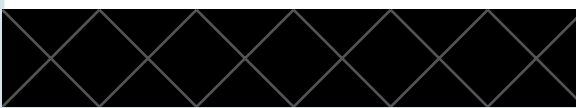




## **WEEK 3 Assignment:** **“Wicked Problems in Design Thinking”**



Group members:

-  Napat Korsincharoen
-  Pawat Kurovat
-  Punnawat Lerdkijrachapong
-  Chalongraj Bangwatana
-  Anchalika Akkarawiboonkij

# BUCHANAN'S CONCEPT

## Linear thinking VS Design thinking

### LINEAR THINKING?

Linear thinking is a way of reasoning that follows a step-by-step path from problem to solution.

#### Examples

Traffic congestion in Bangkok → Build more roads and widen highways → Traffic will flow smoothly

### DESIGN THINKING?

A way of approaching problems that focus on creativity. Design thinking accepts that problems are often unclear and complex which is referred as “wicked problem”.

#### Examples

- Talk to drivers to learn more about pain points.
- The core problem isn't just traffic.
- Launch bike renting to reduce cars in the traffic lanes.

## How Linear & Design thinking differentiate

### Problem Definition

- **Linear:** Assumes the problem can be clearly defined at the start.
- **Design:** Accepts that problems are messy and need to be reframed.

### Process

- **Linear:** Step-by-step, sequential → problem → analysis → solution.
- **Design:** Looping → empathize, prototype, test, and adjust if needed.

### Mindset

- **Linear:** Predictable, logical, efficient, rule-based.
- **Design:** Creative, flexible, empathetic, experimental.

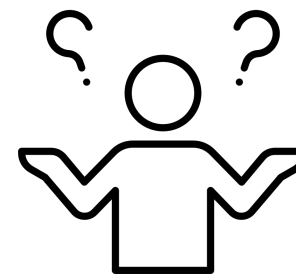
### Placements

A flexible conceptual framework that a designer uses to look at a problem acts as a space where designers can generate new ideas by shifting the way they frame problems.

# WICKED PROBLEMS

**FUNDAMENTAL QUESTION UNANSWERED: WHY ARE DESIGN PROBLEMS INDETERMINATE AND, THEREFORE, WICKED?**

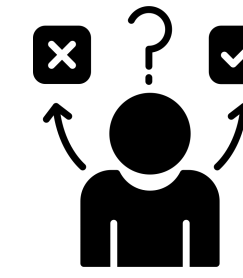
## 10 CHARACTERISTICS OF WICKED PROBLEMS



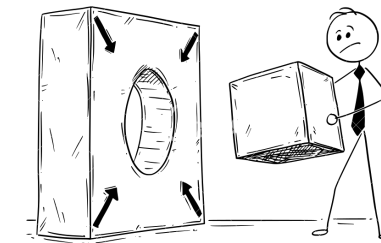
NO CLEAR DEFINITION



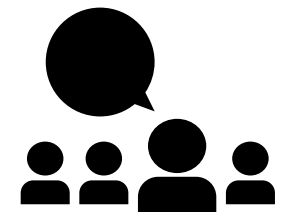
NO CLEAR END POINT



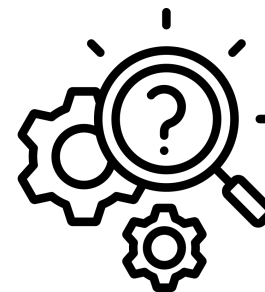
NO TRUE OR FALSE, ONLY GOOD OR BAD



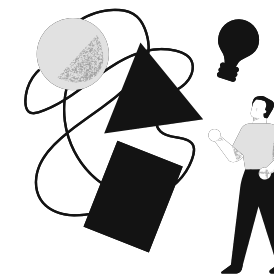
NO FIXED METHOD



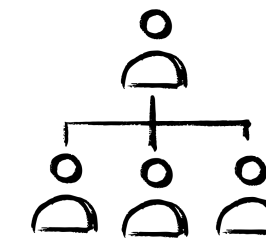
DIFFERENT EXPLANATIONS ARE ALWAYS POSSIBLE



THE PROBLEM ARISES FROM BIGGER ISSUES



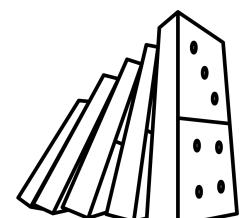
NO COMPLETE FINAL SOLUTION



MISTAKES LEAVE LASTING EFFECT



EVERY PROBLEM IS DIFFERENT FROM EACH OTHER

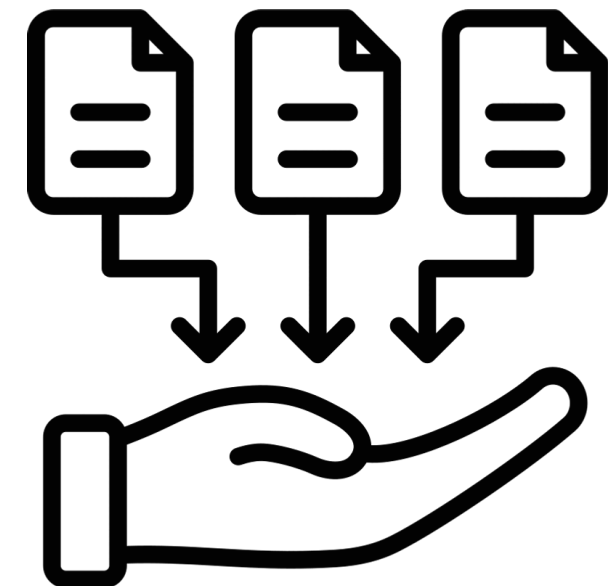
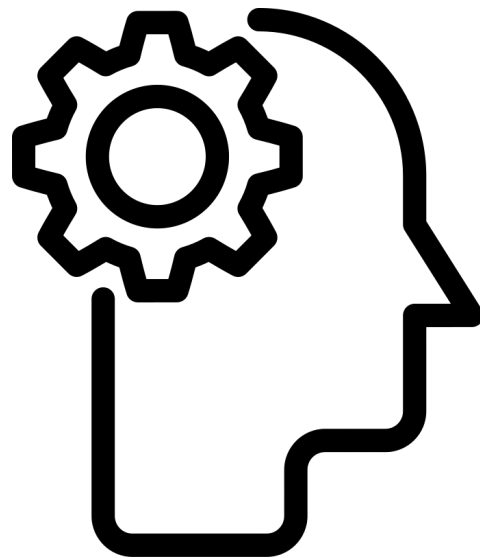


WICKED PROBLEM SOLVER IS RESPONSIBLE FOR THE CONSEQUENCES

**DEFINITION OF WICKED PROBLEM: A PROBLEM THAT CAN BE SOLVED BY THE VARIOUS FIELD OF STUDY DEPENDS ON THE "DESIGNERS'" PERSPECTIVE AND IS A COMPLEX AND DIFFICULT-TO-SOLVE ISSUE—UNCERTAINTY WITH NO CLEAR DEFINITION AND NO SINGLE SOLUTION. THE PROBLEM EVOLVES OVERTIME, MAKING SOLUTIONS TEMPORARY OR OUTDATED QUICKLY.**

# NEW LIBERAL ART OF TECHNOLOGICAL CULTURE

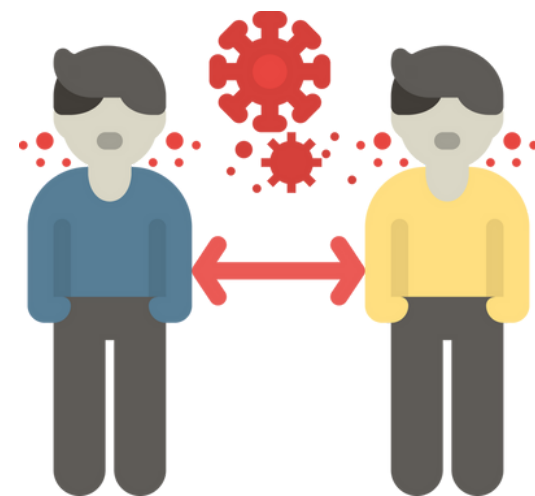
- MANY INDIVIDUALS MISUNDERSTOOD TECHNOLOGY AS A PRODUCT RATHER THAN AS A DISCIPLINE OF SYSTEMATIC THINKING.
- IF WE UNDERSTAND ABOUT “DESIGN THINKING” AND “TECHNOLOGY”, WE CAN WORK COHERENTLY TOWARD THE FUTURE.
- DESIGNERS DO NOT JUST MAKE THINGS—THEY REFLECT WICKED PROBLEM, INTEGRATE KNOWLEDGE, AND CREATE SOLUTIONS.
- DESIGN THINKING IS ESSENTIAL IN ORDER TO SOLVE COMPLEX PROBLEMS BY UNDERSTANDING DIVERSE PERSPECTIVE.



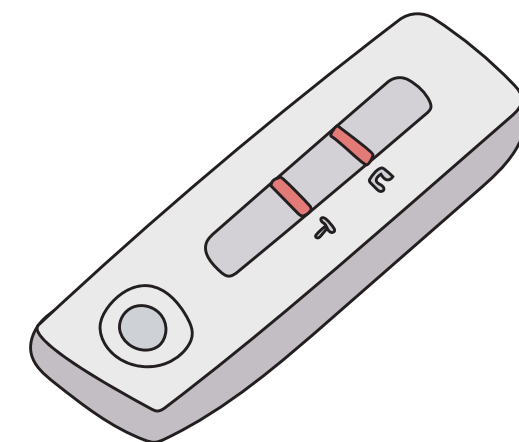
# **PART 2 : APPLICATIONS**

# EFFECTIVE SOLUTION FOR THE POST-COVID-19 SUSTAINABLE PREVENTIVE MEASURES

AS PART OF THE GLOBAL HEALTH CARE POLICY TEAM OF THE WORLD HEALTH ORGANIZATION (WHO), YOU MUST TRY TO ADVISE THE THAI GOVERNMENT REGARDING THE MOST EFFECTIVE SOLUTION FOR THE POST-COVID-19 SUSTAINABLE PREVENTIVE MEASURES AGAINST THE NEW PANDEMIC IN THE NEAR FUTURE.  
[#PUBLICHEALTH]



**COVID-19**



# FIRST SOLUTION: PROMOTING ONLINE MEETINGS INSTEAD OF OFFLINE MEETINGS

ENCOURAGING BUSINESSES ADOPT ONLINE PLATFORMS FOR MEETINGS OR SEMINARS. THIS PROCESS CAN HELP TO REDUCE THE SPREAD OF DISEASES.

WHO ARE STAKEHOLDERS IN THIS CASE?

- WHO
- THAI GOVERNMENT
- THAI ENTREPRENEURS
- WORKERS



## PROS

- Cost Reduction
- Business Continuity
- Environmental Friendly
- Flexibility and Efficiency

## CONS

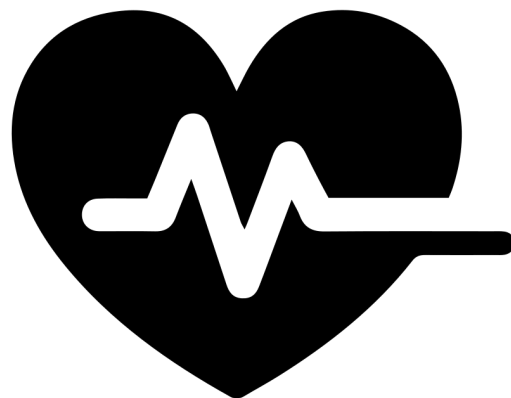
- Reduced Personal Interaction
- Unstable revenue
- Security and Privacy Risks
- Work-Life Balance Blur
- Resistance To Change

# SECOND SOLUTION: HEALTHCARE WELFARE

GOVERNMENT SHOULD INVEST IN DISEASE RESEARCH, ENCOURAGE THAI PEOPLE TO GET VACCINATED, AND DISTRIBUTE WEARABLE HEALTH MONITORING DEVICES FOR EARLY SYMPTOM DETECTION INSTEAD OF ONLY WAITING FOR HOSPITAL TESTING

WHO ARE STAKEHOLDERS IN THIS CASE?

- WHO
- THAI GOVERNMENT
- PHARMACEUTICAL MANUFACTURER
- CITIZENS



## PROS

- Public health infrastructure
- Investment in Research & Development
- Mass production of wearable tech, vaccines, and medicines

## CONS

- Government budget constraints
- Accuracy depends on device quality



# THIRD SOLUTION: USING MEDIA TO SPREAD INFORMATION

GOVERNMENT CAN USE SOCIAL MEDIA, TELEVISION, RADIO, AND ONLINE PLATFORMS TO SPREAD KNOWLEDGE ABOUT DISEASES, ENSURING THAT PEOPLE UNDERSTAND HOW TO PREVENT INFECTION

WHO ARE STAKEHOLDERS IN THIS CASE?

- WHO
- THAI GOVERNMENT
- MEDIA PLATFORMS
- CITIZENS



## PROS

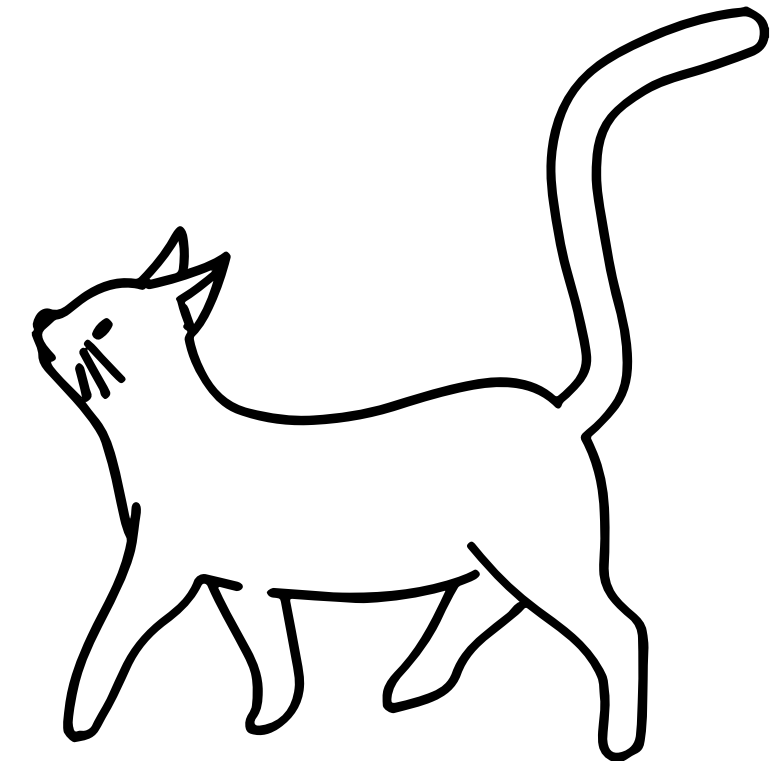
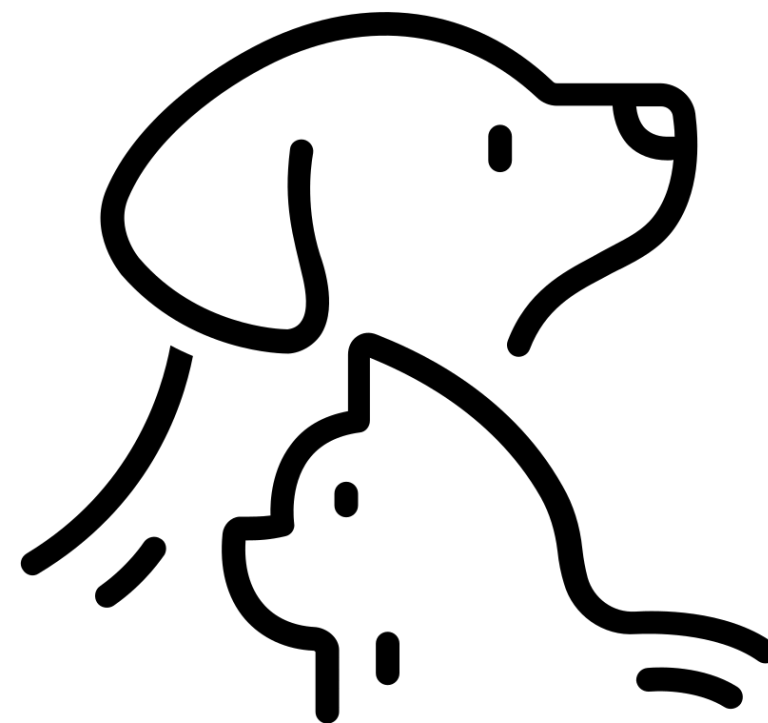
- Raise public awareness about viruses and diseases
- Reduce behaviors causing infection

## CONS

- Risk of propaganda or fake news
- Elderly may believe false information
- Can lead to misunderstandings

# SHOULD THE PETS BE ALLOWED TO SHARE OUR EXISTING SPACES, OR THE NEW SPACES SHOULD BE EXCLUSIVELY BUILT FOR THEM?

DUE TO THE INCREASING NUMBER OF PET OWNERS IN THE CITY, SHOULD PETS BE ALLOWED IN EXISTING PLACES, OR SHOULD MORE PET FRIENDLY SPACES BE BUILT?  
[#PETHUMANIZATION]



# OPTION ONE: ALLOWING PETS TO SHARE OUR EXISTING SPACES

SHOPPING MALLS OR ANY BUILDINGS CAN EITHER DESIGNATE EXISTING AREAS OR CREATE NEW ZONE IN OPEN SPACES FOR PEOPLE WHO WANT TO BRING THEIR PETS.

WHO ARE STAKEHOLDERS IN THIS CASE?

- CITY'S MAYOR
- CONSTRUCTION COMPANY
- PROPRIETOR
- CITIZENS
- PETS



## PROS

- Gains more customers
- Increases in revenues
- Improves customers experiences
- Enhances brand image
- Promotes social interaction

## CONS

- Hygiene concerns
- Allergy risks
- Needs more budgets
- Risk to damage private properties

SHOULD THE PETS BE ALLOWED TO SHARE OUR EXISTING SPACES, OR THE NEW SPACES SHOULD BE EXCLUSIVELY BUILT FOR THEM?

# OPTION TWO: DESIGNATE PET-FRIENDLY ZONES

CREATE SPECIFIC AREAS WITHIN EXISTING SPACES  
( SUCH AS PARKS,PLAZAS OR RESIDENTAL BUILDINGS) WHERE PETS  
ARE ALLOWED, HELPING TO SEPARATE PET AND NON-PET OWNERS  
FOR COMFORT AND SAFETY.

WHO ARE STAKEHOLDERS IN THIS CASE?

- CITY'S MAYOR
- CONSTRUCTION COMPANY
- LANDLORD
- CITIZENS
- PETS

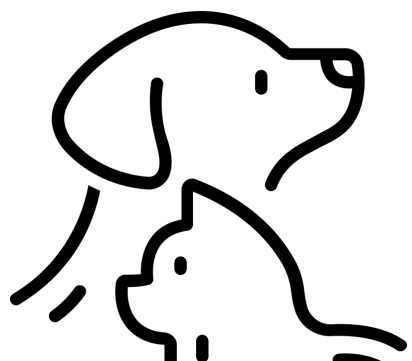


## PROS

- Safe, dedicated pet areas
- Reduces conflicts between pets and others
- Encourages responsible pet ownership
- Enhances community well-being by accomodating pet owners and promoting social interactions.

## CONS

- Reduces spaces for other uses
- Increases maintenance needs
- Possible odor issues
- Risk of pet conflicts if poorly zoned



SHOULD THE PETS BE ALLOWED TO SHARE OUR EXISTING SPACES, OR THE NEW SPACES SHOULD BE EXCLUSIVELY BUILT FOR THEM?

**AND IN CASE I DON'T SEE YOU ..  
GOOD AFTERNOON, GOOD EVENING,  
AND GOOD NIGHT!**

