WICKED PROBLEMS

PROCESS BOOK BY CALE MOOTH

RESEARCH • PROBLEM SOLVING • POSTER DESIGN

Solving Wicked Problems was an exercise in starting with a huge, seemingly unsolvable problem, working through a process to understand the problem and narrowing the scope to a solvable solution.

AUDIENCE & CONTEXT

The final deliverable was a poster designed to create awareness among the local community of a solution that aims to eliminate isolation and loneliness.

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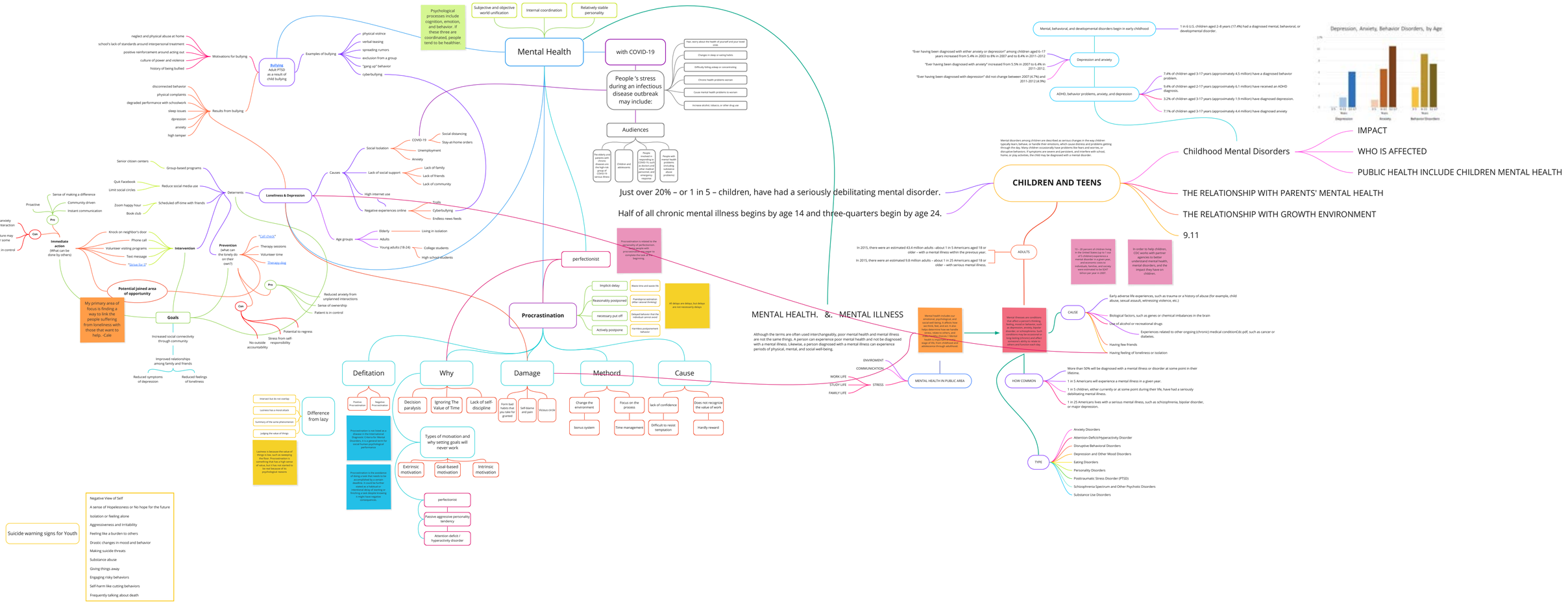
RESEARCH
& PROBLEM DEFINITION

BROAD PROBLEM EXPLORATION

Affordable housing
Great Pacific garbage patch
Endangered species
Monopolies
CEO salaries
Minimum wage
Industrialized agriculture
Grade school funding
Isolationism in suburbia
Isolationism in digital society
Sugar related health risks
Bipartisanship
Food shortages
COVID-19
Cancer
Staying sane in quarentine
Find jobs for unemployed
Exercising from home
Helping the sick from far away
Helping elders in times of quarentine
Companies adapting to WFH
Stranded people in other countries
Professional sports clubs dealing with pandemic
Adaptation of sports
Adaptation for non-essential companies
Schools adaptation to online classes
Dealing with shortage of goods
Economy drop
Loneliness during quarentine
Creating opportunities with pandemic
online learning efficiency
Lack of inspiration
Depression
Time management
Youth sucidal rate increasing
Water pollution
Marine life in danger
Climate change and Global warning
unemployment rate increasing
online harassment
gender inequality
school bullying
mental health awareness
gun violence rate increasing
media misleading

EXPLORING MENTAL HEALTH



ISOLATION & LONELINESS

Analog vs. Virtual dichotomy

NARROWING PATTERNS IN RESEARCH

SOCIAL ISOLATION & LONELINESS DUE TO LACK OF HUMAN INTERACTION

"…significant association between social isolation and loneliness and poorer mental health outcomes as well as all-cause mortality."

"...social isolation from friends only was associated with higher levels of psychological distress."

LONELINESS & DEPRESSION DUE TO INCREASED SOCIAL MEDIA INTERACTION

"10% increase in [social media] negative experiences was associated with a 20% increase in odds of depressive symptoms."

"...limiting social media use to approximately 30 minutes per day may lead to significant improvement in well-being."

RELATIONSHIP BETWEEN ISOLATION & LONELINESS

ISOLATION & LONELINESS OVERVIEW

1 in 5 Americans feel lonely or socially isolated.

2 in 5 report social relationships are always or sometimes not meaningful.

43% Of seniors feel lonely on a regular basis.

10% increase in people living alone over the past decade

25% of the U.S. population lives alone

ISOLATION & LONELINESS OVERVIEW: RISKS

45% increase in risk of mortality among seniors

Similar to smoking 15 cigarettes a day

32% increase in risk of stroke.

29% increase in risk of coronary heart disease.

ISOLATION & LONELINESS
EXISTING SOLUTIONS

OUTSIDE INTERVENTION

- ➔ Knocking on neighbor’s door
- ➔ Volunteer visiting programs
- ➔ Text & phone calls
- ➔ “Strive for 5”

PREVENTATIVE SELF-CARE

- ➔ “Care Check”
- ➔ Therapy animals
- ➔ Volunteering time
- ➔ Therapy sessions

ISOLATION & LONELINESS

EXISTING SOLUTIONS (INTERVENTION) STRIVE FOR 5

Residents are asked to call or visit 5 people each day to help reduce anxiety and fear.

Pros
- ➔ Engages with people, reducing loneliness
- ➔ Builds relationships

Cons
- ➔ Recipient must be receptive
- ➔ Only lasts 30 days
- ➔ Limits time to build relationships

ISOLATION & LONELINESS

EXISTING SOLUTIONS (SELF CARE) CALL CHECK

Seniors receive a call each day “to check on Maryland’s older residents.”

Pros
- ➔ Ensures residents are safe
- ➔ Triggers emergency response if needed

Cons
- ➔ Impersonal
- ➔ Not flexible (same call window each day)
- ➔ “Death check”

ISOLATION & LONELINESS

EXISTING SOLUTIONS (SELF-CARE) THERAPY DOGS

Seniors receive a call each day “to check on Maryland’s older residents.”

Pros
- ➔ Decreases feelings of isolation
- ➔ Encourages communication
- ➔ Reduces loneliness

Cons
- ➔ Extra work & maintenance
- ➔ Physical requirements

OPPORTUNITY & GOALS

OPPORTUNITIES & GOALS

ISOLATION & LONELINESS
AREAS OF OPPORTUNITY

How can volunteers(those that want to help) be engaged with patients without causing anxiety?

How can patients self-heal without regressing from lack of accountability?

How can these two groups be linked together as a community to form lasting relationships?

ISOLATION & LONELINESS
GOALS

Design a system that **builds long lasting relationships** between people experiencing loneliness and the volunteers wanting to help.

At the same time, people experiencing loneliness should **retain healthy independence** while volunteers remain committed for the long-term.

The final result should be **established relationships and reduced loneliness**.

EXPLORING A SOLUTION

Solution

The solution is a personal status system designed to encourage in-person interaction in order to reduce loneliness.

Users place a status module on the exterior of their living space and that module communicates their current mental state and whether a neighbor should intervene. Neighbors or volunteers check on each others statuses and interact as needed. As a result, relationships are built over time and loneliness among the community decreases.

How it works

Users update their status any time, but after 24 hours, their status fades away. This forces engagement as a lack of status would indicate something is wrong.

[color/symbol] 1
User is in a good mental state and is open to visitors

[color/symbol] 2
User is in a good mental state, but no visitors are required

[color/symbol] 3
User is in a bad mental state and requires intervention

No status update in 36 hours
User requires attention

This system benefits both volunteers looking to intervene while honoring the independence of the patient. This system borrows aspects from an intervention approach while still giving patients control over when social interactions occur.

At the risk of oversimplification, this approach merges familiar status indicators found in social media systems with the analog aspect of a neighborhood watch.

PERSONAS

Jack

Jack is a retired Navy officer living in a large apartment complex. He's 79 years old and lives alone. His wife passed away 8 years ago and has lived on his own ever since. Jack sees his daughter and grandchild on the weekend, but must make an effort to interact with others during the week while his daughter works.

While Jack still has a drivers license, he prefers not to drive. He walks to most places including to the corner store and the local community center. Jack's main motivation during the week is spending Tuesday and Thursday mornings at the community center visiting with a pair of old Navy buddies. However, depending on the weather and how mobile he's feeling that day, Jack may or may not be able to make the half-mile walk to the center. As a result, he can experience long-term periods of isolation.

Nicole

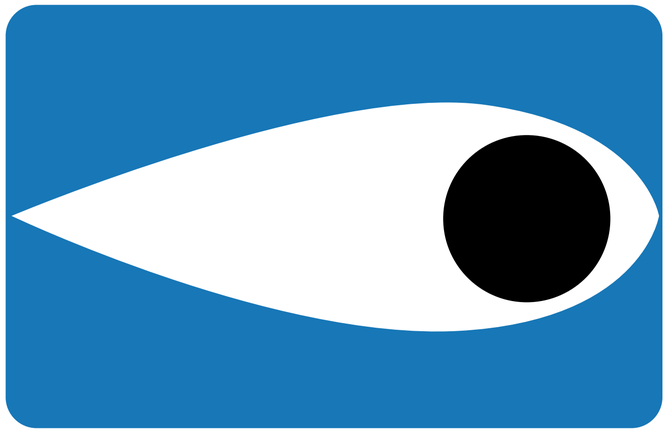
Nicole is an administrative assistant for a local school district. She's 55 years old, married, and has 2 children that recently graduated college and live on their own. With her children now living outside the home, Nicole has found herself with extra time to fill on the weekends. As a result, she and her husband have begun volunteering through their church, working with a different organization each month. She feels good helping so many different people each month, but it's difficult seeing how much need exists in the world and rarely is she able to follow-up with those she encounters.

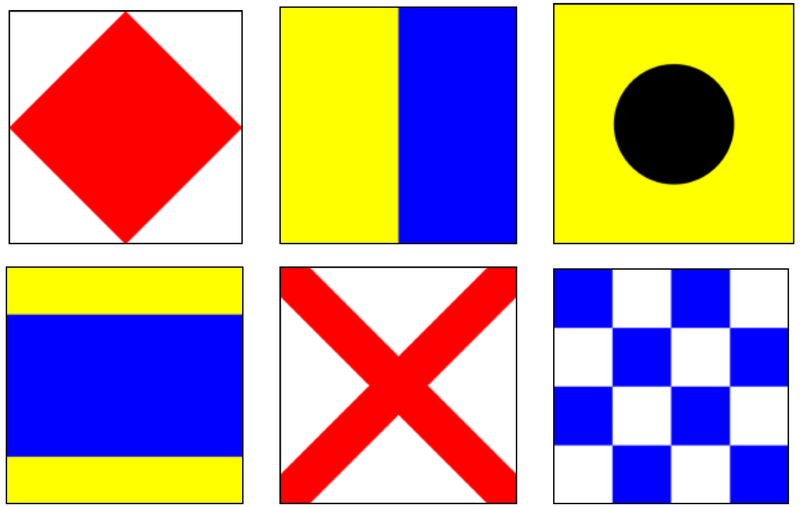
With her children living their own lives and the fleeting nature of the volunteer work, Nicole often finds herself unfulfilled and even lonely.

Individuals that require assistance

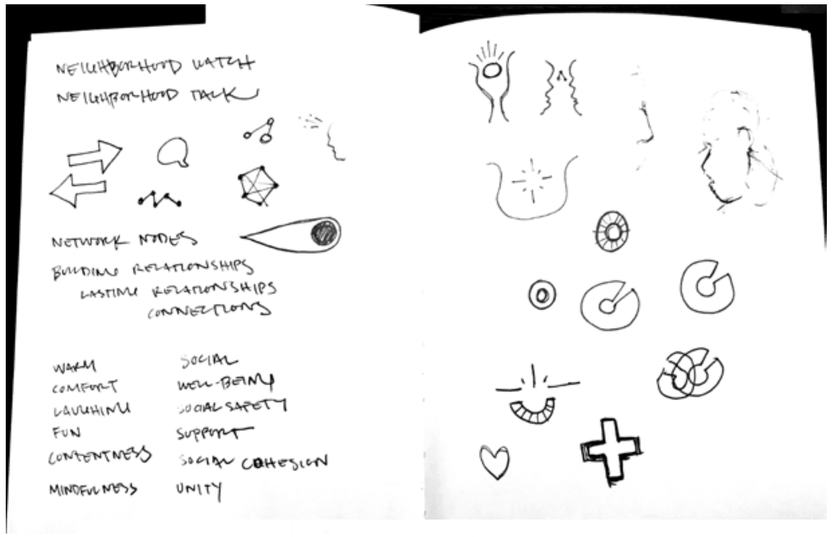
Volunteers that want to help

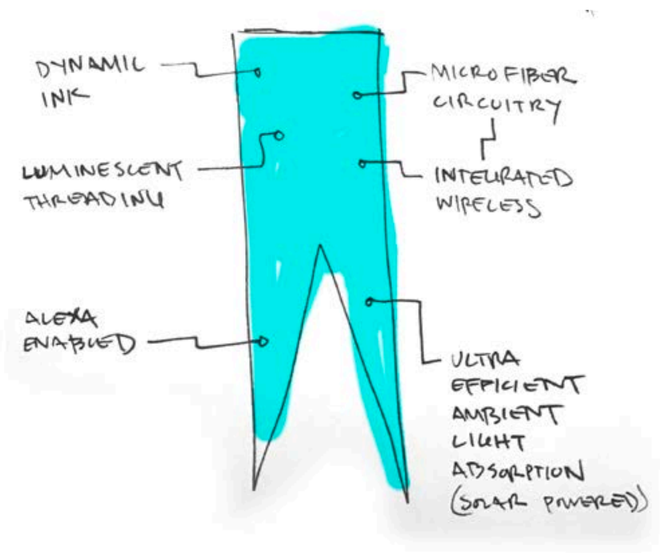
VISUAL INSPIRATION

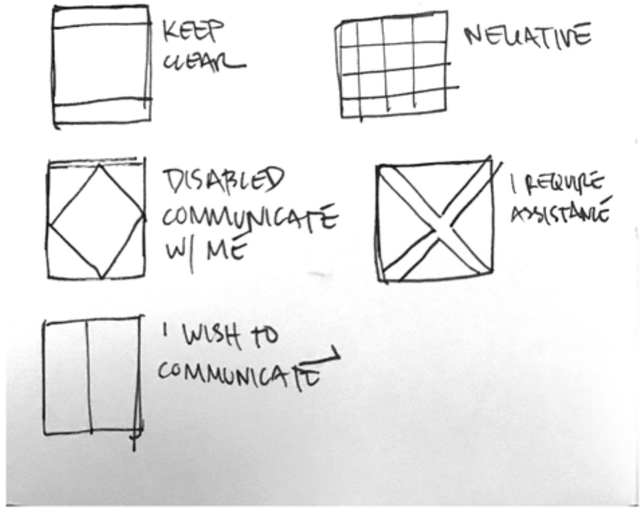


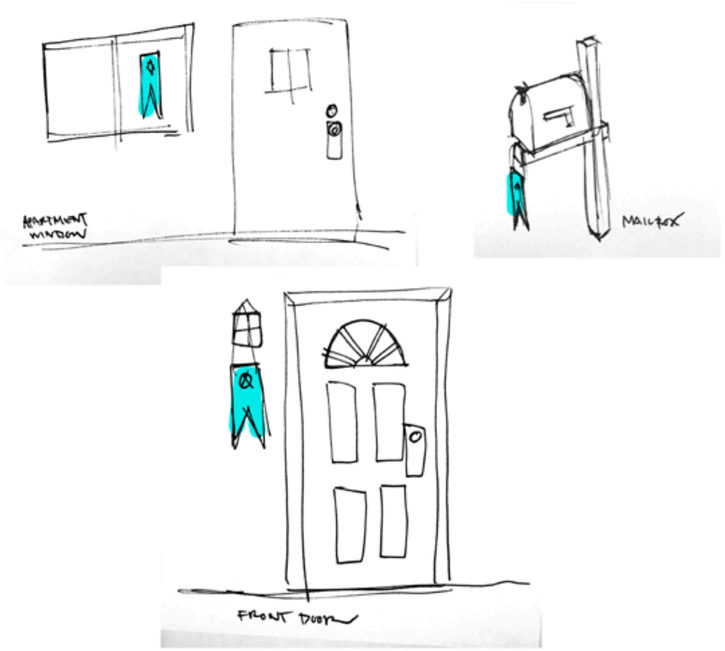


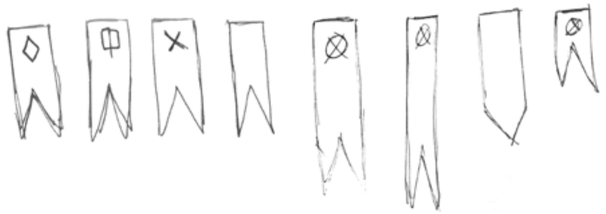
SKETCHES


NEIGHBORHOOD WATCH
NEIGHBORHOOD TALK
NETWORK NODES
BUILDING RELATIONSHIPS
LASTING RELATIONSHIPS
CONNECTIONS
WARM
COMFORT
LAUGHING
FUN
CONTENTNESS
MINDFULNESS
SOCIAL
WELL-BEING
SOCIAL SAFETY
SUPPORT
SOCIAL COHESION
UNITY


DYNAMIC INK
LUMINESCENT THREADING
ALEXA ENABLED
MICRO FIBER CIRCUITRY
INTEGRATED WIRELESS
ULTRA EFFICIENT AMBIENT LIGHT ADSORPTION (SOLAR POWERED)


KEEP CLEAR
NEGATIVE
DISABLED COMMUNICATE W/ ME
I REQUIRE ASSISTANCE
I WISH TO COMMUNICATE


APARTMENT WINDOW
MAILBOX
FRONT DOOR



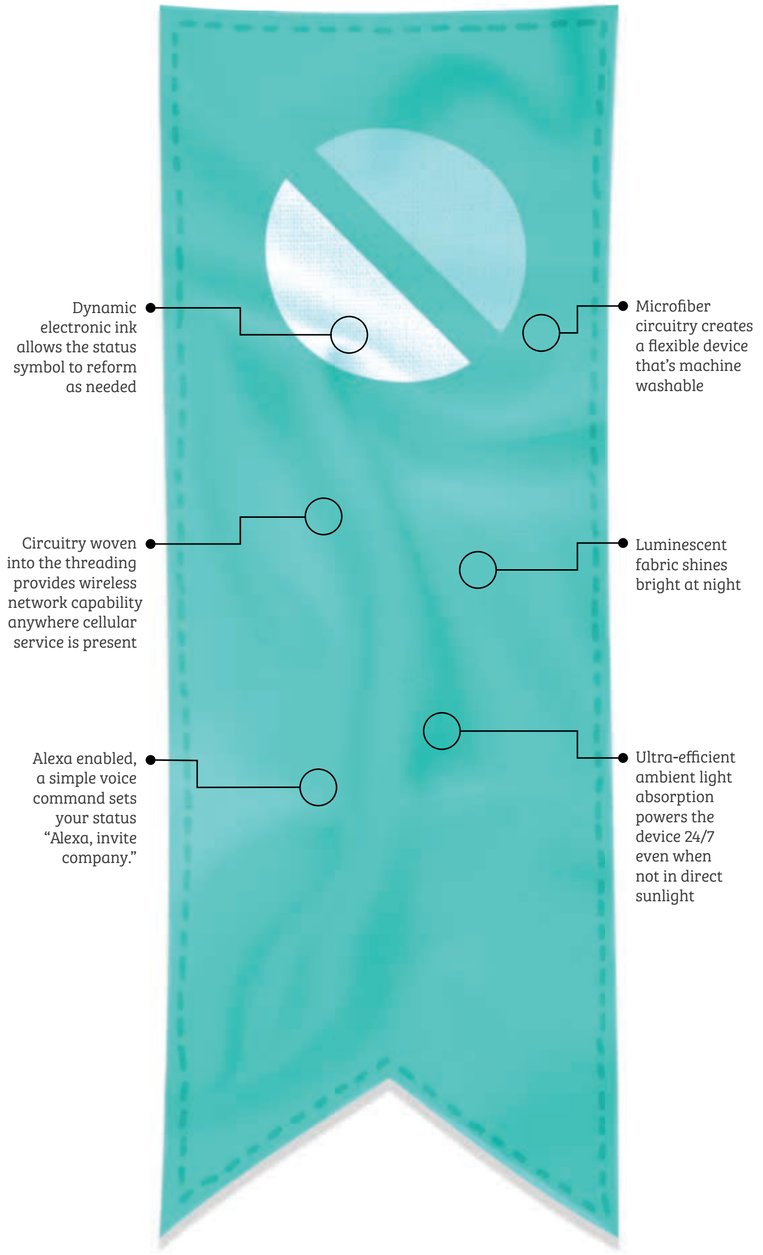
FINAL SOLUTION

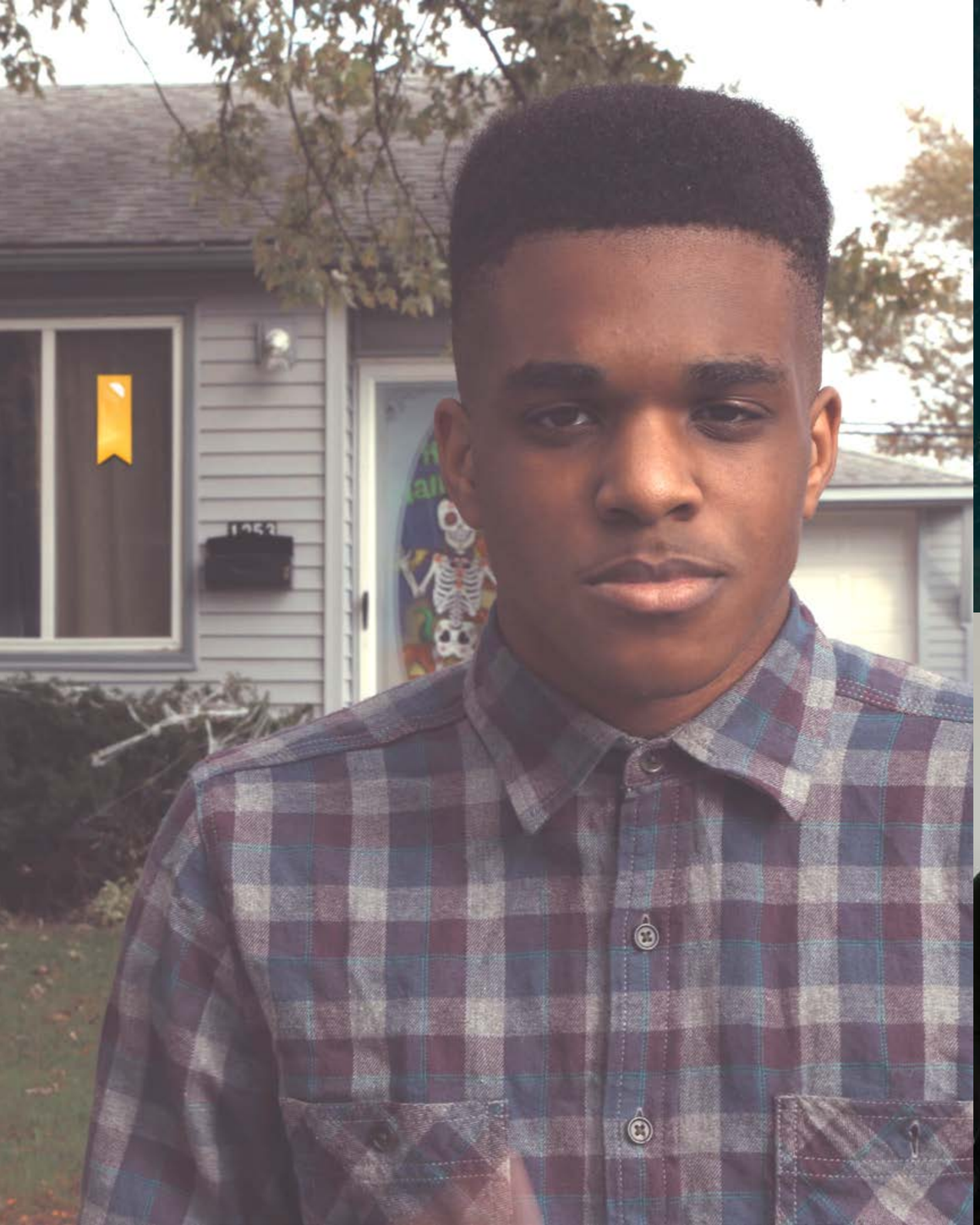
Good mental state. Open to visitors.

Good mental state. Do not disturb.

Marginal mental state. Please visit.

No update. Attention required.





combating loneliness by forming a community
A Simplified Approach
Two Halves Coming Together
Nurtured over time
1 in 5
50%
43%
15
0101
0102
0103
0104
0201
0301
0302
0303
0304
0401
0501
0502
0503
0504
0601

combating loneliness by forming a community
A Simplified Approach
Two Halves Coming Together
Nurtured over time
1 in 5 Americans feel lonely
50% of seniors feel lonely on a regular basis
43% increased risk of mortality among lonely seniors
15 cigarettes per day is equal to the health risks of loneliness

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