</li> <li>• Put away all leftovers</li> </ul>	<ul style="list-style-type: none"> <li>• Re-order depleted ingredients</li> </ul>
Feeling	<ul style="list-style-type: none"> <li>• What is Sam's favorite meal?</li> <li>• How can I make a special meal in a short amount of time?</li> <li>• How do I buy the right amount of ingredients?</li> <li>• What should I prepare by myself vs. what should I buy at the restaurant?</li> </ul>	<ul style="list-style-type: none"> <li>• Trying to find local farm foods</li> <li>• What's healthy?</li> <li>• Is this recipe exotic enough?</li> <li>• Making sure the recipe has no allergy concerns</li> </ul>	<ul style="list-style-type: none"> <li>• Need to make cooking easy and fun</li> <li>• How can I avoid any of this food going to waste</li> </ul>	<ul style="list-style-type: none"> <li>• I don't want to make them eat too much</li> <li>• Maybe we can all go for a family walk after dinner</li> <li>• I would be really happy if Sam enjoys this meal</li> </ul>	<ul style="list-style-type: none"> <li>• There's too much to wash</li> <li>• How long will these leftovers keep?</li> </ul>	<ul style="list-style-type: none"> <li>• Wouldn't it be nice if the food replenished itself</li> <li>• I wonder who has the best sales</li> </ul>
Thinking	<ul style="list-style-type: none"> <li>• Don't want to spend the whole day preparing food</li> <li>• How can I get Sam to want to come home more</li> <li>• Sam wishes Mom wasn't Skyping him during the middle of class</li> <li>• Mom feels nervous about having enough food for everyone</li> </ul>	<ul style="list-style-type: none"> <li>• I hate shopping!</li> <li>• Frustration from difficulty of searching for ingredients</li> <li>• Not wanting to buy food that will go to waste</li> </ul>	<ul style="list-style-type: none"> <li>• Cooking should be both easy and fun</li> <li>• I wish I could talk to Sam more instead of trying to cook and organize everything</li> <li>• I hope Sam and Parker enjoy our family time and don't rush off</li> </ul>	<ul style="list-style-type: none"> <li>• So happy we all get to share a meal together!</li> <li>• I love family time!</li> </ul>	<ul style="list-style-type: none"> <li>• My son is all grown up</li> <li>• Feeling guilty about potential to waste food</li> <li>• I cooked... I'm not cleaning up</li> </ul>	<ul style="list-style-type: none"> <li>• I don't want to go shopping again!</li> </ul>

Ideation



# Overview

Ideation is the process of proposing possible solutions based on identified pain points and opportunities.

This is a process of iteration — of diverging, remixing, and converging — and how to relentlessly go from a point where there's something that's fundamentally not working — and into a path evolving a viable solution that can grow over time.

As ideas emerge, they can be clustered into emergent themes, which will then be prioritized into future initiatives.





# Summary of ALL Big Ideas

## 1. Health and Nutrition

- Family Wellness: tracks each family member's nutrition balance, activity level, lifestyle, and goals
- Healthy Eats: monitors food in refrigerator and makes dietary suggestions to ensure well-balanced meals are being prepared

## 2. Recipe Help

- Smart Recipe Book: records all dishes prepared, when they were last eaten, and any comments or preferences; suggests new recipes to try based on history

## 3. Grocery Shopping and Inventory

- List Generator: grocery shopping list is automatically generated based on a regular inventory check of fridge supply
- Essential Foods Tracker: special feature can measure the weight of food items, track their consumption, and automatically reorder it when it reaches below a certain weight
- Freshness Sensor: capture images and converts inventory to list for the user to see food inventory details, how fresh the food is, and expiration dates

## 4. Gamification

- Voting Station: family members can vote for meal via poll sent out to mobile devices
- Family Mission: fun way to delegate chores to each family member and distribute points based on completion

## 5. Scheduling and Reminders

- Daily Rundown: generates daily list for each family member summarizing events and reminders on schedule
- Family Aligner: syncs all calendars and suggests appropriate meals based on schedule

## 6. AI Assistant

- Kitchen Assistant: sends out personal messages and reminders for each family member, from calendar events to diet insights
- AI Task Prompter: intelligent agent can generate daily list of chores based on schedules and meal plans
- Meal Assistant: generates weekly meal plan based on food inventory, preference history, and schedule

## 7. Social

- What do you eat?: share meal prep and completed dishes with other FH owners; like other recipes and send/receive advice
- Cookstagram: social platform for sharing recipes and following favorite chefs who use FH

## 8. Misc.

- NeighborFOOD: monitors food waste and generates weekly score to help FH owners become more socially responsible
- Compartmentalize: fridge can be personalized to provide each family member with a compartment which they can store favorite foods

# Summary of Big Ideas The Berrys

## 1. Health and Nutrition

- Diet Monitor: simulates a personal dietician that breaks down current diet, lets you know exactly what you eat, provides recommendations, and updates you on progress
- Healthy Eats: monitors food in refrigerator and makes dietary suggestions to ensure well-balanced meals are being prepared
- Family Nutritionist: tracks, analyzes, and recommends
- Baby Nutrition: provides a recommended nutrient breakdown as baby grows up
- Drinking Water Tracker: keeps track of how many glasses consumed per day
- Veggie/Fruits Consumption tracker: tracks fruit and veggie input
- Food and Health “One-Stop Shop”: interface with access to every health app, connected to share data and insight
- Family Health Manager: devise personalized health plans, nutrition recommendations, and exercise routines

## 2. Recipe Help

- Favorite Dish Suggestion: recommends family favorites based on history
- Smart Recipe Book: stores recipes, when they were eaten, who liked them, and suggests future recipes to try
- Smart Meal Planner: generates list of suggested meals based on nutrition, diet performance, personal calendar, and preferences

## 3. Grocery Shopping and Inventory

- Smart Meal and Grocery Planner and Shopper: Recommendations on healthy and smart items to purchase
- Smart Grocery List: like a personal grocery shopper that’s great at guessing what you like and what you need

## 4. Social

- What do you eat?: share meal prep and completed dishes with other FH owners; like other recipes and send/receive advice
- Cookstagram: social platform for sharing recipes and following favorite chefs who use FH
- Recipe ‘Marketplace’: FH owners can exchange recipes, receive/provide feedback and suggestions, and accumulate points
- Points System: receive points for posting FH and usage on social platforms, showcase inside of fridge with #viewinside

## 5. Misc.

- Personal Trainer: provide video conferencing for training/nutrition
- Photo Booth: FH sends daily reminder to capture family photo to enjoy moments when all are in the kitchen together

# Summary of Big Ideas The Chans

## 1. Health

- Health Fridge: provides recommendations/suggestions to make user healthy; knows user preferences and habits
- Always Fresh: smart fridge that always has fresh food and tracks expiration dates

## 2. Personalization

- Experience Bridge: if App A and App B are related in terms of experience, FH can create shortcuts between the apps to provide seamless use and experience
- Knows Me + My Family: tabulates preferences and records food history; also tracks food inventory and what needs to be purchased
- Pop-Up Menu: designs menu for week, suggestions made on recipe history
- Personal Space: using verification (ex. voice), each family member can access a closed, personal space to store their favorite food items (managed by each user's smart phone)
- Proximity: fridge can sense how close you are and can send you greetings/ personalized messages

## 3. Intelligence

- Kitchen Assistant: understands personal needs of the family and can leave personal messages or suggestions for each family member
- "Alfred": Alfred AI can help with everything from generating dinner menu to hiring maids to help complete chores

## 4. Scheduling and Reminders

- Priority Messenger: send out high priority messages to family members
- Reminders: create list of reminders/to-do items and prioritize
- Family Aligner: schedule/planner shows each person's schedules on one screen
- Pop-ups: FH can send important notifications/reminders based on schedule and to-do list

## 5. Grocery Shopping and Inventory

- Shopping Checker: check ingredients or food items purchased and automatically updates food inventory list
- List Generator: take inventory of fridge and generates list for stores that FH user frequently goes to
- Essential Foods Tracker: special feature can measure the weight of food items, track consumption, and automatically reorder it when it reaches below a certain weight
- Smart Reorder: fridge can automatically reorder most common foods for family

## 6. Social

- Healthy Goal: fridge proposes goals (ie. eat healthy for a week) and gives points for successful completion
- FH Messenger: chat box in FH and in the app, can communicate with family members and only FH owners
- "Like" your Family: post something about FH on Facebook, Instagram, Twitter and have the ability to "like it"

## 7. Gamification

- Family Mission: provide fun, productive mission for all family members to work towards; record individual and family progress and achievement of mission to motivate family and generate spirit
- Family Member of the Month/Week: FH automatically nominates family member who completes all chores, eats the healthiest, etc.
- Voting Station: poll distributed via mobile app so family can vote for dinner

## 8. Misc

- Whole Foods Fridge: create a market experience at home
- Compartmentalize: fridge is made of small compartments that you can label
- Nintendo: ability to play Nintendo in FH screen
- NeighborFOOD: become socially responsible with food, monitor waste, recycling
- Snack Pack: dedicate one section for snacks chosen by user; can set fridge to auto-order snack inventory or can also set to lock at certain time

# Summary of Big Ideas The Golds

## 1. Health and Nutrition

- Kid's Healthy Cooking Engagement: activity that lets kids choose ingredients, learn about nutrition, shop and cook together
- Make Me Eat Healthy App: FH provides healthy recommendations
- Family Wellness: tracks family's nutrition balance, lifestyle, activity level, set goals together, be engaged; generates weekly "my family wellness" score and makes suggestions for next week
- Food Tracker: tells you how much of a particular item has been consumed in a given period (ie. (you drink two sodas a day)
- Family Health Center: FH can track exercise, food nutrition for entire family, suggest recipes, shop online

## 2. Gamification

- Points for Chores: FH can reward points for chores completed
- Lucky Coin

## 3. IoT/Mobile

- Plug and Play: any device can be plugged in to FH and will automatically connect and sync
- Fridge = Mobile: all features should work seamlessly between mobile device and fridge
- Hub Away from Home: can control all apps and features on FH even if away from home

## 4. Discipline

- AI Task Prompter: intelligent sourcing to integrate with weekly routine, morning chores
- Kids Responsibilities: FH sends reminders to kids for what chores need to be completed and kids can check off once done

## 5. AI Assistant

- Meal Assistant: knows schedule, time available, knows food preferences and what have in refrigerator, organizes/helps prepare fast food solutions
- Smart Meal Provider: asks questions about cravings/wants then delivers that food item to person cooked or suggests how to best prepare
- Magic Lists: learns from family behavior and makes subject lists, recipes, food orders behavior
- Magic Cook: Fridge that can make basic meals (PB+J, grilled cheese)

## 6. Scheduling

- Connect Smart Phone Calendar to FH: manage life via smart phone and FH for seamless scheduling
- Daily Mission Control: aggregates what should be done, assigns missions, keeps tracking family
- Daily Rundown: lists/summarizes everything that happens in the home (bills, security alerts, meals, weather, errands)

## 7. Misc.

- Light Show: FH can adjust lighting to create mood in kitchen; can be managed via mobile device
- Self-Diagnosis: generates report and alerts when FH is damaged or part is malfunctioning; can search web for solutions
- Emotional Connection: can remember important days or events and order flowers or leave special messages for family members

# Summary of Big Ideas The Rodriguezes

## 1. Grocery Shopping and Inventory

- How to Organize: FH recognizes food inventory and creates shopping list as well as recommends how to organize refrigerator
- Local Shop Messaging: FH sends message to local shop via “msg application” that notifies store what shopping list/order is
- Farm to Fridge (to farm): electronic connection to local farms for fresh produce and compost of waste
- Shopping Consultant: suggests user what day is best to shop and notifies which foods should be purchased or what ingredients are needed
- Freshness Sensor: takes pictures and converts to list providing user with inventory details as well as how fresh food is/when it is going bad

## 2. Communication

- Virtual Family Dinner: all family members can eat together via Skype or other social communication platforms
- Agent: can communicate with users, voice reminders, and distribute points for completing items on to-do list

## 3. Auto Support

- Fix User Interface: fridge can detect software and hardware issues and can automatically fix or call for support if needed
- Chat: real-time chat with FH engineering team
- Automatic Software Updates

## 4. Mental Health and Food Health

- Health Counselor: FH can report advice to each family member based on weekly history of eating, mood and feeling reporting; provide motivational or daily messages
- Mood Sensor: FH can detect and respond to mood based on season, holiday, psychological condition, activity history and biography

## 5. Misc.

- Meal Prep Kits: pre-cut vegetables or easy sandwich making ingredients organized for fast lunches
- Auto-syncs to Web: easily post images, recommendations, questions to community website for FH owners

# Emergent Themes and Prioritization



# Overview

Emergent themes are the core concepts behind the Big Ideas, and were organized so that we can see the patterns and begin prioritization.

During prioritization, we negotiate around which initiatives are most important to customers and for business.

A prioritization matrix:

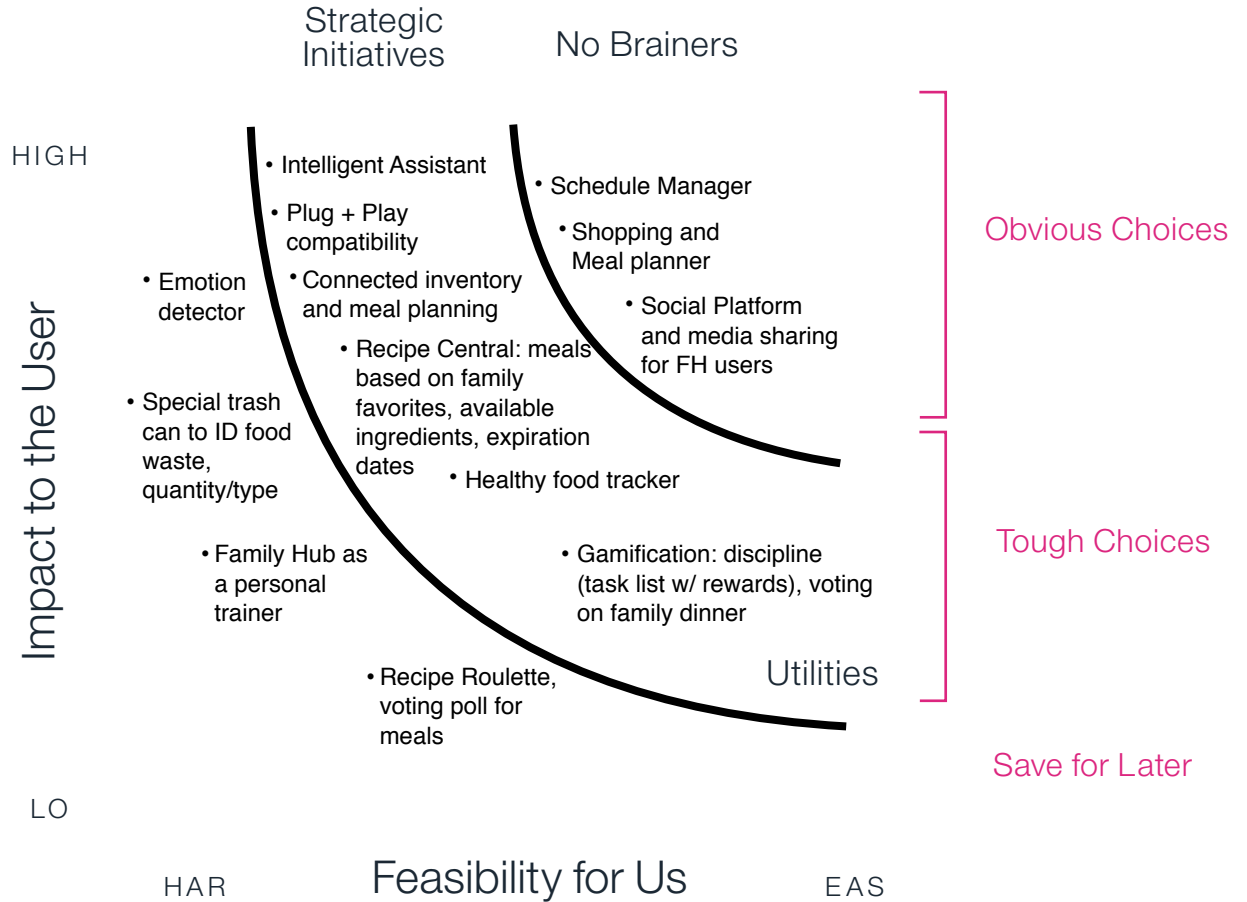
- Reflects the thoughts of everyone on the team
- Shows us, clearly, which ideas to pursue
- Identifies opportunities for next steps



# Prioritization Grid

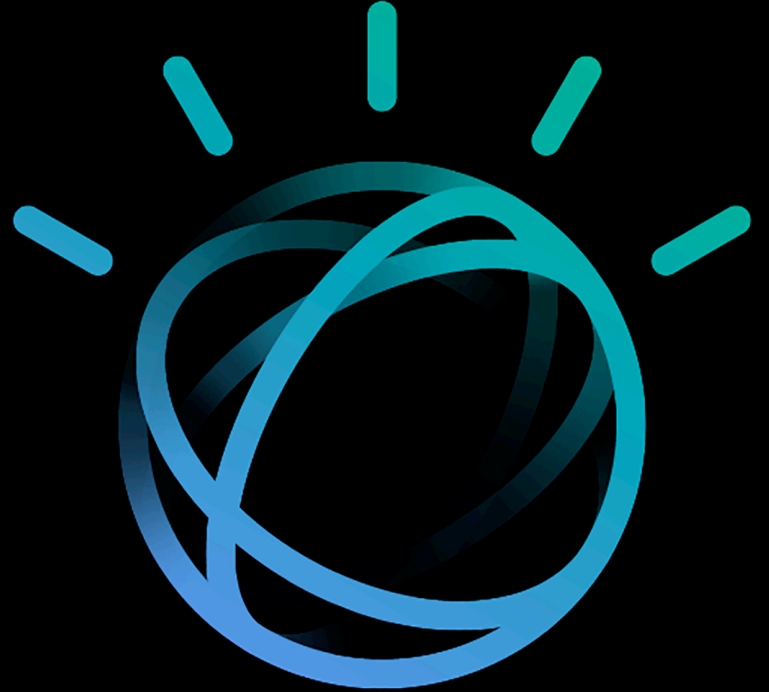
These are the key initiatives as identified and prioritized by the group at the end of the day.

This matrix will be used to guide the functions and features that go into the initial POC and Pilot Programs.





The Watson Experience



# Overview

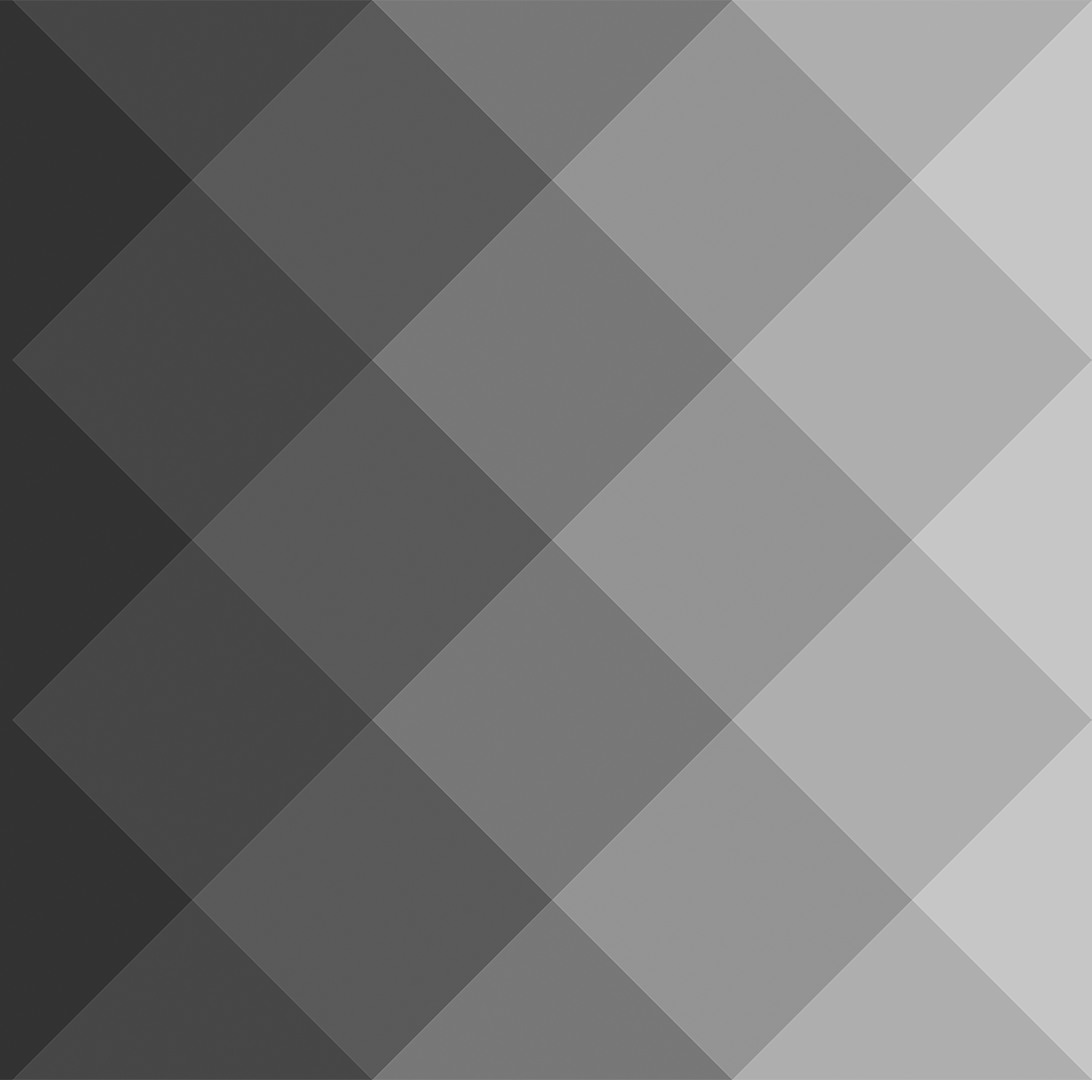
We spent an hour engaging with IBM's Watson Experience – learning about and visualizing Watson's powerful cognitive capabilities.

Using a hypothetical business problem, Watson demonstrated how analytics could be performed to provide business insights, improve operations and deliver an enhanced customer experience.





Day 2  
Looking Inward



# Opportunity Statements



# Overview

Whereas the first day centered on the customer experiences, the second day was arranged around how Samsung could achieve these goals.

For Opportunity Statements, we wanted to focus on the goals and ideals for Samsung to deliver the best possible products and experiences.

This exercise began with individuals and teams converging around how they would describe their ideal working scenario and vision, and then they worked together to shape these into full expressions of intent.



We bring innovation to your home that cares for, nourishes, and connects the ones you love.

Samsung easily provides healthy and memorable family experience within your home and in the world.

We continuously innovate to bring families closer throughout the day.

Family Hub is a premier luxury experience that makes my life more enjoyable and brings my family closer.

# Tenets of Our Opportunity Statements

Table 1

- Streamline household tasks
- Helps keep family organized
- Unifies families
- Seamless experience across all devices
- Simple, frictionless
- Thoughtful design
- Innovative
- Promotes a healthier and more convenient lifestyle
- To care for and nourish the people you love

Table 2

- Companion device that promotes healthy lifestyle
- True luxury good
- Helps creates a closer family bond
- FH is how my life is made easier
- Prioritize health and an easier, more connected life
- Gives me a sense of control in my home
- Premium experience for managing family

Table 3

- Interactive and innovative
- Satisfaction and fulfillment
- Companion of life
- Knowledgeable and personable
- End-to-end experience
- Seamless design that unifies family
- Helps organize and align family
- More than just a fridge

Table 4

- Connect people and products
- Tracks food to promote a healthier life
- Healthy family, happy times
- Home centered in the kitchen
- Ease of use, WOW factor
- Automatic food management
- Optimal functionality
- Support sustainability



Needs Statements



# Overview

What is a needs statement?

It is a statement that frames your user's actual needs, desires and goals.

A need statement is structured in 3 parts:

- Establish who the user is
- Identify what it is that they need
- And the corresponding benefit to addressing that need

What makes a good needs statement?

- Focuses on a user's real pain points
- Does NOT focus on features
- Can be either specific or general



# Needs Statements

Makes sure that the needs align to her human needs to perform her role, with any technology as only the enabler.

Samsung needs a way to \_\_\_\_\_ so that \_\_\_\_\_ .

- |  |  |
|--|--|
| • Have flexible schedules  | • We can be iterative in our design process  |
| • Have an easily updated and upgradeable hardware system         | • Our products can remain relevant   |
| • Understand and communicate product changes                     | • We can deliver an optimal customer experience  |
| • Share project deliverables and schedules                       | • All objectives are aligned and we can work to achieve the same goals                         |
| • Influence organizational change                                | • Work can be completed more efficiently   |
| • Embrace a new software methodology                             | • We can better serve customers  |
| • Address minor bugs faster                                      | • Our products can improve   |
| • Improve communication skills                                   | • The software team can remain on schedule   |
| • Enhance customer service                                       | • Family Hub can deliver an optimal user experience  |
| • Understand consumer's aspirations                              | • We can come up with new value propositions   |
| • Build a more collaborative culture                             | • GBM can operate in a more holistic fashion   |
| • Align and share our vision                                     | • All departments can collectively work to influence and achieve the company's long-term goals |
| • Better collaborate with innovation teams across the enterprise | • We can leverage skills and SMEs for breakthrough thinking                                    |
| • Focus on the customer experience                               | • We can differentiate our solutions in the market   |
| • Unify objectives   | • We can streamline development  |

# Big Ideas and Key Task Mapping



# Overview

## Big Ideas and Key Task Mapping

The ideation exercise was similar to day one, although this time it was focused on Samsung's internal operations, and how to deliver the best possible solutions for Samsung's customers.

For the Key Task Mapping exercise, each key idea was mapped with corresponding benefits, as well as what it would take to implement the idea, and what would be needed for next steps.



# Big Ideas and Key Task Mapping

Big Ideas	Benefits	Teams	Enablers	
			Tools / Blockers	Next Steps
Adopt collaboration tools to track features/issues/UX centrally	Reduce emails, centralize to-dos, clear ownership/transfer, audit trails	PP, IT/Tools	PRMS, Google Docs, JIRA	PP/PM/Design to get access like Eng.
More integration and transparency between teams	Faster fixes for bugs; more seamless experience	All	Currently silo'ed business units	Establish Samsung Enterprise Innovation Team. Members of different teams to sometimes sit together at work
Iteratively design/prototype/test (Agile)	Faster adoption of changes, greater transparency, measure progress in real time	PP and PM, Eng., Design, QA, Exec	PRMS, Google Docs, JIRA, Confluence	PM/PP pitch to exec sponsors
Daily bug testing	Increased customer satisfaction and customer loyalty	CS, Eng., PM, UX	Open bug tool, maintenance team, ops team, SW budget, training, resources	Set up JIRA
Work from home	Less stress, more efficient online communication	All	Online collab. for all teams using Confluence	Permission to work from home using just VPN
Clear product ownership	Clearer communication, greater alignment, more consistent/focused product	PM, Scheduler, Design, Prototyper Eng	Evaluation from the T.F. team (not the old team manager), T.F. room in R +D, new org structure	HR Meeting, P.O. training course, Management defined boundaries of product ownership

# Big Ideas and Key Task Mapping (continued)

Big Ideas	Benefits	Teams	Enablers	
			Tools / Blockers	Next Steps
Partner Dev Program	Leverage 3 <sup>rd</sup> party, ecosystem, more apps	BD, Dev partner, 3 <sup>rd</sup> party dev	Dedicated partner eng. team, SW dev program, SDK, training program, online tools	Written proposal
Make-your-own product contest	Entirely new concepts/features, gain better understanding of entire product and product lifecycle	All	SS Creative studio Limited time and resources	Written proposal
FH 4.0 as a C-lab product	Bring talented designer, engineers and planners across Samsung, fast & agile	Designer, planners, engineers	C-Lab team room Goal oriented	HR meeting for a new org structure
FH client advisory board	Establish physical + electronic feedback channels to get prod/experience feedback	C.S. team	Staff resources	Establish budget, find participants
Have Samsung product designers use Family Hub fridge in their own homes	Deeper understanding of product, including both features and bugs, visualize your users' lives	Finance	Logistical issues, finances, security	Propose plan to put into action, collect feedback and data
Coffee chats/happy hour	Brainstorm new ideas, foster colleague relationships, build morale	All	Time, budget	Set a schedule, funding for beverages

## Wrap-Up

- We have synthesized the outcomes from the IBM Design Thinking workshop and summarized it in this document
- IBM will use these outcomes as key input towards recommendations on value proposition, design concept, organization and monetization models as part of the final deliverable

Thank you for your time and support so far –  
we look forward to continuing this journey with you!







