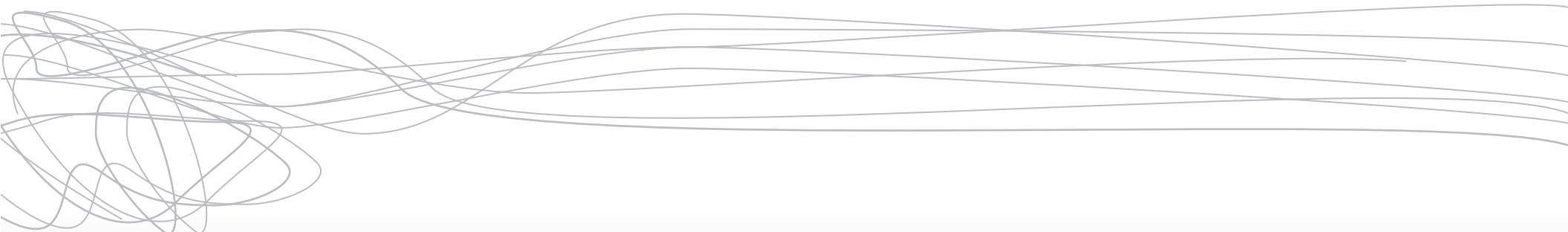


DINNER AT 6

Jason Chalecki
Susan Dybbs
Rebecca Hume
Min Kyung Lee
KC Oh

Gigabit Connection
Graduate Studio II
Spring 2006



DINNER AT 6 | We are...

HCI Jason Chalecki

IntD Susan Dybbs

CPID Rebecca Hume

IntD Min Kyung Lee

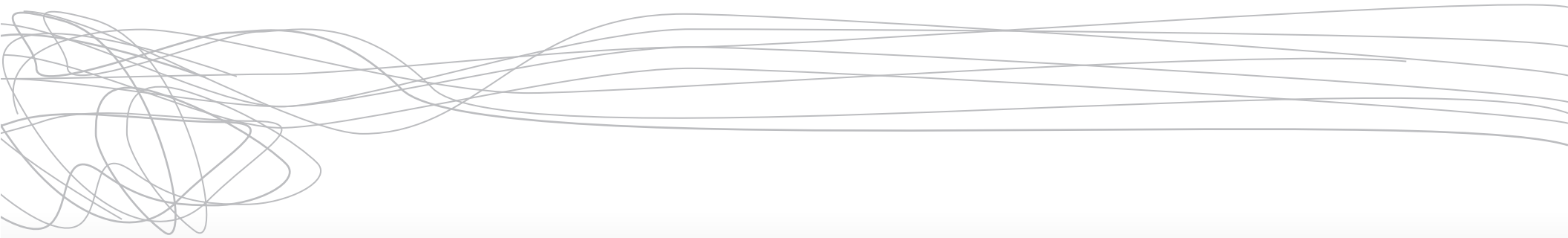
HCI KC Oh





PHASE ONE RECAP

project definition
territory map
target audience



How can
pervasive computing
enhance
family connections



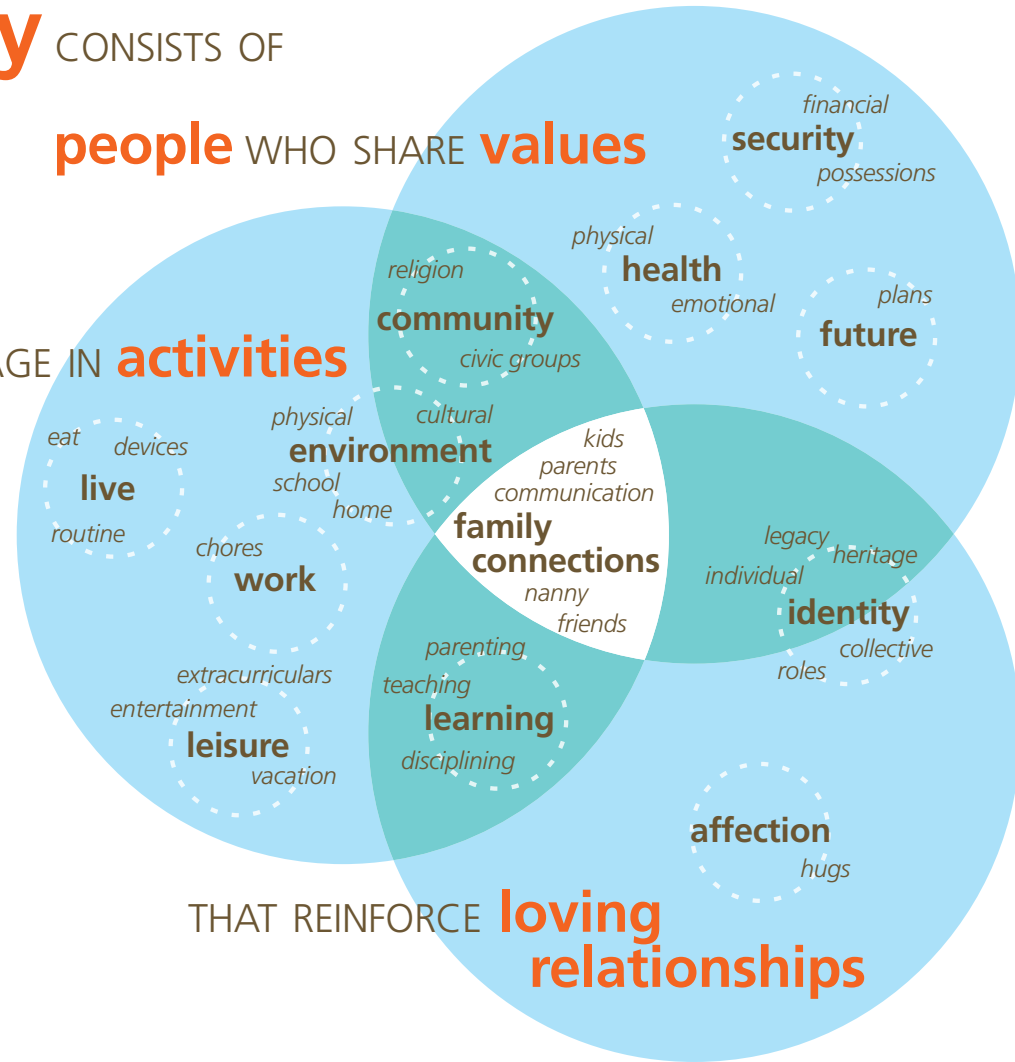
PROJECT DEFINITION
FAMILY CONNECTIONS

In initial team discussions, we found we were all interested in exploring family connections.

family CONSISTS OF

people WHO SHARE **values**

AND ENGAGE IN **activities**

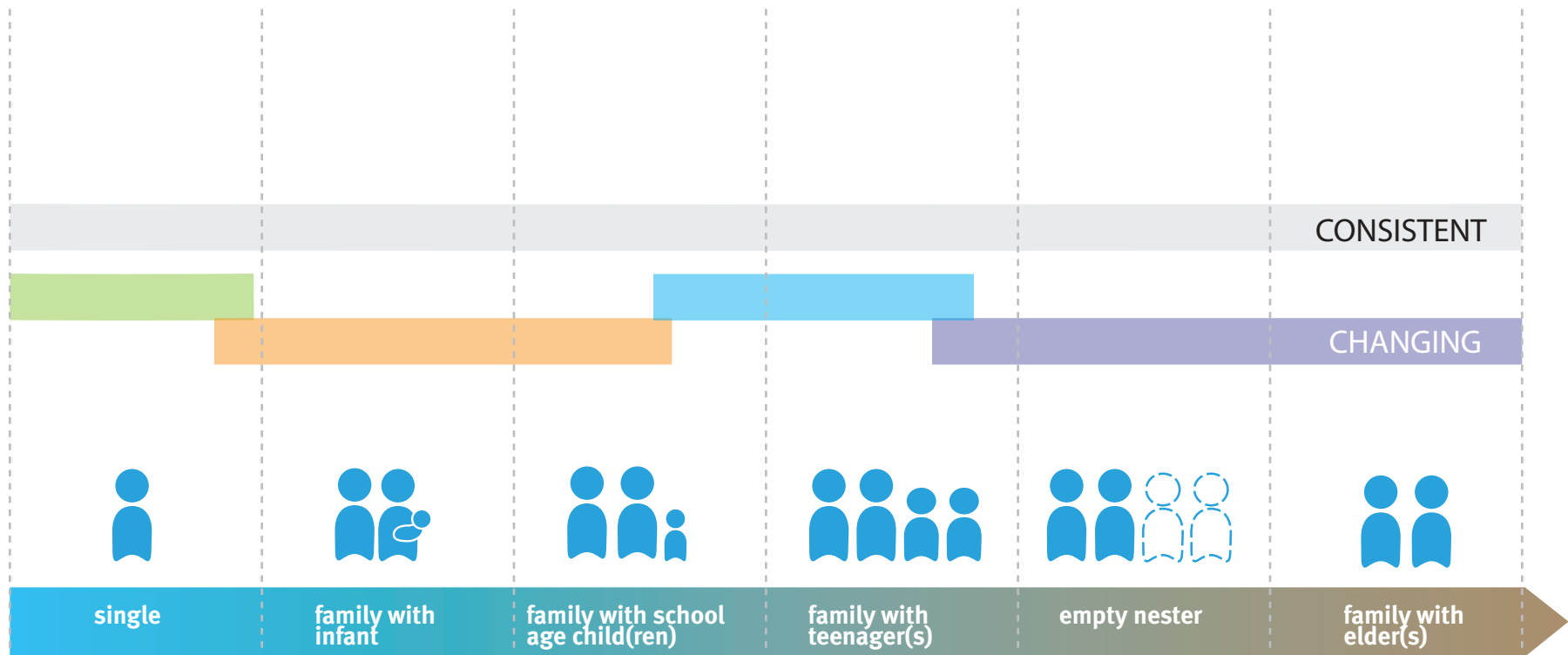


THAT REINFORCE **loving relationships**

TERRITORY MAP

DEFINITION OF FAMILY

After several brainstorming sessions, we settled on a definition of family and created a map of areas to explore through research.



TARGET AUDIENCE

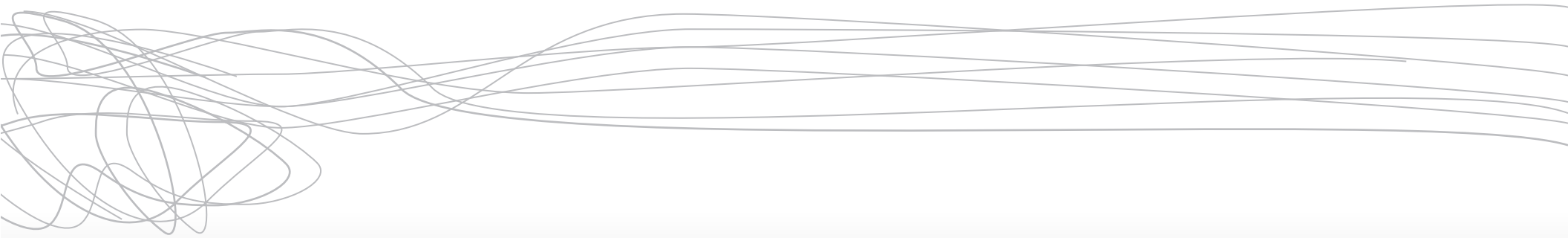
FAMILY LIFECYCLE

We set out to look at the whole family lifecycle in order to discover what changes and what remains the same throughout the family's evolution.



RESEARCH

overview of methods
research target
observation
directed storytelling
touchstone tour





observation



touchstone tour



directed storytelling

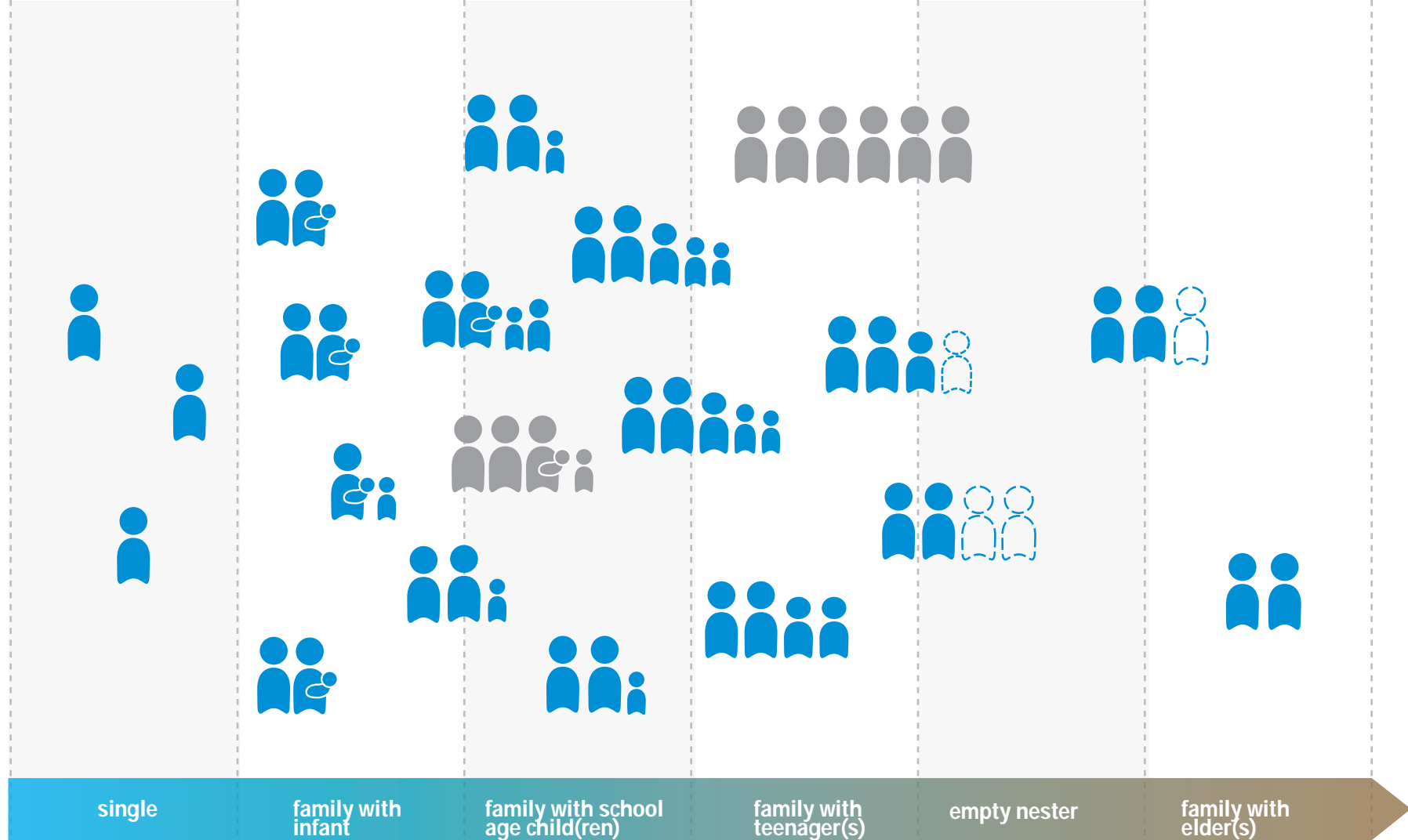


literature review

RESEARCH METHODS

OVERVIEW

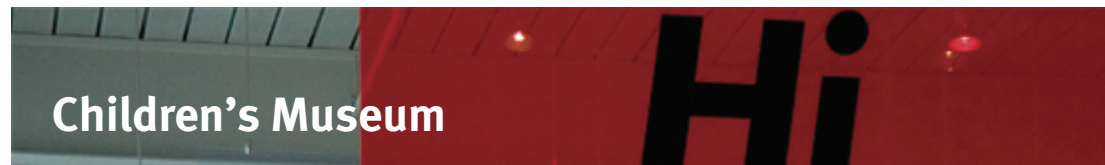
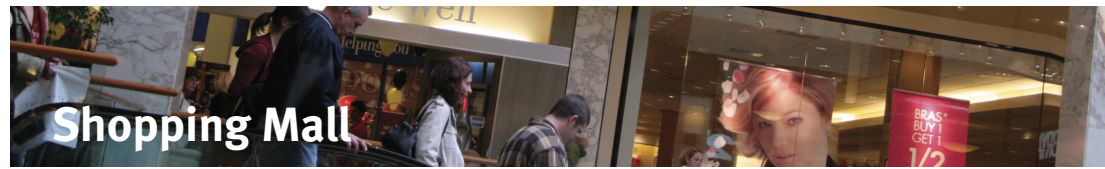
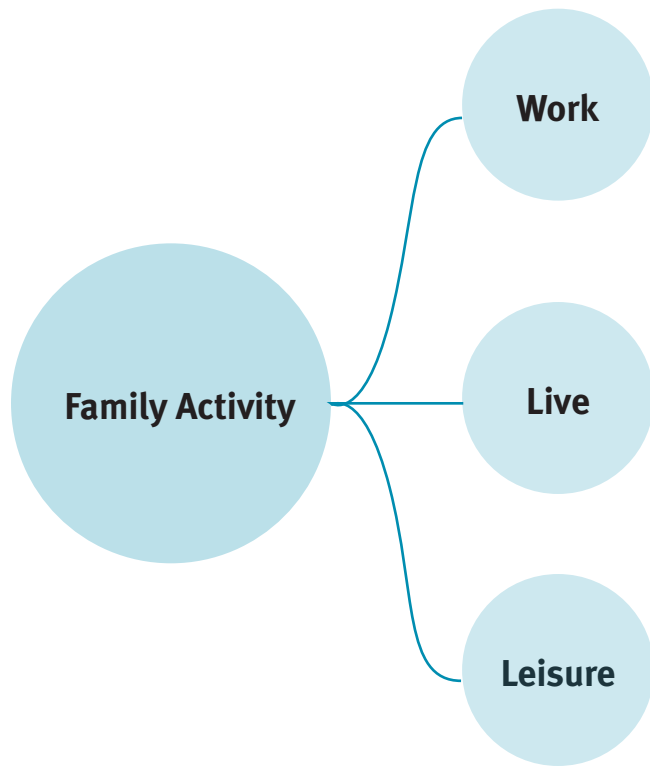
We employed a variety of methods in order to understand what families and family members say, make, and do.



RESEARCH TARGET

FAMILY PARTICIPANTS

We looked at 21 families at varying stages across the family life cycle. Analogous situations were examined to counterpoint primary research.



“ What do families do? ”

OBSERVATION WHAT FAMILIES DO

We observed families in diverse situations where they take part in different activities.

Value

- Who do you consider family?
- What object in your home best represents your family?

Activity

- Tell me about your most recent family activity.
- Describe the last time your family had fun.

Relationships

- Tell me about a time you felt close with your family.
- Can you describe a time when you felt distanced?



“ How do people describe their family connections? ”

DIRECTED STORYTELLING

WHAT FAMILIES SAY

We conducted directed storytelling interviews to discover what people think and feel about their families.



Daily Routine



Shared Activity



Use of Calendar

“What things are important to families”

TOUCHSTONE TOUR

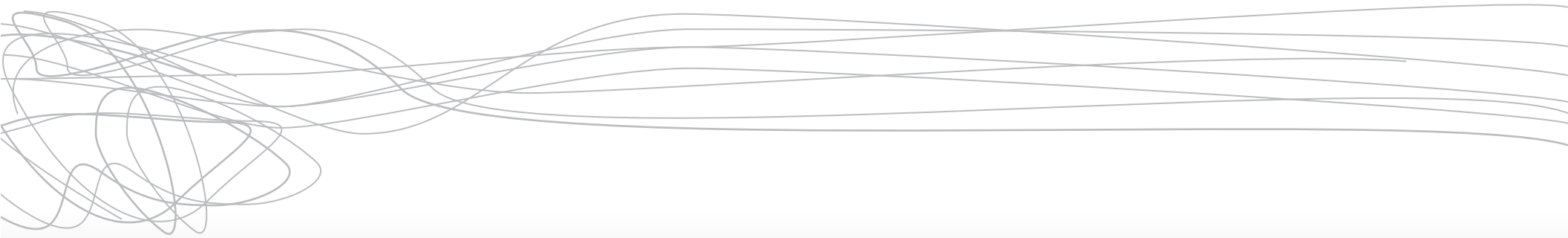
WHAT FAMILIES MAKE

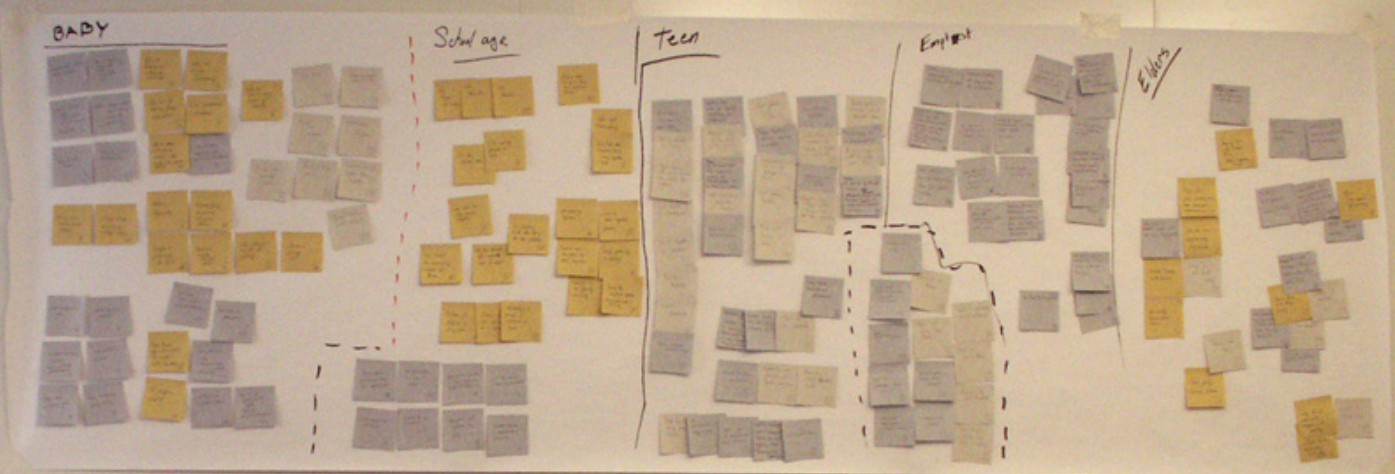
We asked family members to take us on a tour of their home, pointing out important objects and how they are used.



RESEARCH FINDINGS

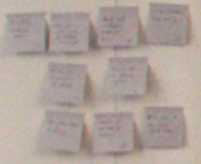
data
research insights
family stages findings
emerging themes





Single

Findings for all
 PHOTOS
 - CREATE/THEMATIC EVENTS & MILESTONES
 - PROMPTS FOR ABSENT FAMILY MEMBERS
 - PROMPTS FOR RELIVING MEMORY/PRESERVING ON VALUES/TRADITIONS



FINDINGS

- DISCONNECTED FROM CENTRAL FAMILY
- FEELS CLOSE TO SIB
- CLOSE FRIENDS LIKE FAM

Activity
 in-home/outside
 individual/family
 spontaneous/planned/negotiated
 kid focused/kid-obligated ref.
 active/inactive
 attention/intentional
 routine/sporadic

- DIFFICULT FINDING TIME/MAKING ROOM FOR INDIVIDUAL ACTIVITIES (PARENT)
- ACTIVITIES REQUIRE PROUD CHILD (AK)
- STRUCTURED ACTIVITY/ROUTINE → VALUE SPONTANEITY (P)
- IMPART FEELING OF SAFETY/AFFECTION → HUGS + KISSES
- SCHEDULED INTERACTION W/ OTHER ERS, EXTENDED FAMILY
- PHOTOS KEY - DOCUMENT GROWTH → CREATE MEMORIES/IMPRESSES
- GRANDPARENTS/EXT FAMILY WANT TO SEE THE BABY

NEGOTIATION
 SOCIAL SPACES
 PARENT/CHILD
 FAMILY/FAMILY
 INTENT/MODES OF COMM.
 LOGISTICS
 CONNECTION
 CONTENT DRIVEN/AFFECT

- ACTIVITY REVOLVES AROUND KIDS (A)
- KIDS INCREASED USE OF TECHNOLOGY
- MANY IN HOME ACTIVITIES → OUTINGS GENERALLY PLANNED
- PARENTS TIRED → ENTERTAIN KIDS VS PLAY WITH
- PHOTOS KEY - DOCUMENT MILESTONES
- SCHEDULED INTERACTION W/ OTHER KIDS/EXTENDED FAM
- EXPANDS AS A FAMILY (A) → SHOPPING
- BEGIN TEACHING SKILLS/TRADITIONS
- KIDS FORCED PARTICIPANTS → LOW AUTONOMY

• MORE AUTONOMY - LESS TENSION
 • COMMON ACTIVITIES INTERMITTENT
 • INDEPENDENCE
 • LITTLE NEED TO COMMUNICATE OPEN → SCHEDULED

- Family Dinners (F)
- DIFFERENT SPACES
- TEEN DESIRE FOR AUTONOMY CONTROL
- INCREASED TECHNOLOGY USE
- PARENTS DESIRE FOR FAMILY TIME - COORDINABLE → FEEL DISCONNECTED
- FEW COMMON ACTIVITIES - (A)
- EXTENDED FAM GATHERINGS BEING FAMILY CLOSER (F)
- NEGOTIATION NECESSARY
- BUSYNESS/LESS COMMUNICATION
- SACRIFICE/COMPROMISE
- TEEN INTERESTS
- TEEN WOULD RATHER SPEND TIME W/ FRIENDS → MOBILITY

• PARENTS SEE KIDS AS PEERS
 • SHARED SPACE IMPERIAL FOR INDIVIDUAL ACTIVITIES
 • RELIANCE ON TRADITION/HOLIDAYS FOR FEELING OF CLOSURE
 • SCHEDULED COMMUNICATION

- RELIVING MEMORY THROUGH PHOTOS (A)
- KIDS & PARENTS MAKE EFFORT TO GATHER (P)
- INTRODUCTION OF NEW FAMILY MEMBERS → CAN CAUSE TENSION

Needs + opportunities

1. COLLABORATIVE ACTIVITY
2. WILLINGNESS TO PARTICIPATE (GROUPS)
3. SUPPORTS DIFF. LEVELS OF ATTENTION WHILE STILL FOSTERING CONNECTIONS
4. NON INVASIVE - PRIVACY - TRUST
5. CAPTURING THE MOMENT VS. (MOVING) SHARING AN EXPERIENCE (ACTIVITIES)
6. FOSTERING AUTONOMY/INDEPENDENCE
7. FUN/ENGAGING FOR ALL (Cool!)
 - 8. SUPPORT EXISTING TRAD. CREATE/REINFORCE
 - 9. REDUCING DISTANCE "ALIVE" - ORAL TRADITION - PHYSICAL/TECHNICAL
 - 10. KEEPING PEOPLE "ALIVE"

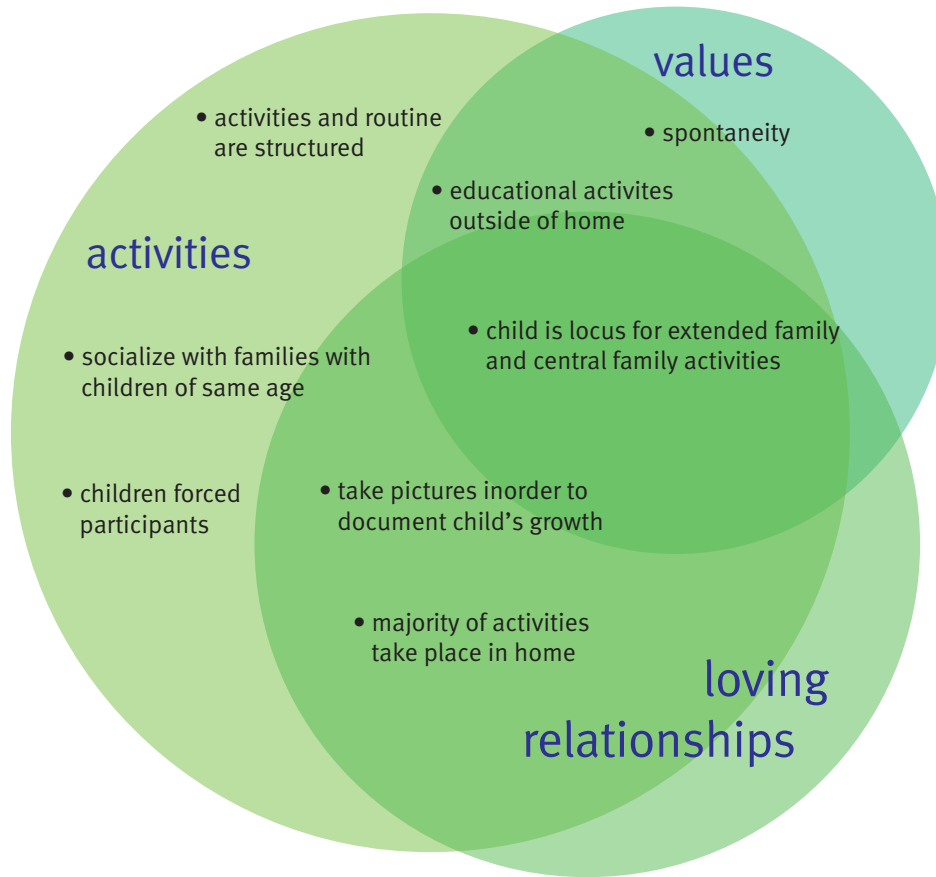
- Hotkey
- 1. CREATIVITY/OWN
- 2. SUPPORTING TEAM
- 3. NEGOTIATION

<p>Often feels disconnected from central family</p> <p>Feels close to sibling(s)</p> <p>Friends are like family</p> <p>Values independence</p> <p>Common family activities are intermittent and consist mostly of holidays and events</p>	<p>Activities of central and extended family revolve around new child</p> <p>Parents consider close friends as family</p> <p>Parents feel need for independence</p> <p>Parents have difficulty finding time/making room for individual activities</p> <p>Activities and routine are highly structured</p> <p>Interaction with other children and extended family is scheduled</p> <p>Value spontaneity</p> <p>Impart feeling of affection through frequent hugs & kisses</p> <p>Photos taken often to document growth of child</p>	<p>Activity revolves around children</p> <p>Many family activities are in-home: TV, radio, and board games</p> <p>Shared space sometimes used for individual activities.</p> <p>Parents are often too tired for activities outside the house</p> <p>Outings are planned</p> <p>Many outings are educational in nature</p> <p>Also run errands together, to grocery store or Costco</p> <p>Children are obligated participants</p> <p>Photos are central for capturing milestones in child's life</p> <p>Parents begin teaching child skills and traditions</p>	<p>Teen desires increased autonomy and control</p> <p>Teen would rather spend time with friends</p> <p>Parents desire family time and often feel disconnected from teen</p> <p>Few common activities, mostly scheduled around food or other basic needs; planned family dinners are prevalent</p> <p>Family members' interests differ significantly</p> <p>Negotiation is necessary for shared activities</p> <p>Technology separates family members, TV, computers, IM</p> <p>Communication is often businesslike, focused on check-ins and logistics</p> <p>Extended family gatherings bring family together</p> <p>Photo creation focuses on documenting milestones</p>	<p>Parents often see child as a peer or friend</p> <p>Sharing space is important even in individual activities</p> <p>Rely on traditions and holiday gatherings for feelings of closeness</p> <p>Communication between family members is often scheduled, weekly calls</p> <p>Photos are cherished for reliving memories</p> <p>Children and parents make the effort to gather</p> <p>Introduction of new family members can cause tension</p>	<p>Concerned with preservation of values, tradition, and family history</p> <p>Photos substitute for interaction with lost loved ones</p> <p>Children caring for their parents feel increased responsibility</p> <p>Children and parents both feel loss of autonomy</p> <p>Extended family gathers for holidays and events</p> <p>Family dinners continue</p>
single	family with infant	family with school age child(ren)	family with teenager(s)	empty nester	family with elder(s)

RESEARCH INSIGHTS

GATHERED INFORMATION

We compiled and distilled the data, pulling out key insights.



“...we played with Noah’s train set; we helped him build the tracks...”



family at the Children’s Museum

“...we drop her off at daycare together and then he continues to walk me to work...”



INITIAL FINDINGS

EARLY STAGE OF FAMILY

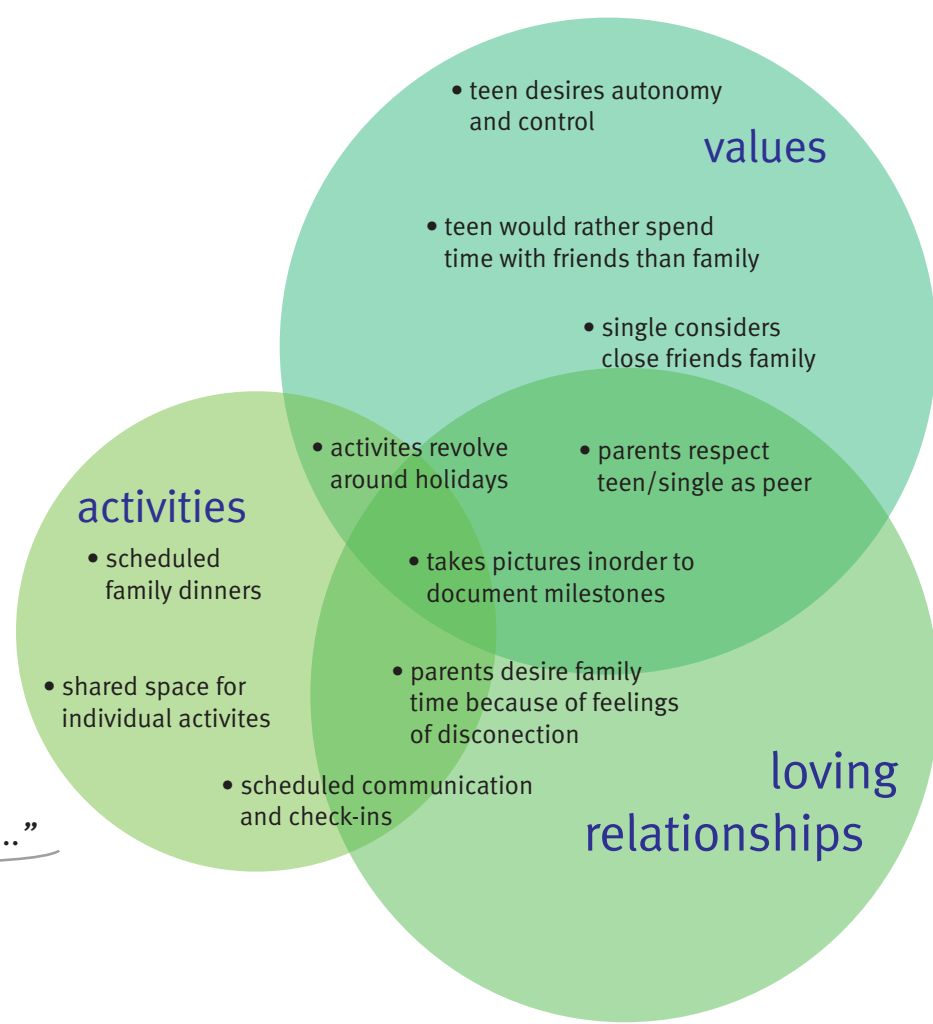
In the early stages of family life, shared activities predominate and revolve around the child. Photos are taken frequently, and parents often feel tired.



“...one of my cousins just had a baby so everyone gathered to see [the baby].”



“Today I talked with my older son... every Sunday he calls...”

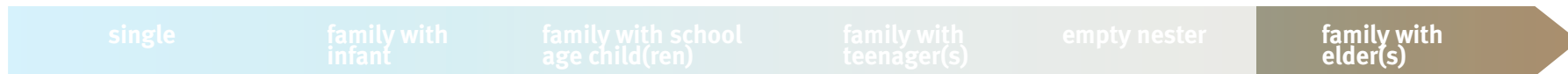
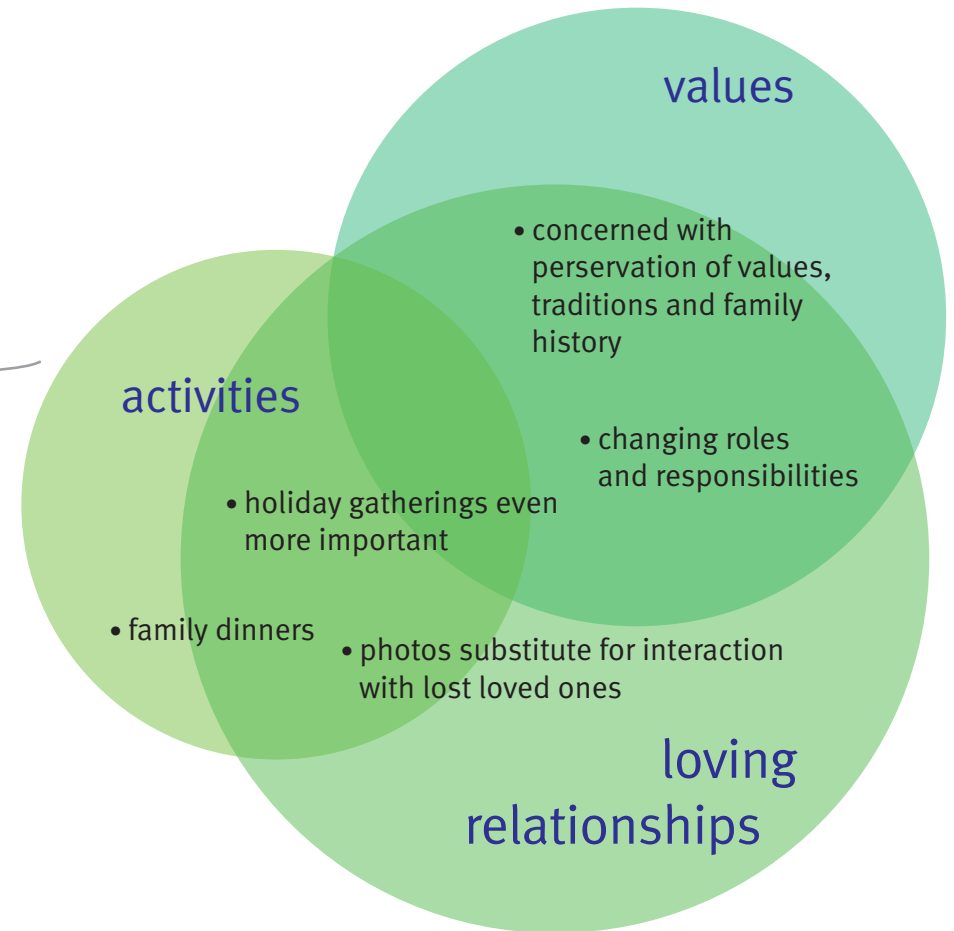


INITIAL FINDINGS

MIDDLE STAGE OF FAMILY

The middle stage of family life is marked by diverging interests and an increased need to schedule shared activities and communication.

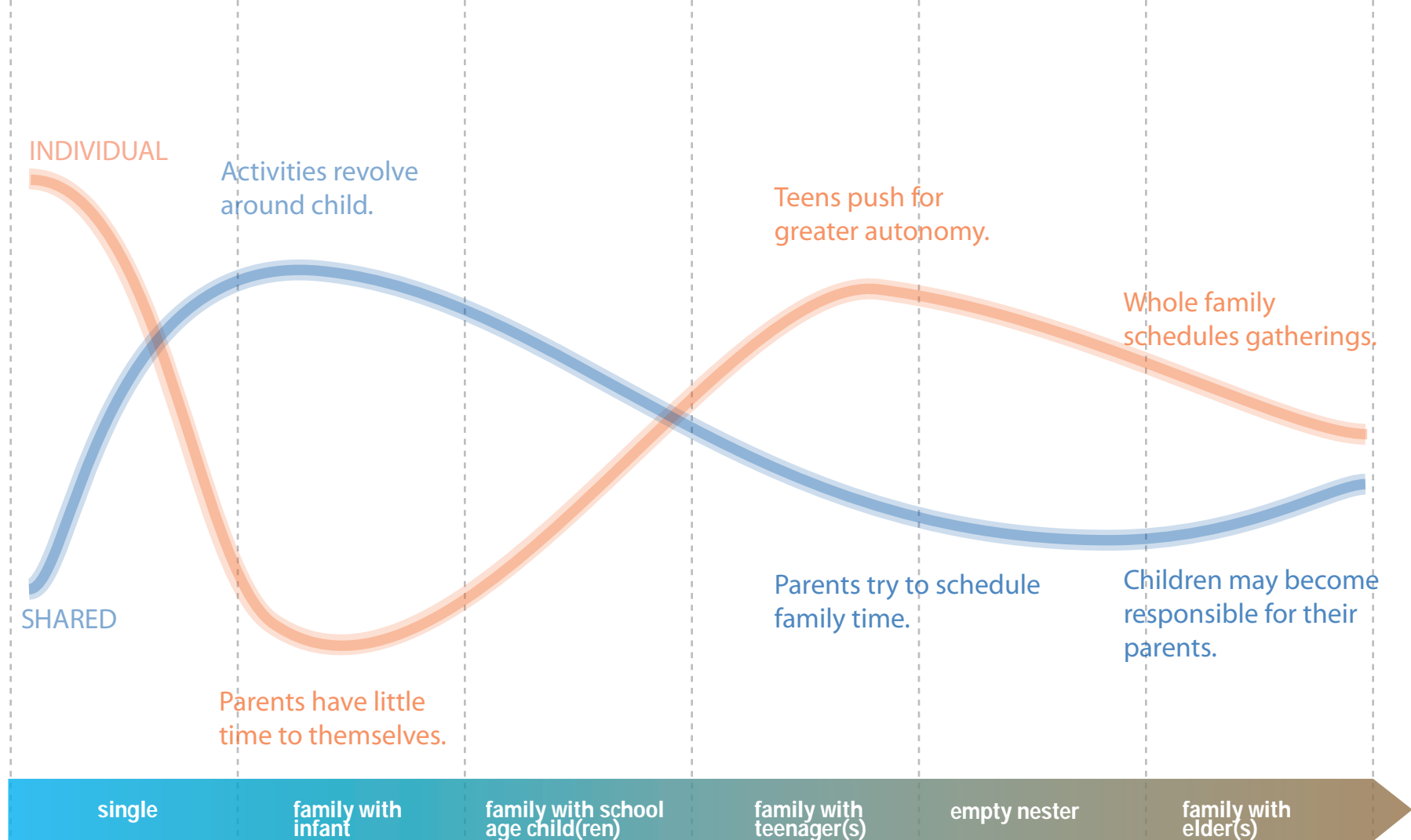
“My father and his brothers all owned kosher butcher shops in Pittsburgh...”



INITIAL FINDINGS

LATER STAGE OF FAMILY

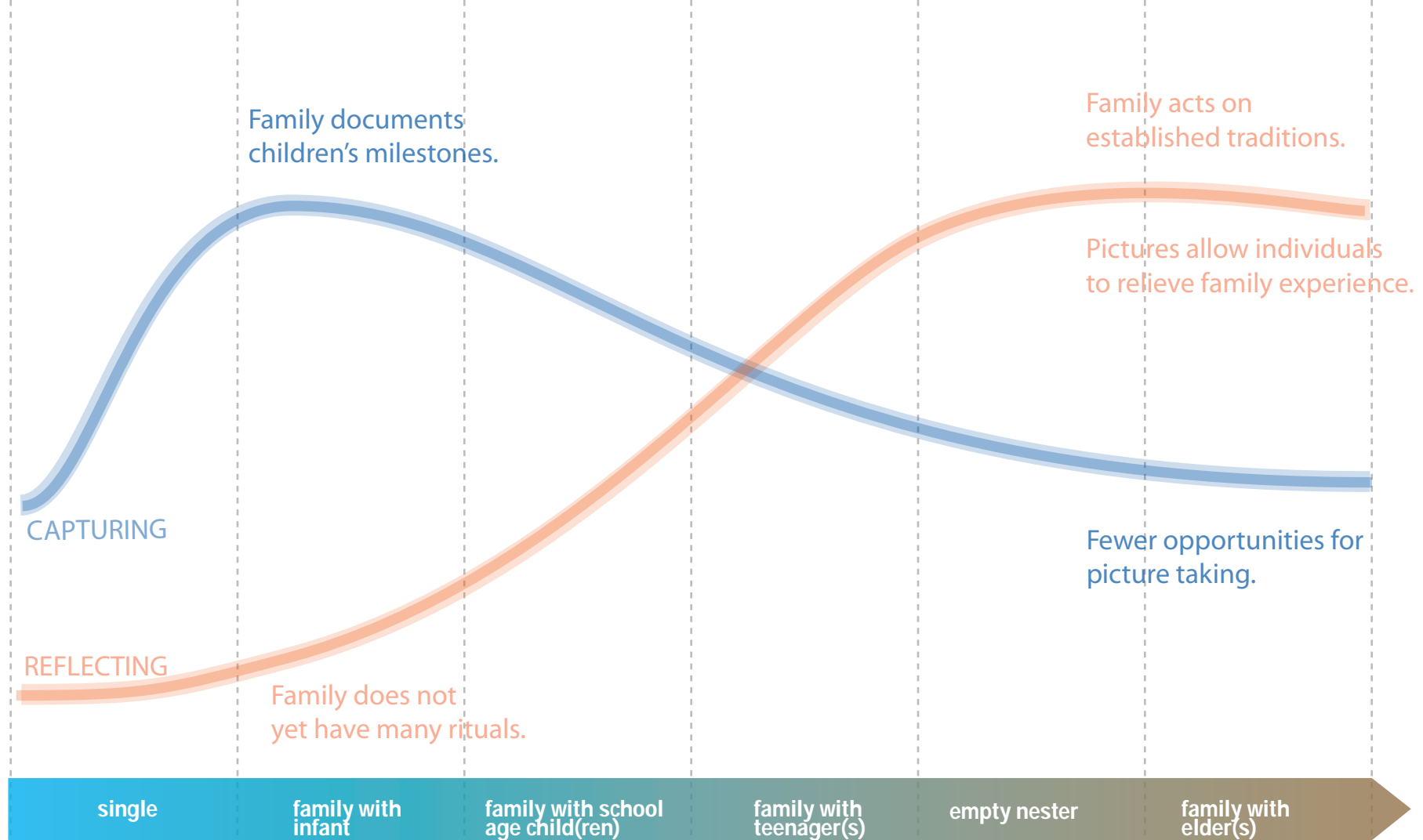
As families grow older, children take on increased responsibilities. Relationships are reinforced through family gatherings, traditions, and cherished mementos.



FAMILY ACTIVITIES

SHARED vs. INDIVIDUAL

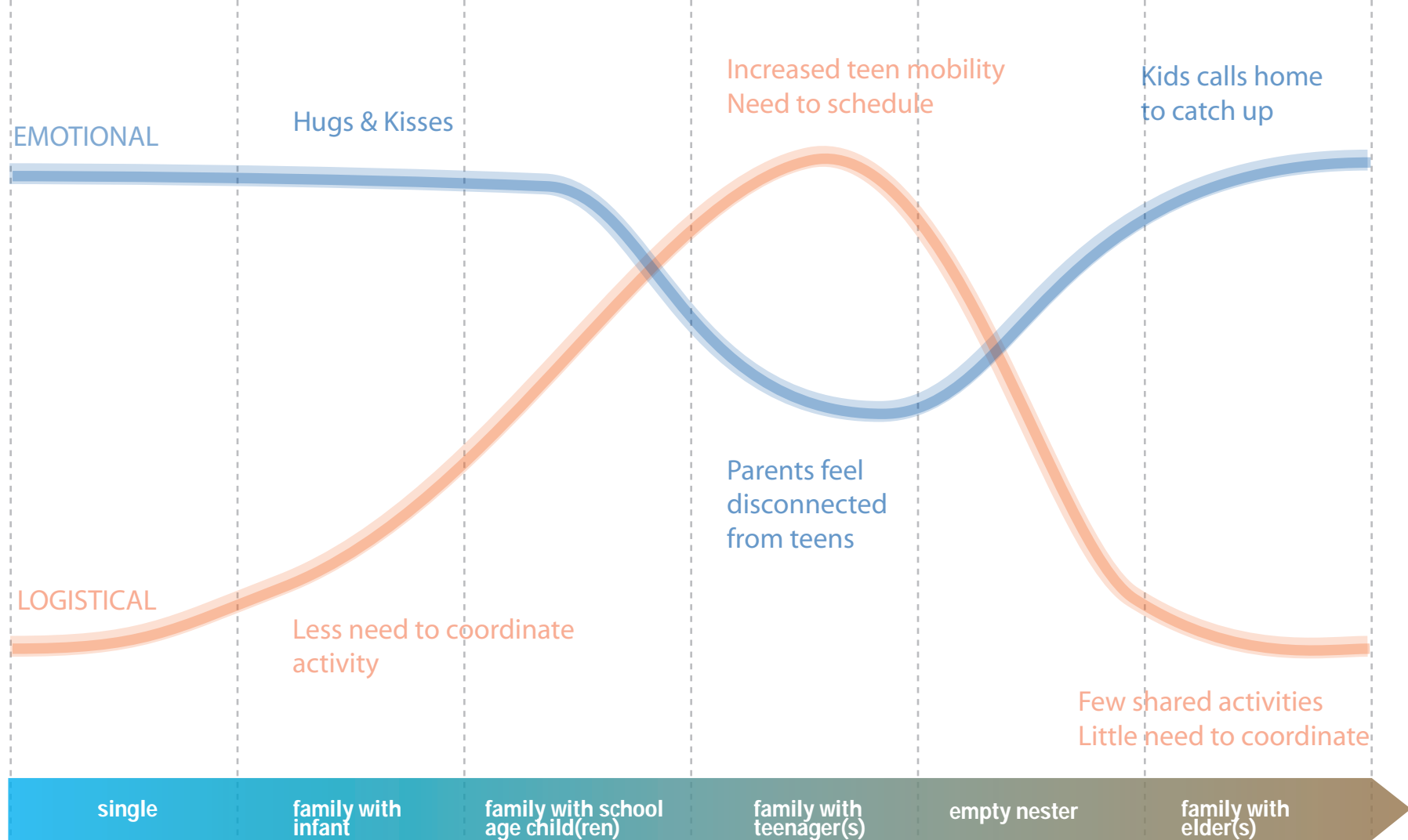
Frequency of individual and shared activity shifts through the stages of family life. When a baby arrives, individual activity drops drastically; by the time children reach their teens, individual activity surpasses family time. In later stages, shared activity again becomes increasingly important.



PHOTOS & MEMENTOS

CAPTURING vs. REFLECTING

Over time, family focus shifts away from creating traditions and capturing moments. Created artifacts are prized in later stages for their power to evoke past experiences.



COMMUNICATION

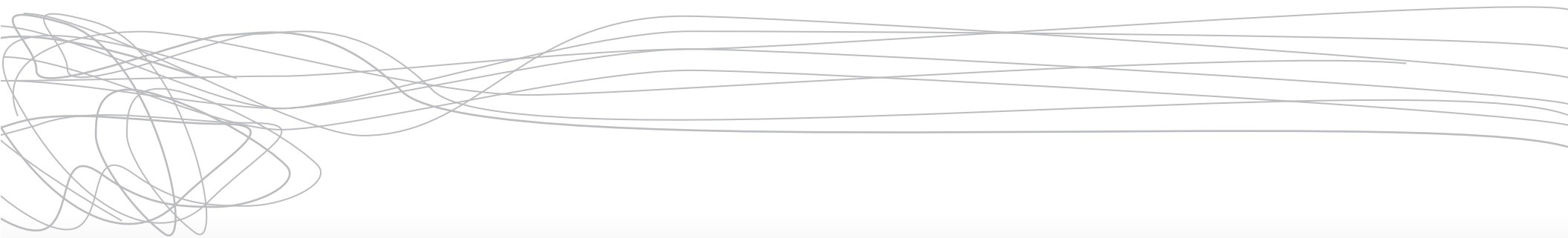
EMOTIONAL vs. LOGISTICAL

Family communication takes many forms.



DESIGN IMPLICATIONS

needs & opportunities
opportunity map
competitive landscape
technology map
next steps



Individual & Family Identity

Foster healthy balance between **family and individual identity**
Maintain **sense of family** while **respecting individual interests**
Allow for **individual** and **collective creativity**
Facilitate **compromise**

Motivation For Activity

Increase **desire to participate**
Promote togetherness for its own sake
Support **connection** through active or passive **involvement**
Engage and **be enjoyable** for all
Strengthen family bonds through **active making**
Build **trust** by maintaining **comfortable levels of communication**

Spanning Distances

Promote **closeness across distances** (physical, emotional, generational)
Allow for **collaboration across space and time**
Support rich **remembrance of ancestors and lost loved ones**

Creating & Reliving Memories

Foster sense of family identity through **preservation and creation of traditions**
Allow for the **spontaneous capture of memories**
Enable the **reliving of emotion and experience** through artifacts

Overall

Facilitate **changing needs as families grow**

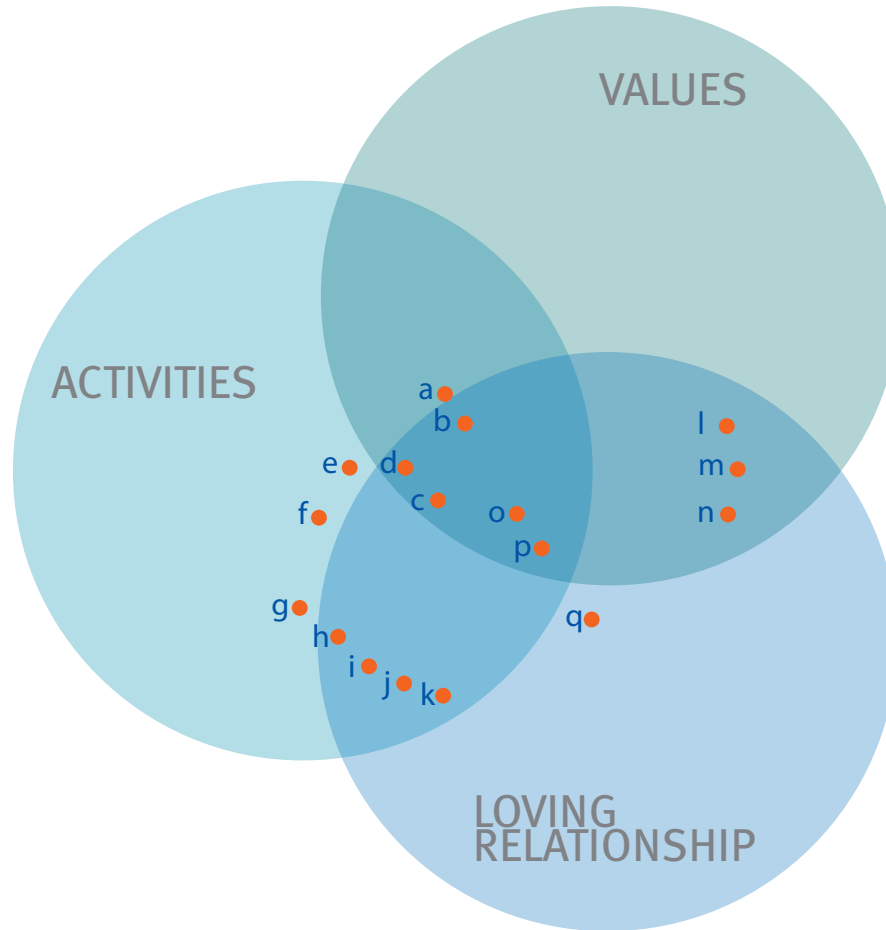
NEEDS & OPPORTUNITIES

OVERALL THEMES

From the needs and opportunities we identified, the four themes of individual and family identity, motivation for activity, spanning distances, and creating and reliving memories emerged.

- a. enable the **reliving of emotion and experience** through artifacts
- b. **engage and be enjoyable** for all
- c. increase **desire to participate**
- d. **facilitate changing needs** as families grow
- e. foster family identity through **preservation and creation of traditions**
- f. allow for the spontaneous **capture of memories**

- g. support connection through **active or passive involvement**
- h. enable **rich remembrance** of ancestors and lost loved ones
- i. **promote togetherness** for its own sake
- j. strengthen **family bonds through active making**
- k. allow for **collaboration** across space and over time



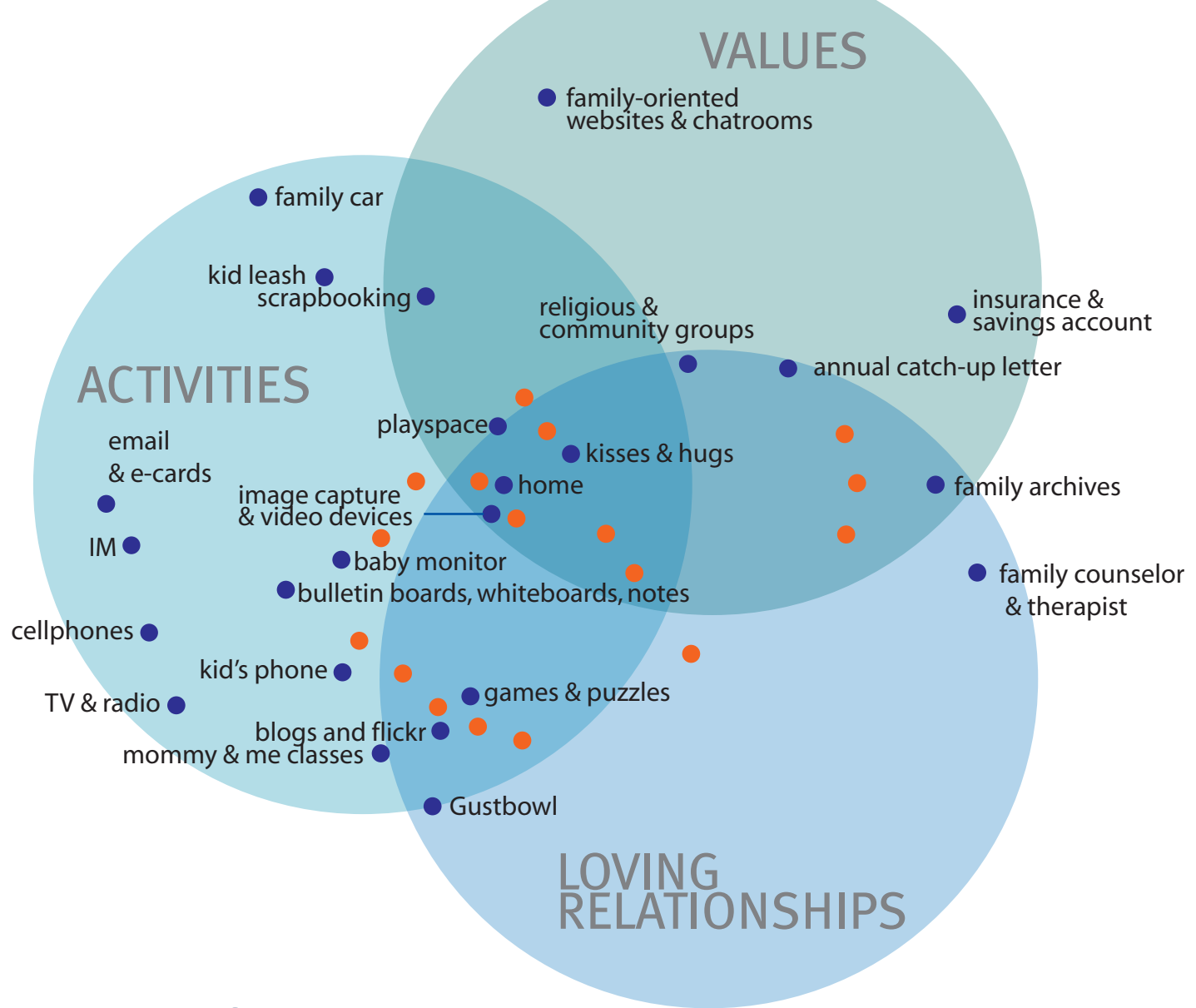
- l. foster healthy balance between **family and individual identity**
- m. **build trust** by maintaining comfortable levels of information sharing
- n. **maintain sense of family** while respecting individual interests

- o. allow for **individual and collective creativity**
- p. **promote closeness** across distance: physical, emotional, and generational
- q. **facilitate compromise**

“*Our solution for enhancing family connections might...*”

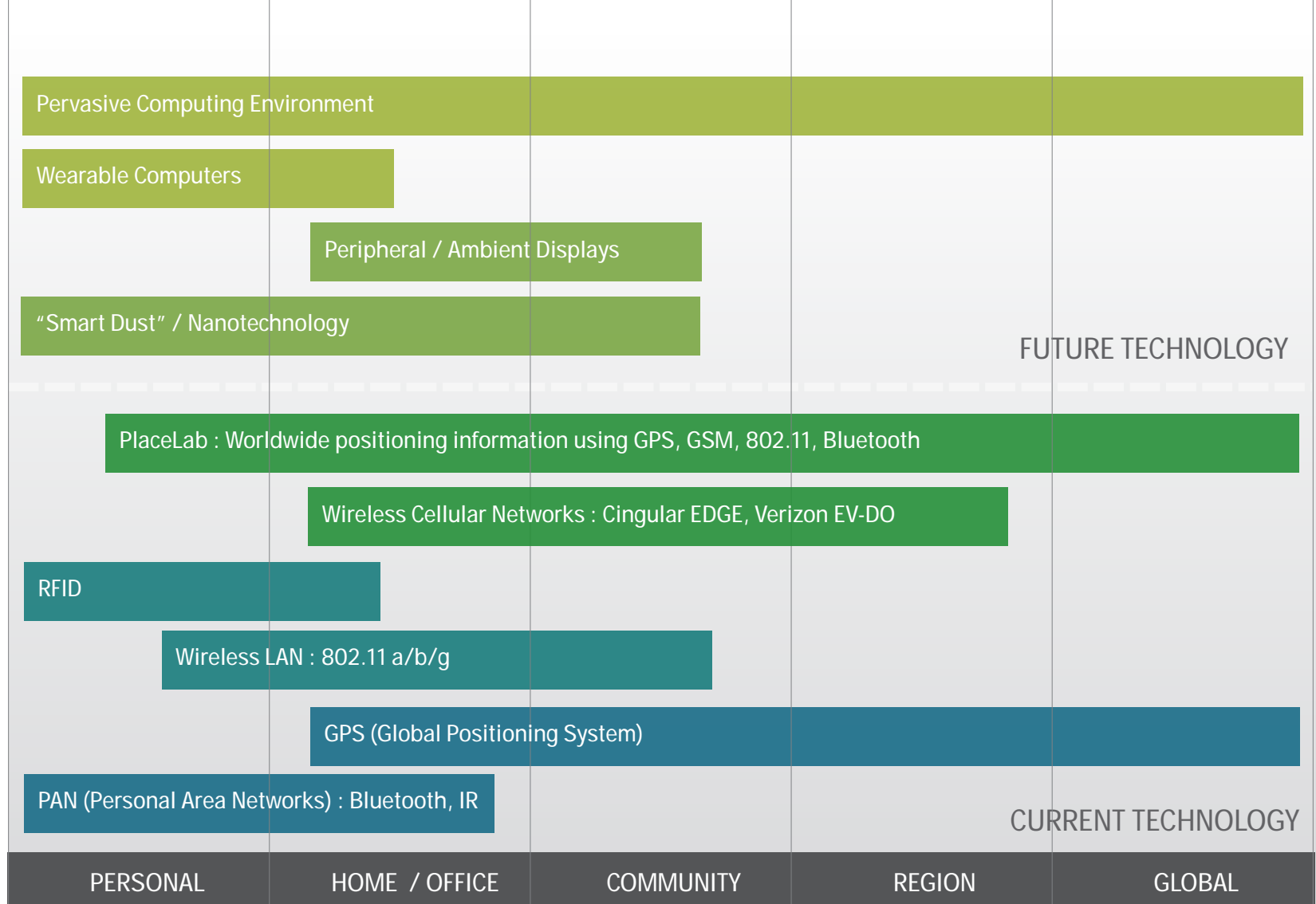
OPPORTUNITY MAP

ROOM FOR IMPROVEMENT



COMPETITIVE LANDSCAPE

WHAT'S OUR THERE



TECHNOLOGY MAP

WHAT IS POSSIBLE

We researched current and potential technologies, and mapped them according to the physical spaces they exist in and effect.

Our solution will use

non-verbal communication

to allow family members to

express real-time emotion

and create enduring memories.

The solution will

provide for enhanced expression and awareness of emotions and activities of individual family members

add emotive and memory-based dimension to the home and surrounding environment

create a platform for fun, shared activity, even across distance

MISSION STATEMENT

THE BIG IDEA

Enhanced Family Awareness



Elizabeth has not heard from her son Brad in a week. He missed their normally scheduled Sunday night phone call. She's not too worried, though; she sees he's just stressed out. It must be finals time she thinks. Elizabeth sends Brad a sign of her affection and support to help him through the tough part of the semester.

Fun Collective Activity



Bobby arrives home from school, throws down his backpack, and heads to his room to play some video games. On his way, he sees that mom has left a kiss for him; she'll see him at dinner. After dinner, they spend some time together, sifting through last fall's little league memories and laughing as they make new ones.

Emotive Environment Augmentation



After her weekly bridge game, Sylvia realizes that her daughter, Michelle, and son-in-law, Tom, have made an update. Sylvia and her husband, Fred, sit down after dinner to see the new additions. "Looks like little Adam is going to be walking soon," chuckles Fred. Remembering Michelle's first wobbling steps, they are able to share the pride and excitement while reminding their daughter of her own childhood experiences as well.

SCENARIOS EXPLORING THE IDEA

Our solution has numerous implications for family life. These scenarios address the key areas and opportunities uncovered by our research.



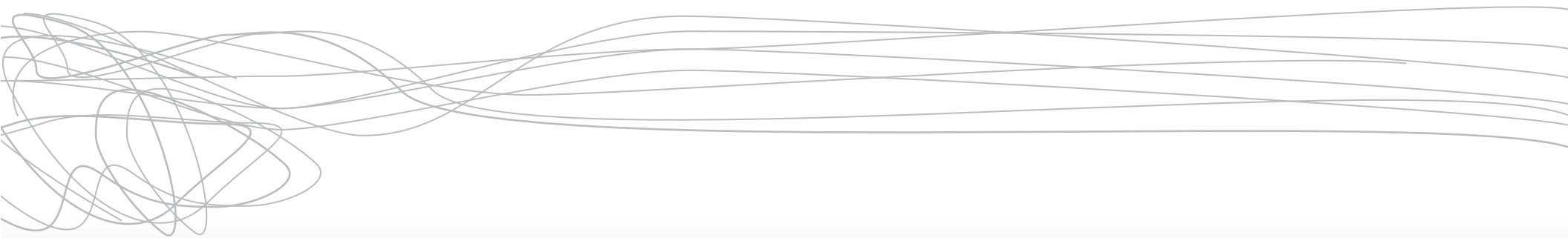
NEXT STEPS

Validate identified needs

Conduct participatory design session

Generate concepts

Create and develop scenarios of use



● **THANKS !**

