

# Smart object for people to care for

A common condition in many families

Many **older people** with mild reduced cognitive abilities live alone and far from their loved ones. Smartphones are **too difficult** for them to use, and relatives struggle to leave **helpful directions** or simply **messages of support**.

Examples of people with these characteristics are: initial stages of senile dementia, first symptoms of Alzheimer's, post-stroke recovery phase.

["Living Alone Puts People with Cognitive Decline at Risk"](#)

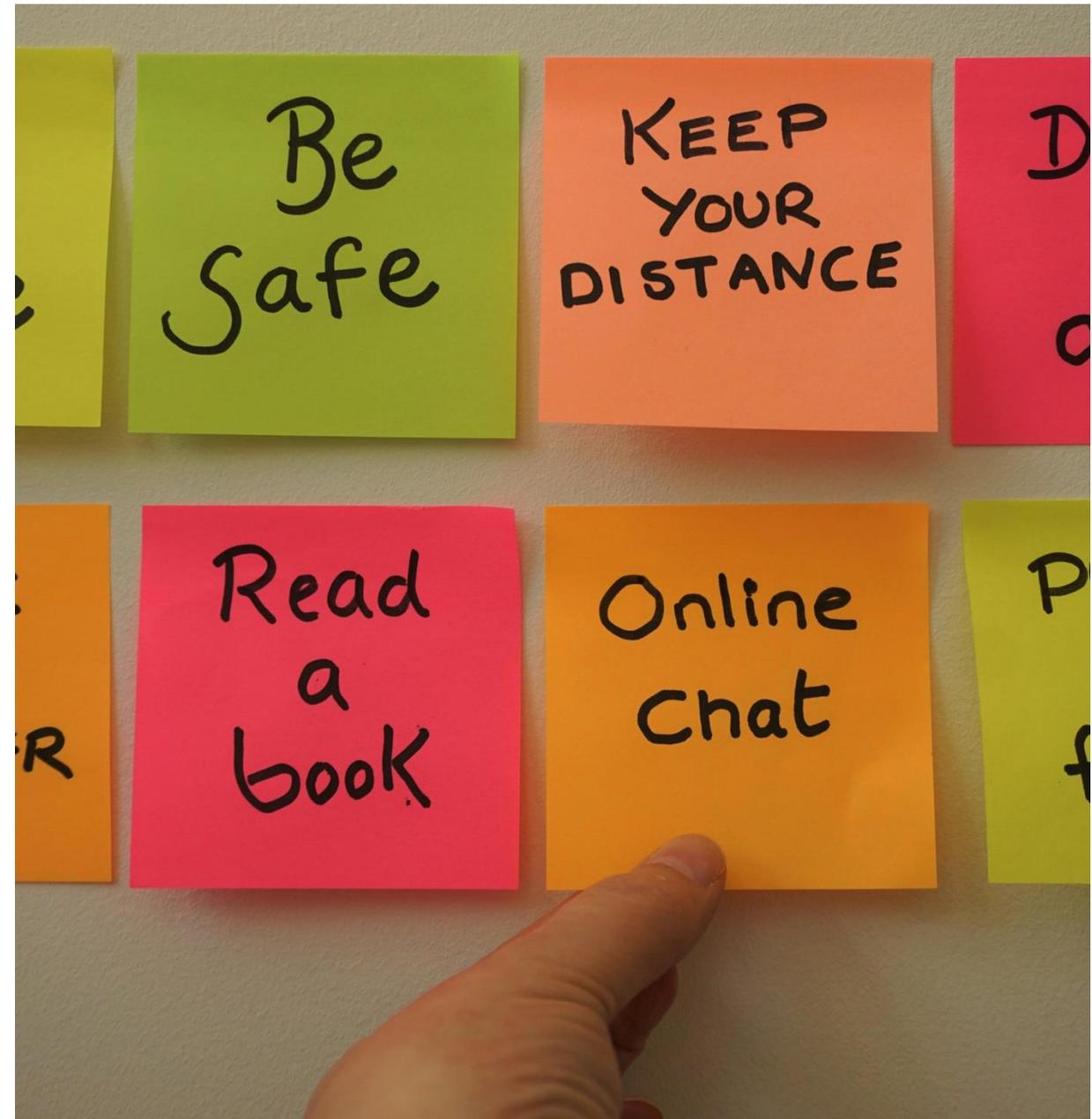
["A Systematic Review of Smartphone and Tablet Use by Older Adults With and Without Cognitive Impairment"](#)

We imagined a tech object that could help the elderly in these conditions

Based on our considerations, the object must have these characteristics:

- it must have a need for **minimal interaction and maintenance** by the elderly person
- it does not require **constant attention** from the caring relatives
- it must **integrate organically** into the domestic environment
- it must have a **low cost**

This product must fit into the philosophy of [Calm Technology](#) according to Amber Case



# Introducing



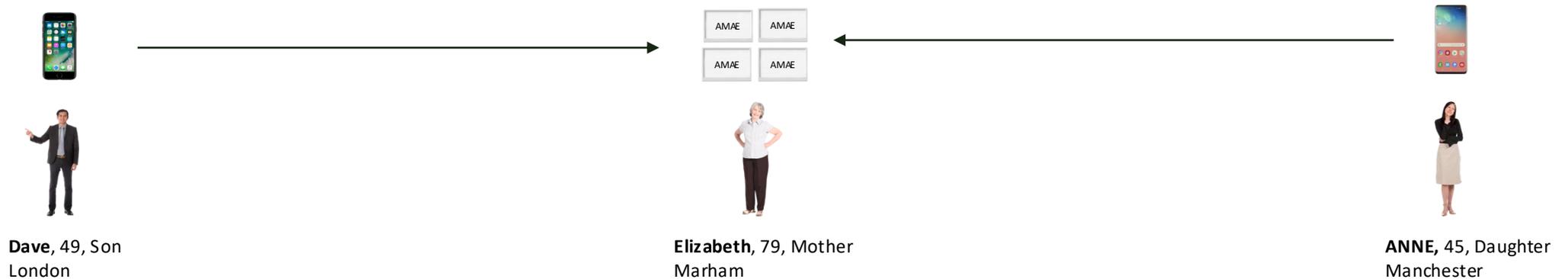
## Amaé 甘え

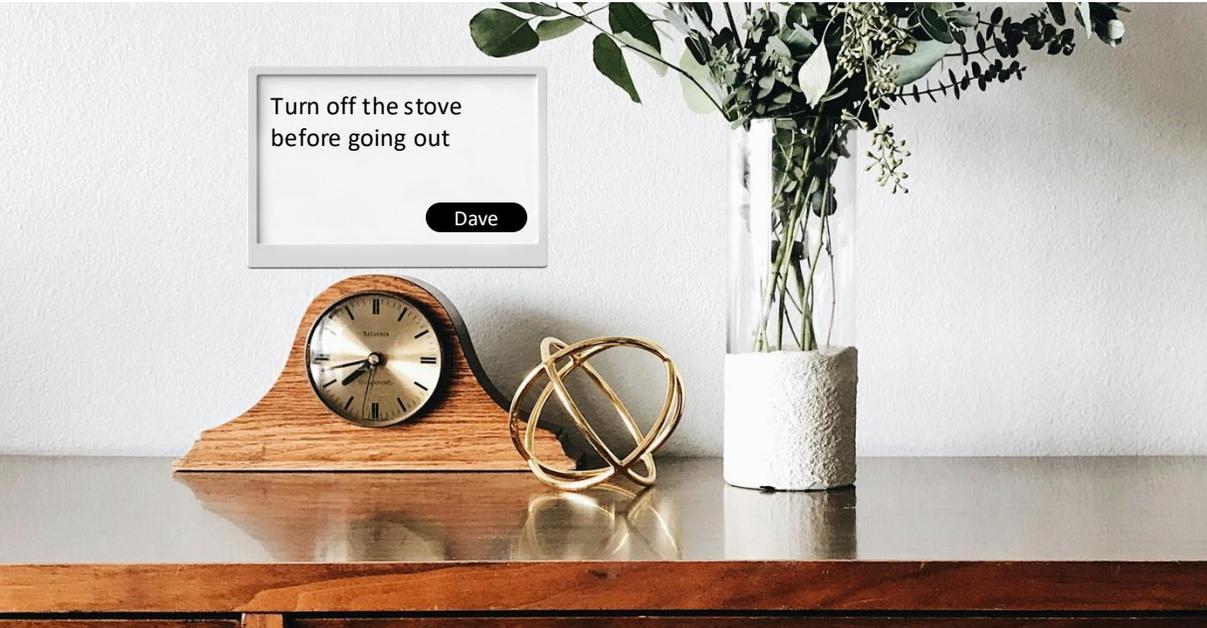
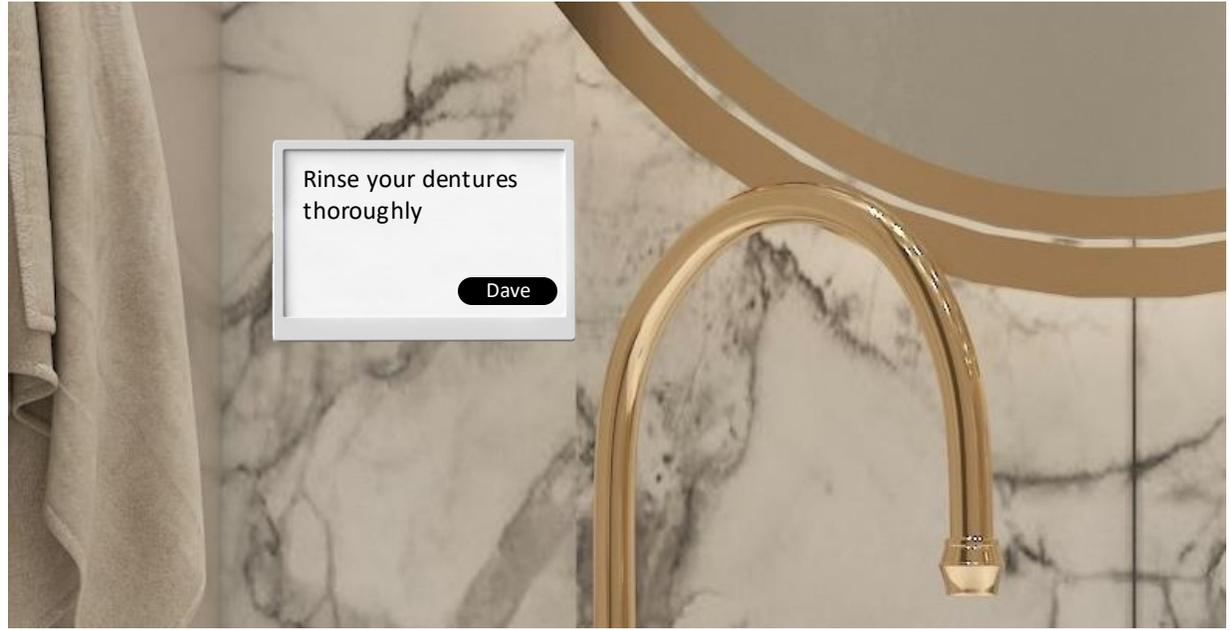
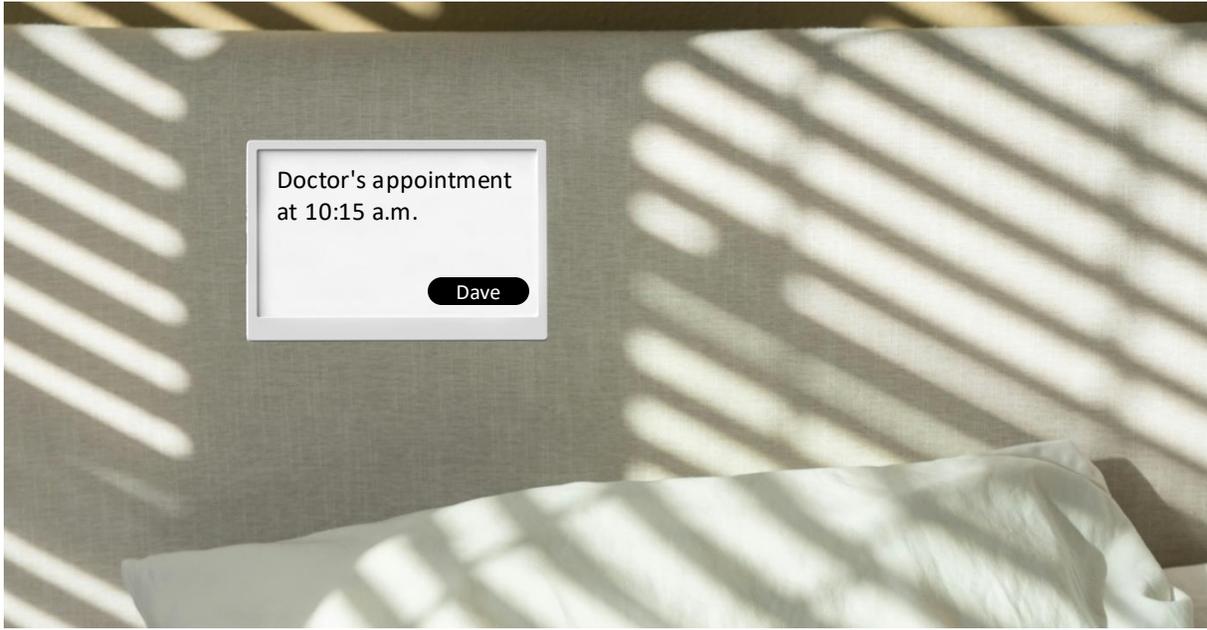
Amae is a Japanese term used to describe behavior and emotion which can be translated as “indulgent love” and is related to acting like a spoiled child.

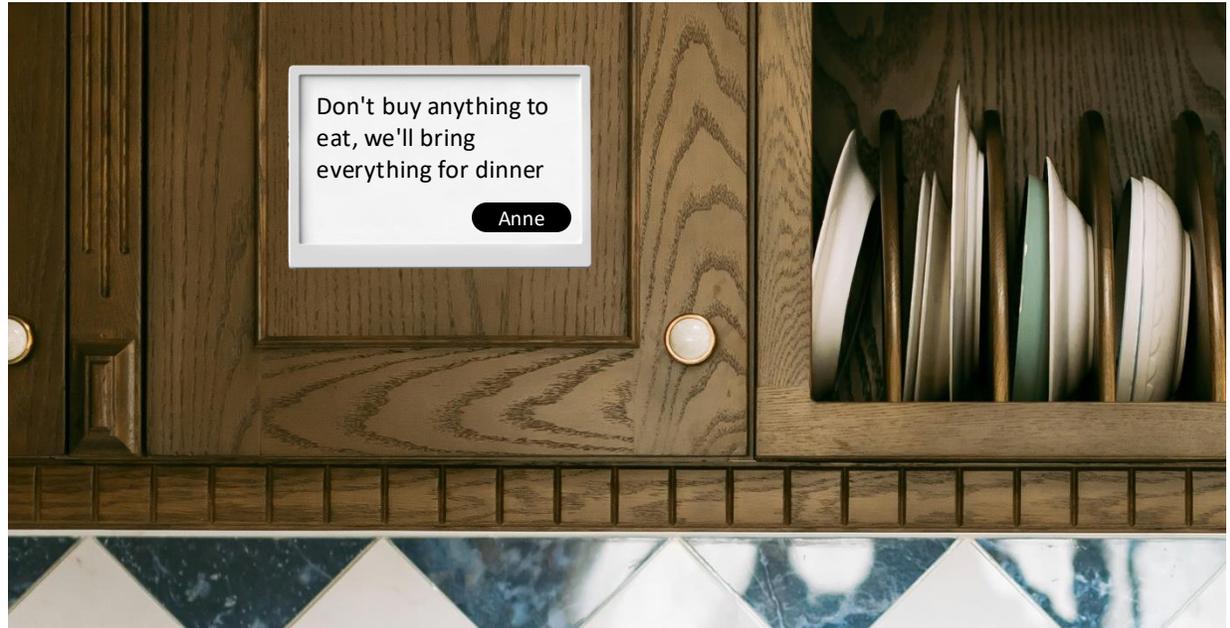
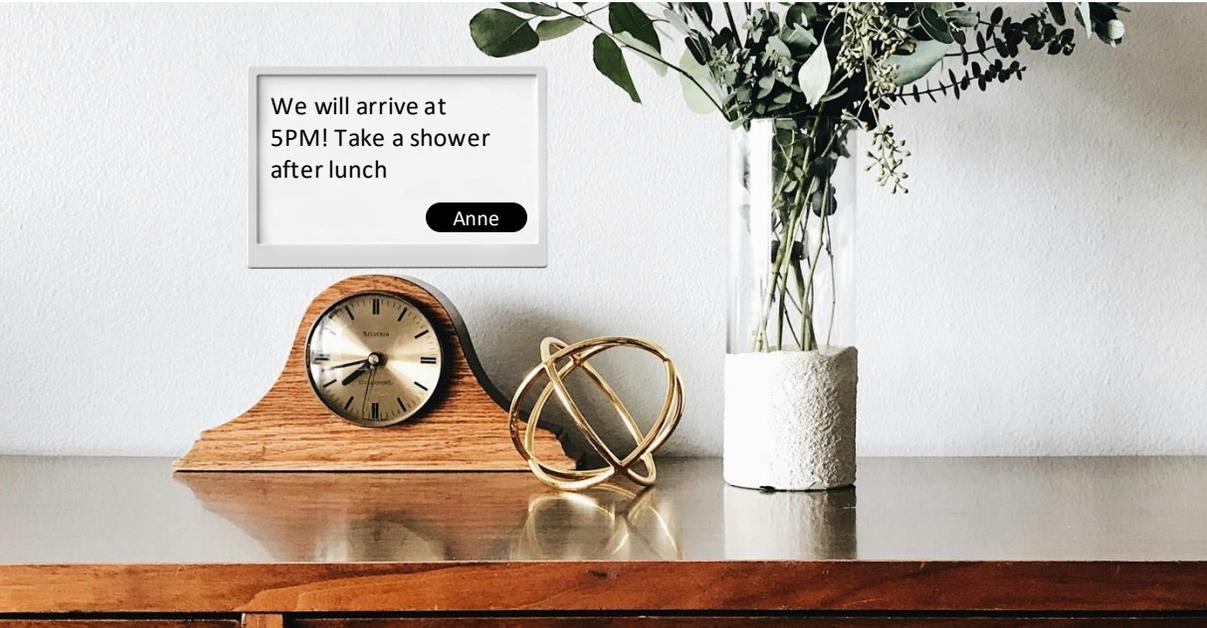
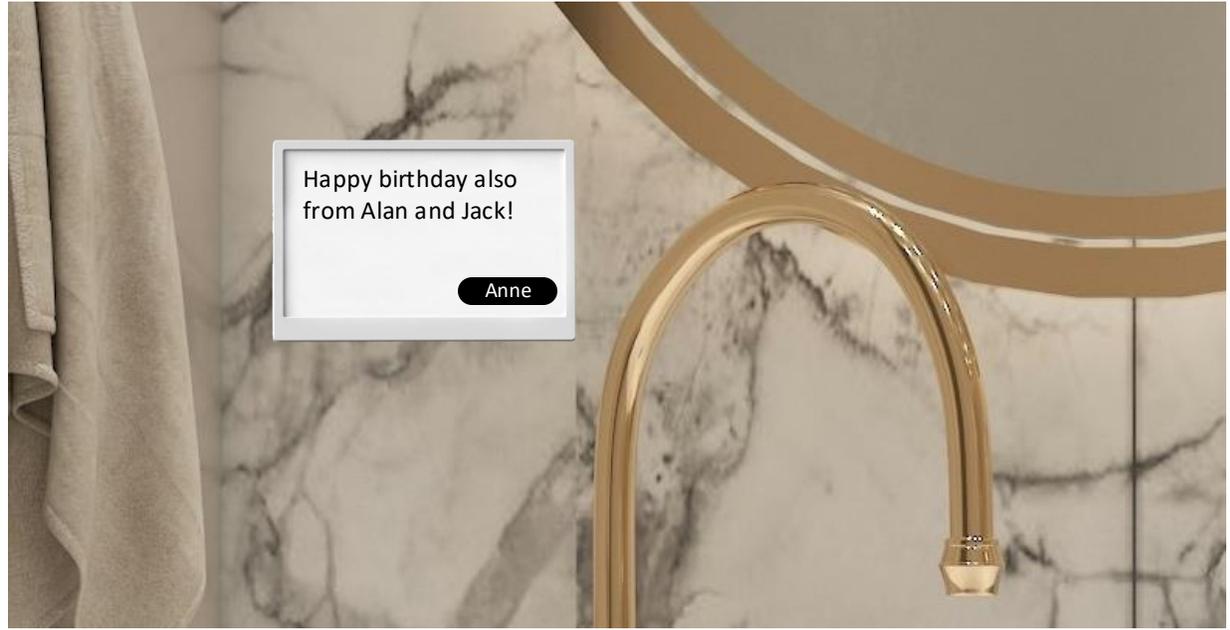
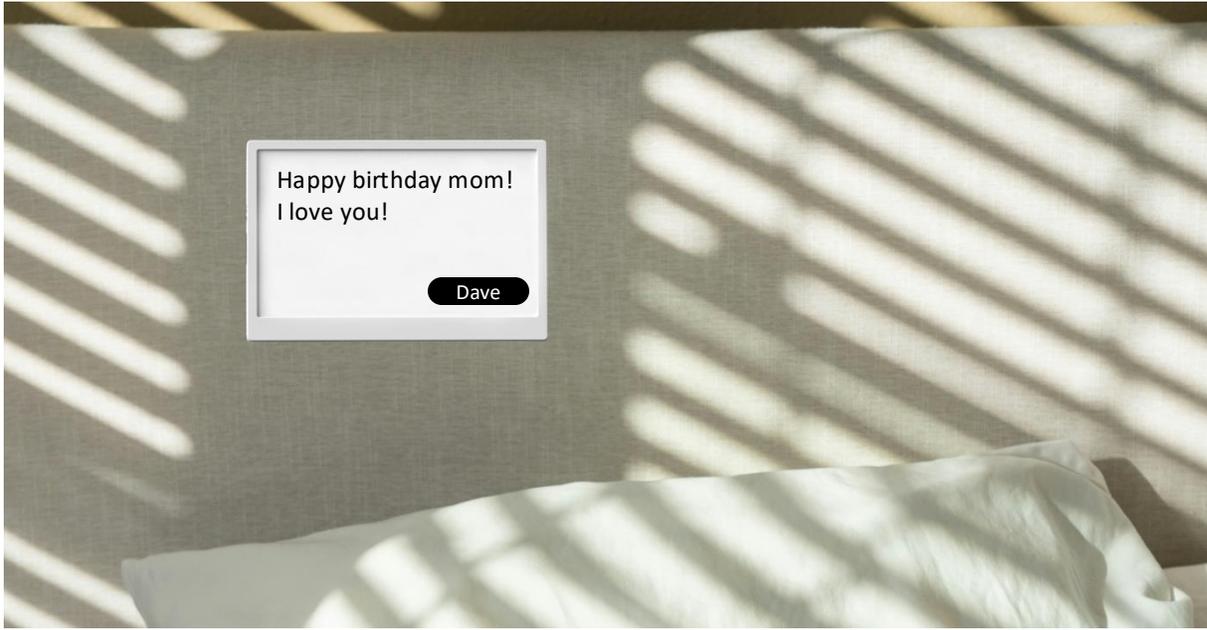
[Intercultural Word Sensei. What is amae?](#)

## The Amae concept

Several Amae displays are positioned in visible points in the rooms inhabited by the elderly person. Relatives send messages through an app that are useful for guiding the elderly person in his activities or making him feel less alone.

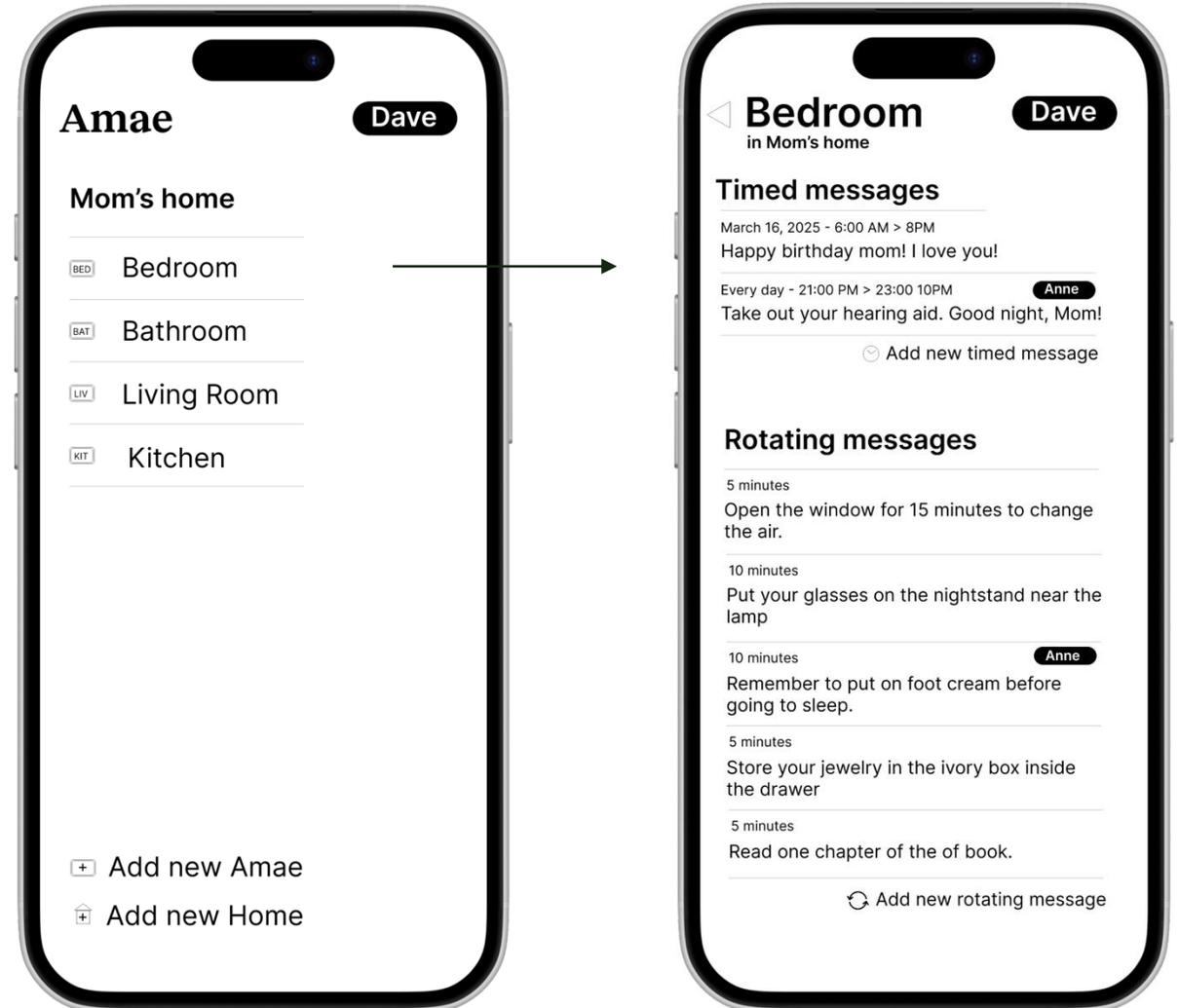






# A complete app for managing messages

- The smartphone app allows relatives to independently manage messages on the **various rooms** where an Amaé is installed.
- You can create a type of messages that appear and last a **predetermined time**, or you can write messages that appear in **rotation** based on a definable duration.
- The app allows **multi-user management** of messages so that all relatives have the possibility of communicating with the elder.



# Simple and versatile tool for a wide range of use cases

## Daily Safety & Care

### Medication Management

- "Time for your morning pills - they're in the blue container"
- "Don't forget your blood pressure medication after breakfast"
- "Dr. Smith said to take the white pill twice daily"

### Home Safety

- "Check that the front door is locked before bed"
- "Turn off the stove burner - the red light should be off"
- "Don't answer the door unless you're expecting someone"
- "Close the windows - rain is coming this afternoon"

### Daily Routines

- "Good morning! Breakfast is ready in the fridge"
- "Time for your afternoon walk around the block"
- "Put on your reading glasses - they're on the nightstand"

## Health Management

### Appointment Reminders

- "Physical therapy at 2 PM today - wear comfortable shoes"
- "Eye doctor appointment tomorrow at 10:15 AM"
- "Blood test results are ready - call Dr. Wilson"

### Health Monitoring

- "Please check your blood sugar and write it down"
- "Drink more water today - you haven't had much"
- "Use your inhaler if you feel short of breath"

## Social Connection

### Family Communication

- "Sarah called - she'll visit this weekend"
- "Happy anniversary! 52 years of beautiful marriage"
- "Grandchildren's school play is next Thursday"
- "Your bridge club moved to 3 PM today"

### Emotional Support

- "We love you and think about you every day"
- "You raised wonderful children - we're so proud"
- "Remember you're never alone - we're always here"

## Emergency & Urgent Situations

### Weather Alerts

- "Storm warning - stay inside until 6 PM"
- "Icy roads today - don't go outside"

### Important Updates

- "Power outage expected - flashlight is in kitchen drawer"
- "Water will be shut off from 2-4 PM today"

## Special Occasions

### Celebrations

- "Happy 80th birthday! Party starts at 4 PM"
- "Easter dinner is at Anne's house at 1 PM"
- "Your favorite cake is in the fridge for your birthday"

### Seasonal Reminders

- "Daylight saving time - clocks spring forward tonight"
- "First day of spring - flowers are blooming!"

# Technical specifications and costs hypothesis

## 1. E-ink Display:

- Type: Graphical e-ink display, similar to those used in electronic shelf labels (ESL).
- Size: 2.13 inches for home use.
- Cost: Approximately \$11-\$22 per unit, depending on the supplier and size.

## 2. Battery:

- Type: Long-lasting batteries, similar to those used in ESL labels (up to 1 year).
- Cost: Approximately \$1-\$3 per battery, depending on capacity and type.

## 3. Control Board with Wi-Fi Module :

- Type: Microcontroller like Arduino or Raspberry Pi Pico to manage the labels.
- Cost: Approximately \$10-\$30 per board, depending on the model and features.

The total cost per Amae components could range from **\$21 to \$55**, depending on component choices and suppliers.



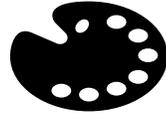
# Possible future technical developments

In addition to the MVP already sufficient for market launch, we imagine possible evolutions of the product based on user requests.



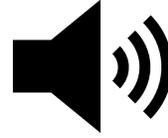
## Bigger screen

There are many sizes of e-ink screens up to 40 inches. Larger screens increase the ease of reading and the amount of information.



## Color screen

Starting from the two-color version of red and black up to a full range, messages can be better communicated by strengthening them with the use of color.



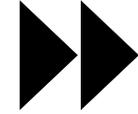
## Sound speaker

Useful for important message alerts or to assist people with vision or reading difficulties.



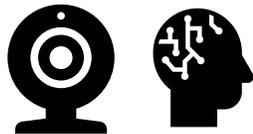
## Led Light

To visually warn of a new important message, to illuminate in unfavorable light conditions.



## Motion sensor

To verify the elderly person's motility, to verify the presumed reading of the message through a position verification algorithm in front of Amae.



**Camera and AI** to learn from user behaviors and give automated help messages

# Advanced use cases for future development

## Advanced sensors

### Motion Sensor Integration

- Automatic "Good morning" message when movement detected
- "Haven't seen you in the kitchen - are you okay?" after extended inactivity
- Location-specific messages (bathroom: "Wash your hands", kitchen: "Check expiration dates")

### Voice Integration

- Audio alerts for visually impaired users
- Spoken medication reminders with dosage information

### Multi-Device Coordination

- Messages appear on multiple displays throughout the day
- Kitchen display shows automated meal reminders, bathroom shows automated hygiene reminders

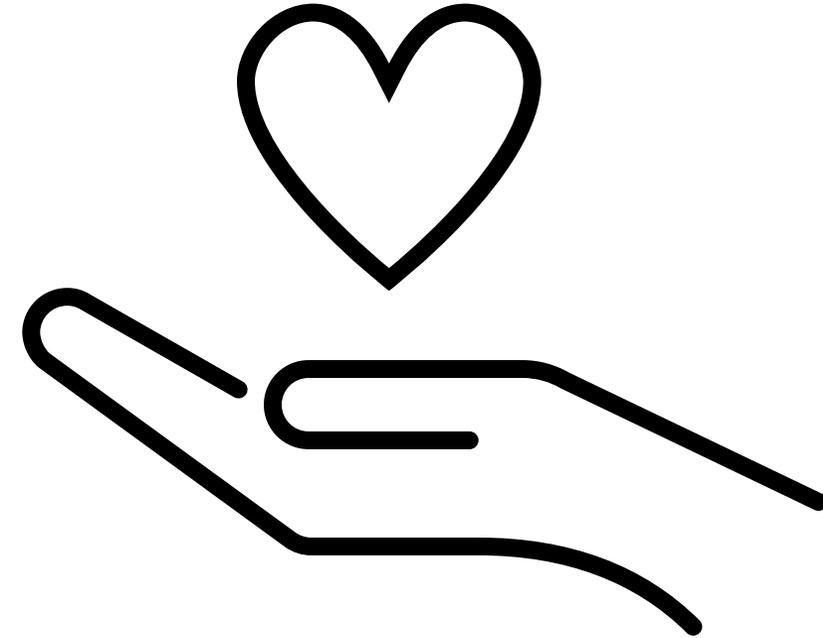
## Persona-Specific Use Cases

### Appointment Reminders

- "Physical therapy at 2 PM today - wear comfortable shoes"
- "Eye doctor appointment tomorrow at 10:15 AM"
- "Blood test results are ready - call Dr. Wilson"

### Health Monitoring

- "Please check your blood sugar and write it down"
- "Drink more water today - you haven't had much"
- "Use your inhaler if you feel short of breath"



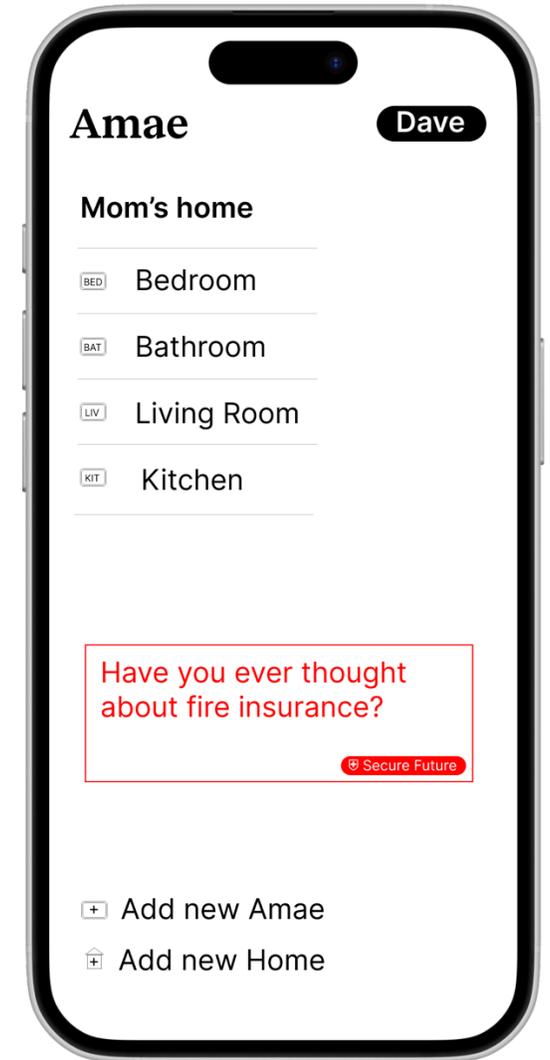
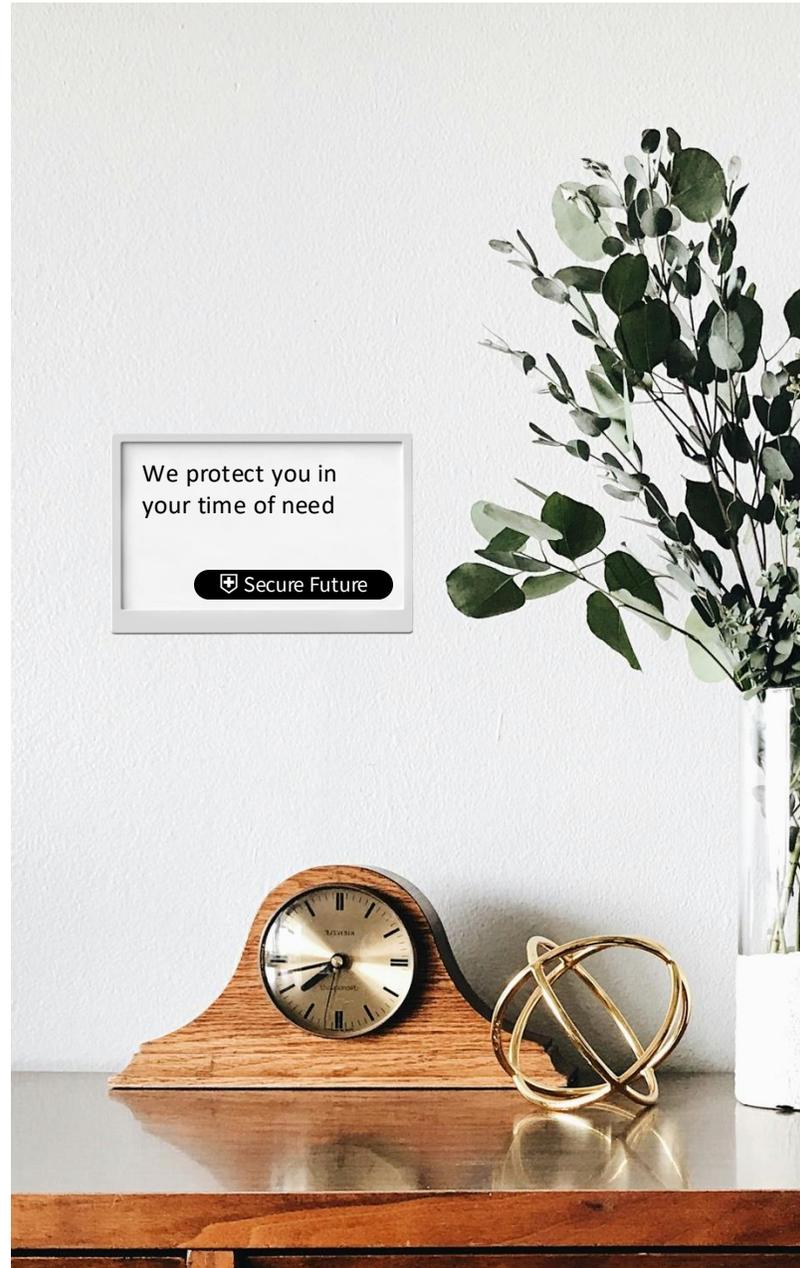
# Hypothetical Business Case for an Insurance Company



## Side offer for Secure Future insurance

David purchases a Health policy from Secure Future for her mom. Secure Future gives David a branded Amae kit. In this version, the company adds its own messages on the display and the app. These messages can be:

- **reinforcement** of benefits and brand value
- **proposal** of new policies
- **health tips**



# Other examples of business use cases 1/2

## Financial Services

### Banking & Credit Unions

"Your Social Security deposit arrived - \$1,247 available"  
"Suspicious activity detected - call us at 1-800-XXX-XXXX immediately"  
"Monthly statement ready - no action needed, all bills paid automatically"  
"Certificate of Deposit matures next week - renewal options available"

### Investment & Retirement Services

"Market update: Your portfolio gained 2.3% this quarter"  
"Required minimum distribution due by December 31st"  
"Annual review meeting scheduled with advisor Janet on Thursday"

### Insurance (Beyond Health)

"Home insurance renewal in 30 days - premium stays the same"  
"Car insurance discount available - you qualify for senior rates"  
"Life insurance beneficiary update needed - call to schedule"

## Retail & E-commerce

### Grocery & Pharmacy Chains

"Weekly specials: Bananas 59¢/lb, your favorite yogurt 2 for \$5"  
"Prescription refill ready for pickup - counter 3"  
"Your regular grocery order delivered - milk expires Friday"  
"Senior discount day Thursday - 15% off everything"

### Department Stores & Retail

"New comfortable shoes arrived in your size 8 - trying encouraged"  
"Winter coat sale starts Monday - warm options for cold weather"  
"Your favorite brand of tea is back in stock"

### Online Marketplaces

"Package delivered safely to your porch by Jane at 2:15 PM"  
"Your granddaughter's gift was delivered on time for her birthday"  
"Automatic reorder of vitamins scheduled for next week"

## Utilities & Home Services

### Electric, Gas, Water Companies

"Your energy usage is 20% lower this month - great job!"  
"Meter reading scheduled tomorrow between 9-11 AM"  
"Bill payment processed successfully - next due date March 15th"  
"Power outage in your area expected to last 2 hours"

### Home Maintenance & Repair

"Annual HVAC service reminder - schedule your appointment"  
"Plumber will arrive at 10 AM for faucet repair"  
"Gutter cleaning completed - no issues found"  
"Lawn service moved to Thursday due to rain"

### Security Services

"Motion detected in backyard - probably the neighbor's cat"  
"System test successful - all sensors working properly"  
"Battery low in bedroom smoke detector - replacement scheduled"

# Other examples of business use cases 2/2

## Transportation Services

### Public Transit

- "Bus route 42 delayed 15 minutes due to traffic"
- "Senior monthly pass expires next week - renewal available online"
- "New accessible bus stop installed near your home"

### Ride Services & Medical Transport

- "Your ride to Dr. Johnson arrives in 10 minutes"
- "Medical transport confirmed for tomorrow's appointment"
- "Regular grocery shopping ride available every Tuesday"

### Automotive Services

- "Car inspection due next month - appointment available Thursday"
- "Oil change reminder: last service was 4 months ago"
- "Tire rotation completed - good tread depth on all tires"

## Government & Public Services

### Social Services

- "Medicare enrollment period ends next week - call for assistance"
- "Property tax payment received - thank you"
- "Senior services van available for grocery shopping Tuesdays"

### Postal Services

- "Certified letter arrived - signature required, will attempt delivery tomorrow"
- "Your grandson's birthday card was delivered successfully"
- "Hold mail service starts tomorrow as requested"

## Technology & Telecommunications

### Internet/Phone Providers

- "Internet working normally - no outages in your area"
- "Your phone bill is \$45 this month - autopay scheduled"
- "New simple tablet available - designed for seniors"

### Tech Support Services

- "Your computer update completed successfully overnight"
- "Wi-Fi network 'YourNetwork' is working properly"
- "Reminder: never give passwords to callers claiming to be tech support"

# Tangity

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