

# DESIGN THINKING/METHOD

ITX 2005 WEEK 2 – LEARNING TO OBSERVE



The Office of Charles and Ray Eames

# AGENDA

| DESIGN THINKING   | EMPHATHISE   | CONTEXT   |
|---|--|---|
| <ul style="list-style-type: none"><li>• Design Thinking?</li><li>• Design Thinking Mindsets</li><li>• Why Design Thinking</li></ul> | <ul style="list-style-type: none"><li>• Empathy?</li><li>• Asking Questions</li><li>• Observation / Research</li></ul> | <ul style="list-style-type: none"><li>• Environmental</li><li>• Socio-Economic</li><li>• Cultural Context</li><li>• Design Adaptation</li></ul> |

----- **BREAK** -----

| EXERCISES  | WK III<br>PREPARATION  |
|--|--|
| <ul style="list-style-type: none"><li>• The Ideal Wallet</li></ul> | <ul style="list-style-type: none"><li>• Stationary/Tools</li></ul> |

# DESIGN THINKING

Google

design thinking

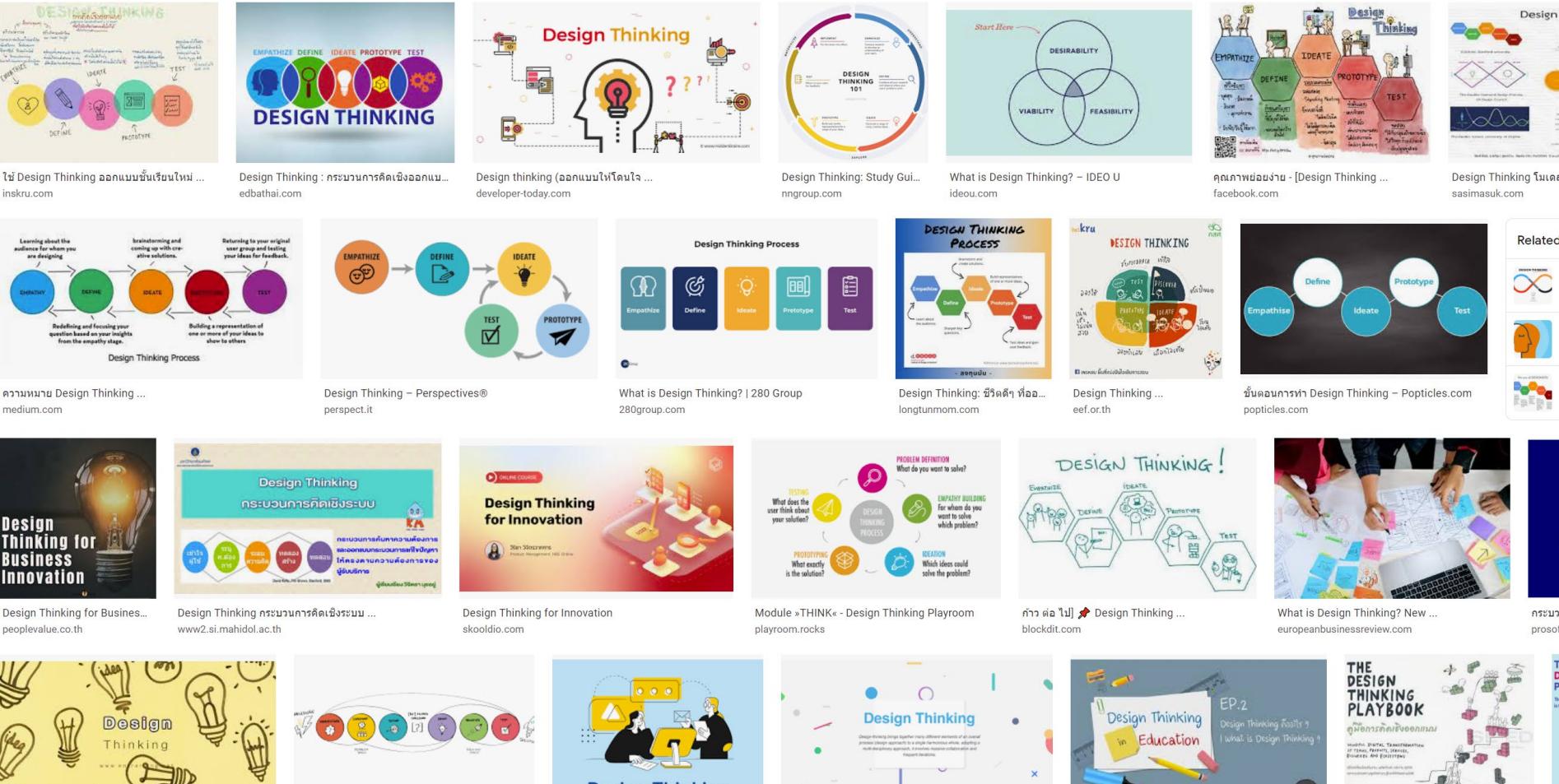


All Images Videos News Books More Tools



## Design Thinking

1. Empathise
2. Define
3. Ideate
4. Prototype
5. Test



## Insight into Designer's Perspective

- How to think like one?
- How do they operate?
- Methodologies/  
Mindset
- Tools / Techniques



# DESIGN THINKING

## Case Studies

- Investigate
- Understand
- Analyse
- Adapt / Apply



Lisa Mouse A9M0050, IDEO, 1983



Apple's Predictive Keyboard



Horreos de A Merca, Spain, 1600s

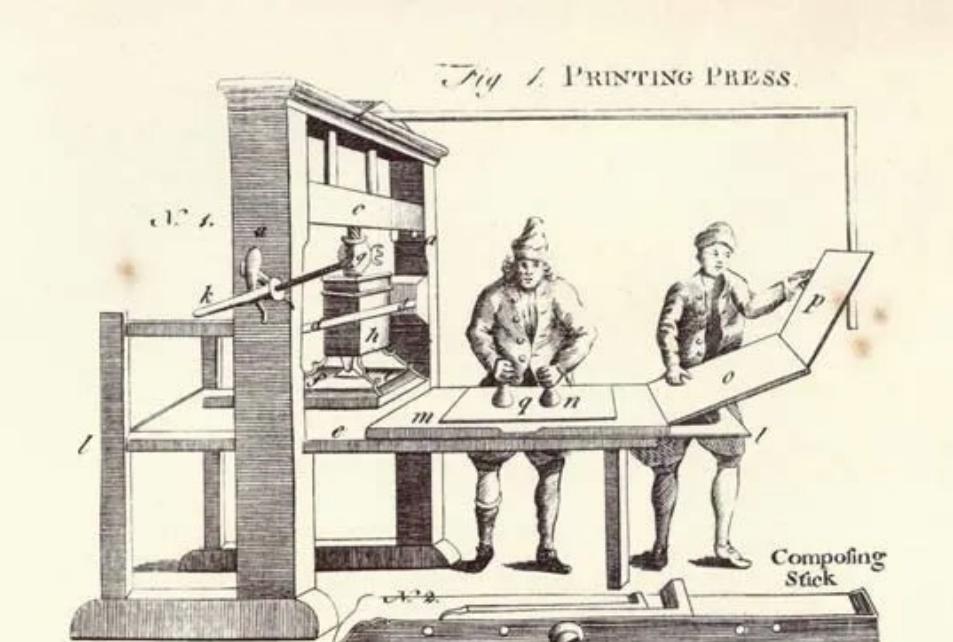


CopenHill, Copenhagen, BIG, 2017

# DESIGN THINKING

## Case Studies

- Investigate
- Understand
- Analyse
- Adapt / Apply



The Printing Press



---

# DESIGN THINKING MINDSETS

---

- Curiosity
- Embrace Failures
- Process-Oriented
- Documentation
- Sharing Ideas



# DESIGN THINKING MINDSET

## Be Curious

- Ask Questions
- Be Open-minded
- Be Skeptical



Sherlock Holmes sitting on LC2 armchair by Le Corbusier

# DESIGN THINKING MINDSET

## Be Hands-on

- Try New Things
- Don't be afraid to get your hands dirty



Breaking Bad, 2008-2013

# DESIGN THINKING MINDSET

## Embrace Failures

- Make Mistakes
- Learn from Mistakes
- Fail Fast / Learn Fast



Model Graveyard, Denys Lasdun

# DESIGN THINKING MINDSET

## Process-Oriented

- Journey > Destination
- Design Processes
- Design Decisions



14

B-MADE Workshop, The Bartlett School of Architecture

# DESIGN THINKING MINDSET

## Document Everything!

- Take photos/videos
- Save ideas/iterations



Galloping Horse. Eadweard Muybridge, 1900s

# DESIGN THINKING MINDSET

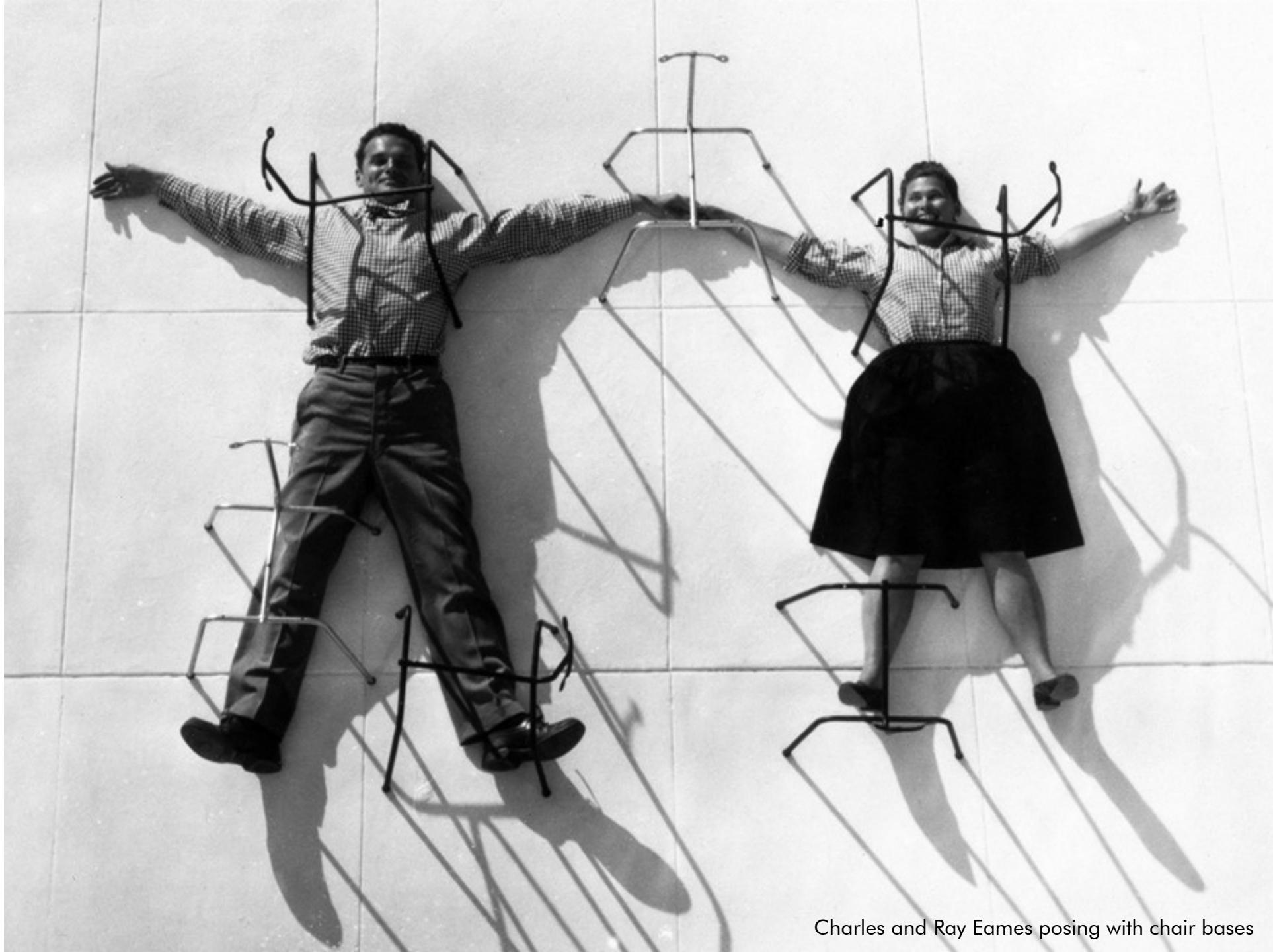
## Sharing is Caring

- Share your work
- Discuss your problems



# DESIGN THINKING MINDSET

Have Fun  
&  
Don't be too serious



Charles and Ray Eames posing with chair bases

# What is Design?

# DESIGN THINKING

## **Design** (noun) /dɪ'zaɪn/ (Oxford)

1. The general **arrangement** of the different parts of something that is made, such as a building, book, machine, etc.
  
2. The art or **process** of deciding how something will look, work, etc. by drawing plans, making computer models, etc.
  
3. A drawing or **plan** from which something may be made.
  
4. An arrangement of lines and shapes as a **decoration**

# DESIGN THINKING

## DESIGN

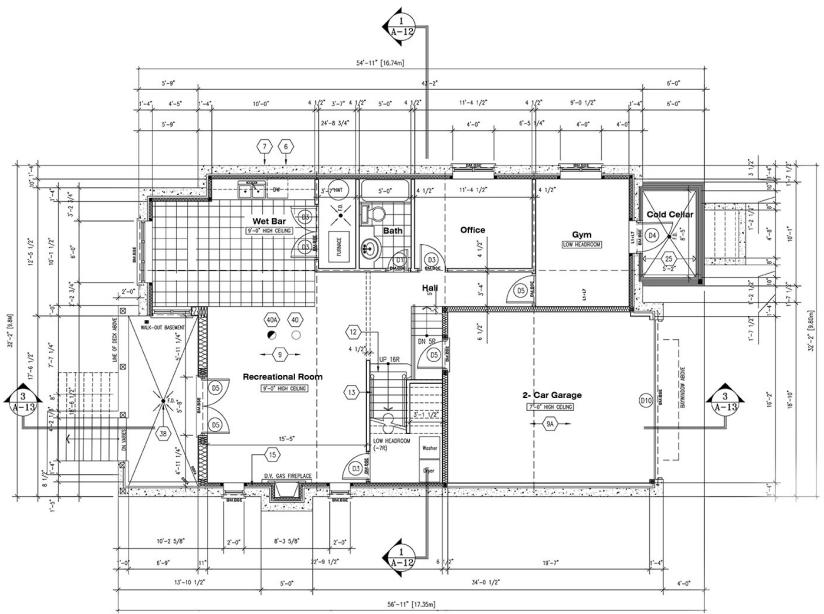
- Arrangement
- Process
- Plan
- Decoration



Charles and Ray Eames



Porsche 928 Cut-away Drawing



Construction Drawing



Qishe Courtyard / Archstudio, Beijing, 2020

# DESIGN THINKING

What is design **about**?

Who is design **for**?

Why does design **matter**?

# DESIGN THINKING

Why does design  
**matter?**

Understanding  
**design**

=

Understanding the  
**world** around us



Juicy Salif, Philippe Starck, 1990



Mahanakorn, Büro Ole Scheeren, Bangkok, 2018

Apps

# DESIGN THINKING

# What is design **for**?



Joseph Joseph Nest 9 Plus



Tesla Cybertruck

# DESIGN THINKING

What is design  
**about?**

Problem-Solving  
Process



# DESIGN THINKING

What is design  
**about?**

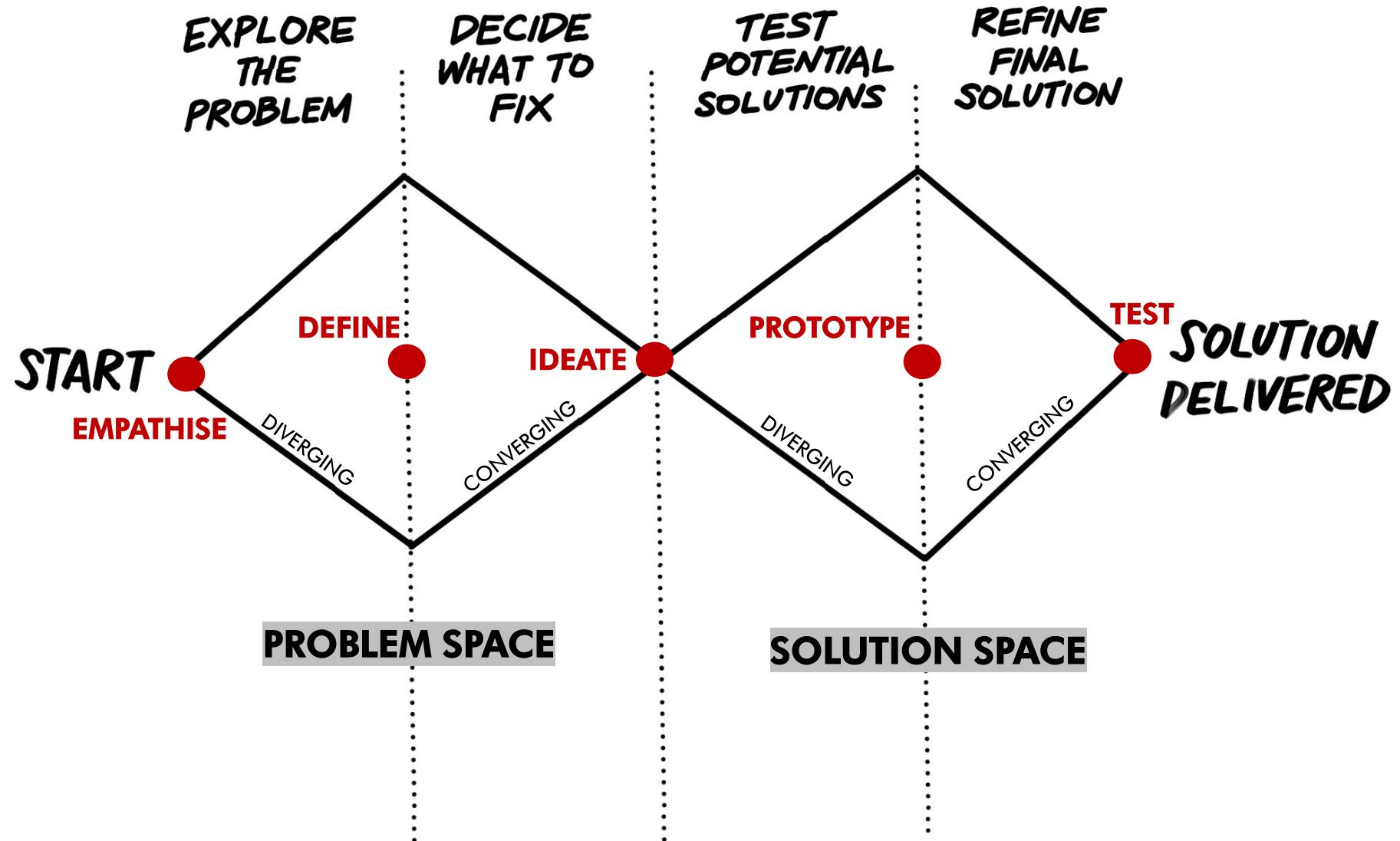
Problem-Solving  
Process



# DESIGN THINKING

## Design Thinking *Process*

- Mindset, Tools, Methods
- Understand & Solve problems Effectively & Creatively
- Highly Fluid, Playful



# DESIGN THINKING

Why *Design Thinking*?

# DESIGN THINKING

Why  
*Design Thinking?*

- Manufacturing

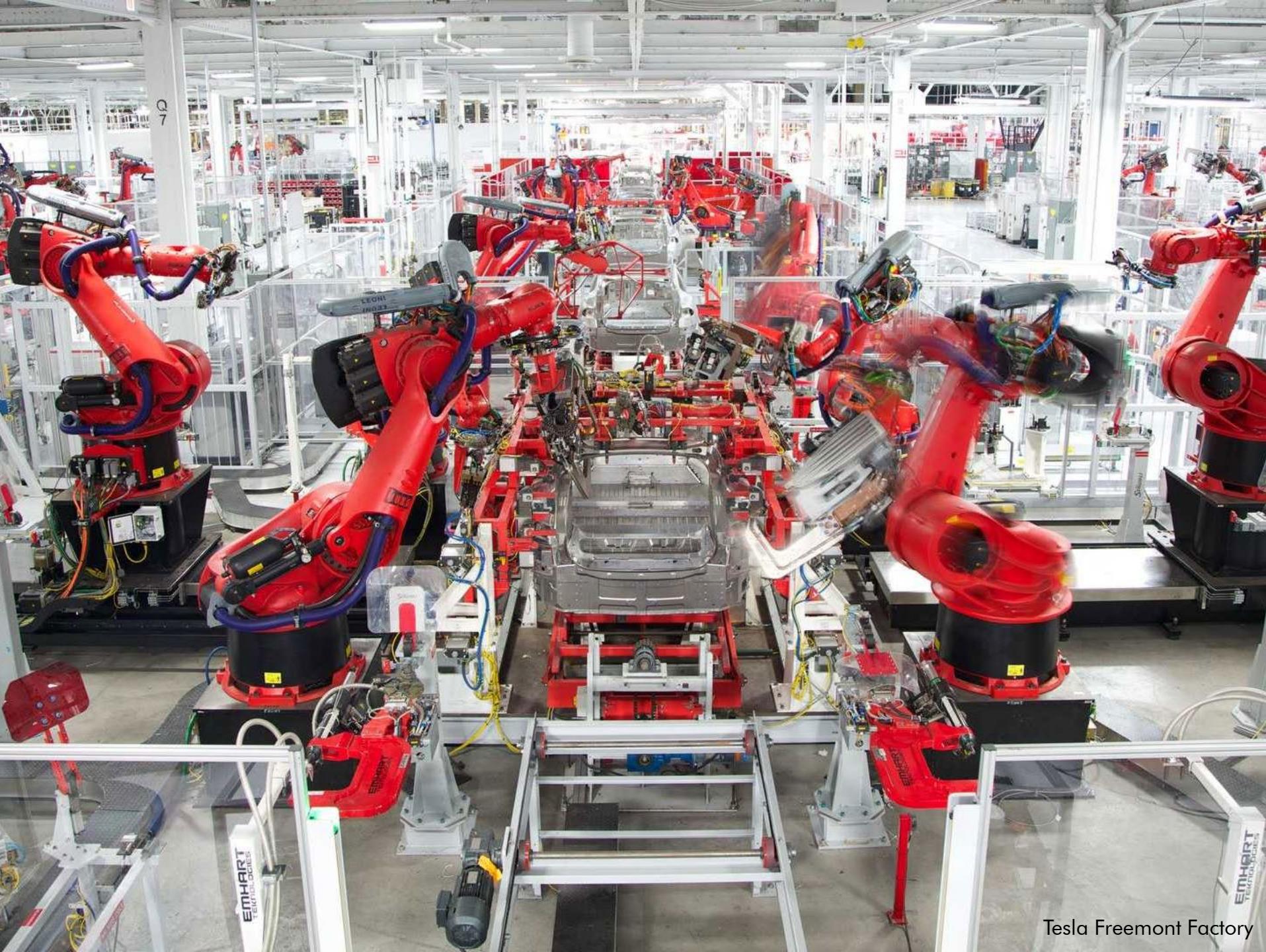


Tool and Die Department, Ford's River Rouge Plant, Early 1900s

# DESIGN THINKING

Why  
*Design Thinking?*

- Manufacturing



Tesla Fremont Factory

# DESIGN THINKING

Why  
*Design Thinking?*

- Agriculture



CNH Industrial Autonomous Tractor Concept

# DESIGN THINKING

Why  
*Design Thinking?*

- Agriculture



DJI Agra sprayin pesticides

# DESIGN THINKING

Why  
*Design Thinking?*

- Mundane Task



Tesla Autopilot

# DESIGN THINKING

Why  
*Design Thinking?*

- Repetitive Job



Spot inspection power sub-station , Boston Dynamics

# DESIGN THINKING

Why  
*Design Thinking?*

- Specialised Job

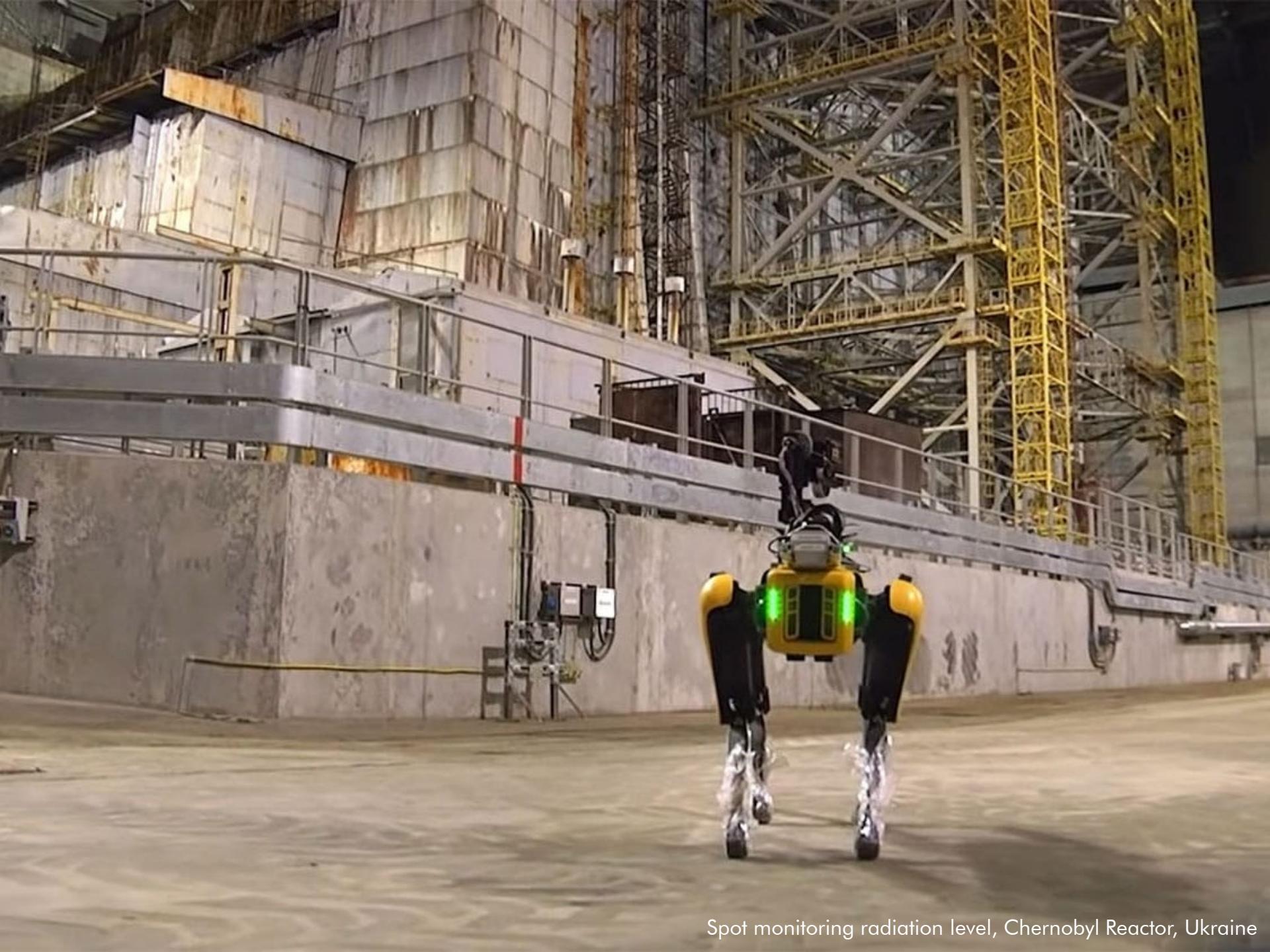


Spot scanning construction site, Boston Dynamics

# DESIGN THINKING

Why  
*Design Thinking?*

- Hazardous Job



Spot monitoring radiation level, Chernobyl Reactor, Ukraine

# DESIGN THINKING

Why  
*Design Thinking?*

- Service Job



Starbucks Pickup with Amazon Go!

# DESIGN THINKING

## Why *Design Thinking?*

- Service Job



Tao Bin Vending Machine

# DESIGN THINKING

'Creative'

# DESIGN THINKING

*Or is it?*

# DESIGN THINKING

## *Deep Learning Models*

- MidJourney
  - DALL-E
- Stable Diffusion



DALL E Outpointing Johannes Vermeer's Painting

# DESIGN THINKING



Astronaut Riding a Horse

# DESIGN THINKING



Pope Francis in Puffer Jacker

# DESIGN THINKING



*Collaborate?*

## *Understand*

## 1. EMPATHISE

---

- Definitions
- Asking Questions
- Observation

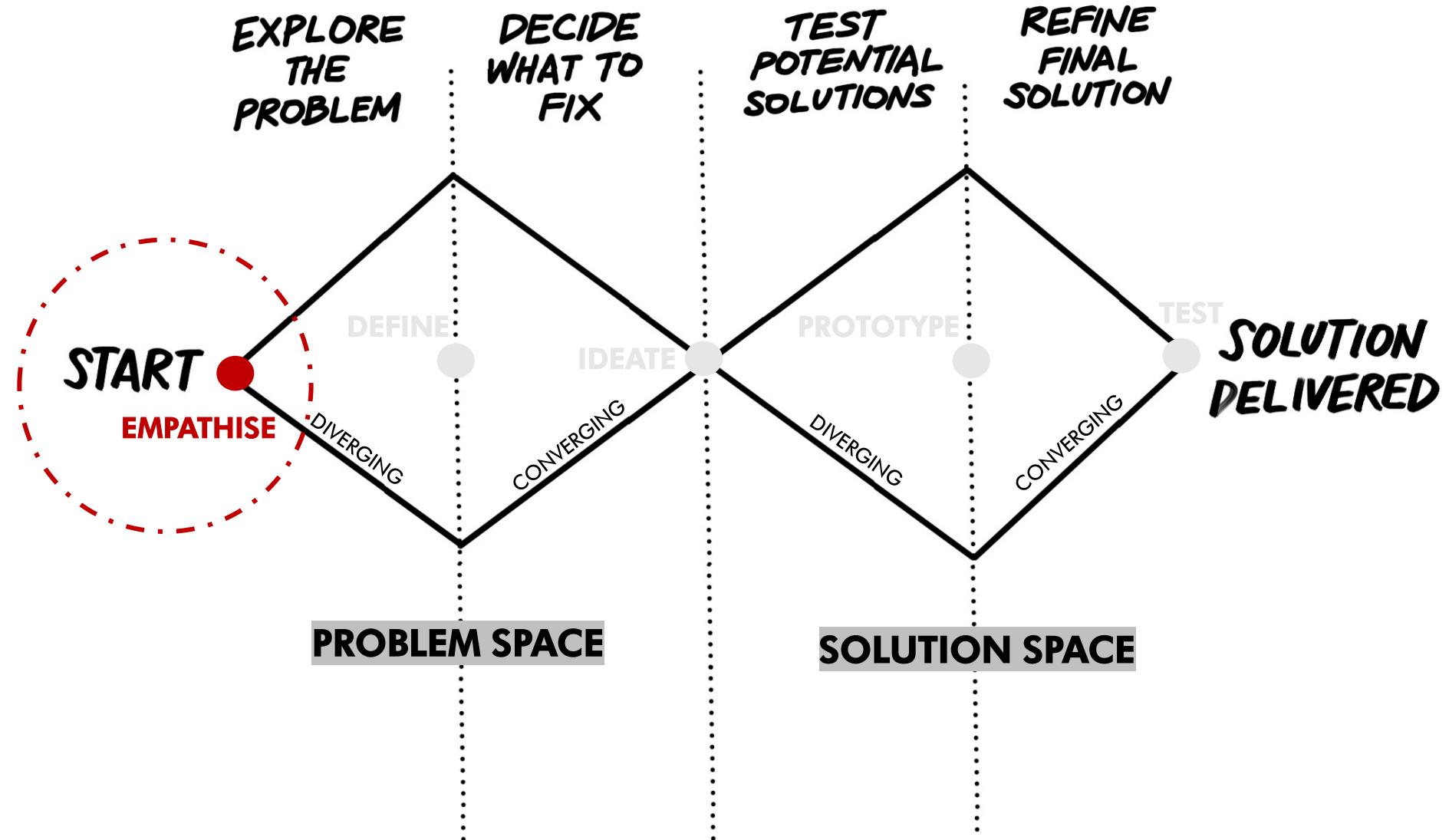


Le Corbusier

# DESIGN THINKING

## Design Thinking *Process*

1. Empathise
2. Define
3. Ideate
4. Prototype
5. Test



# DESIGN THINKING

## **Empathise?**

Empathy?

## DEFINITIONS

**Empathy** (noun) /'empəTHē/ (Oxford)

the ability to understand another person's feelings, experience, etc.

**Empathise** (verb) /'empə,THīz/ (Oxford)

To understand and share the feelings of another.

# EMPATHISE

## **Initial stage to solve any problem**

- Base / Fundamental
- Critical to the overall process



# EMPATHISE

## Be-All & End-All

A ***good understanding*** of the problem is the be-all & end-all in Design Thinking



Edward Burtynsky, Stepwell #4, Sagar Kund Baori, India, 2013

# EMPATHISE

## Get familiarised with the problem

- Observe
- Understand



EMPATHISE

**What do you do then?**

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

?

# ASKING QUESTIONS

**5W + 1H**

# ASKING QUESTIONS

## **5W + 1H**

- Who
- What
- When
- Where
- Why
- How

# ASKING QUESTIONS

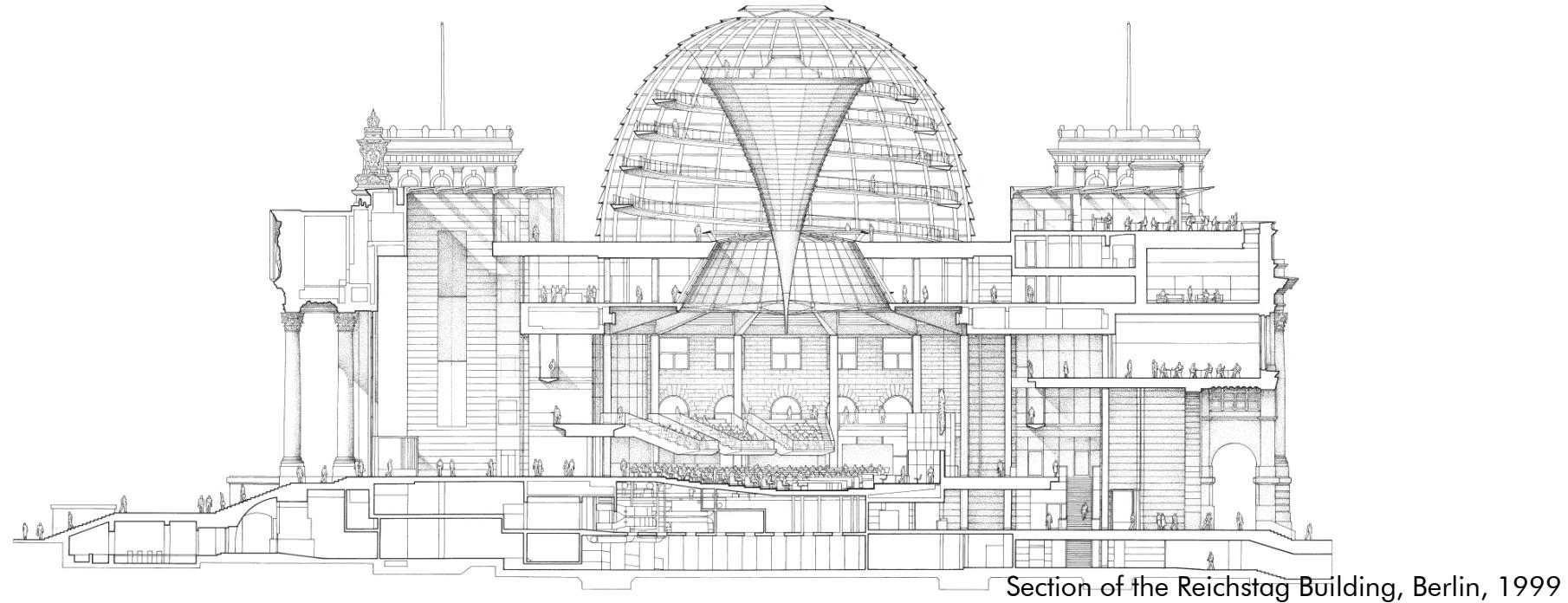
Example



# ASKING QUESTIONS

## What

- What is this building?
- What is the significance of this building?
- What is that glass dome?



Section of the Reichstag Building, Berlin, 1999

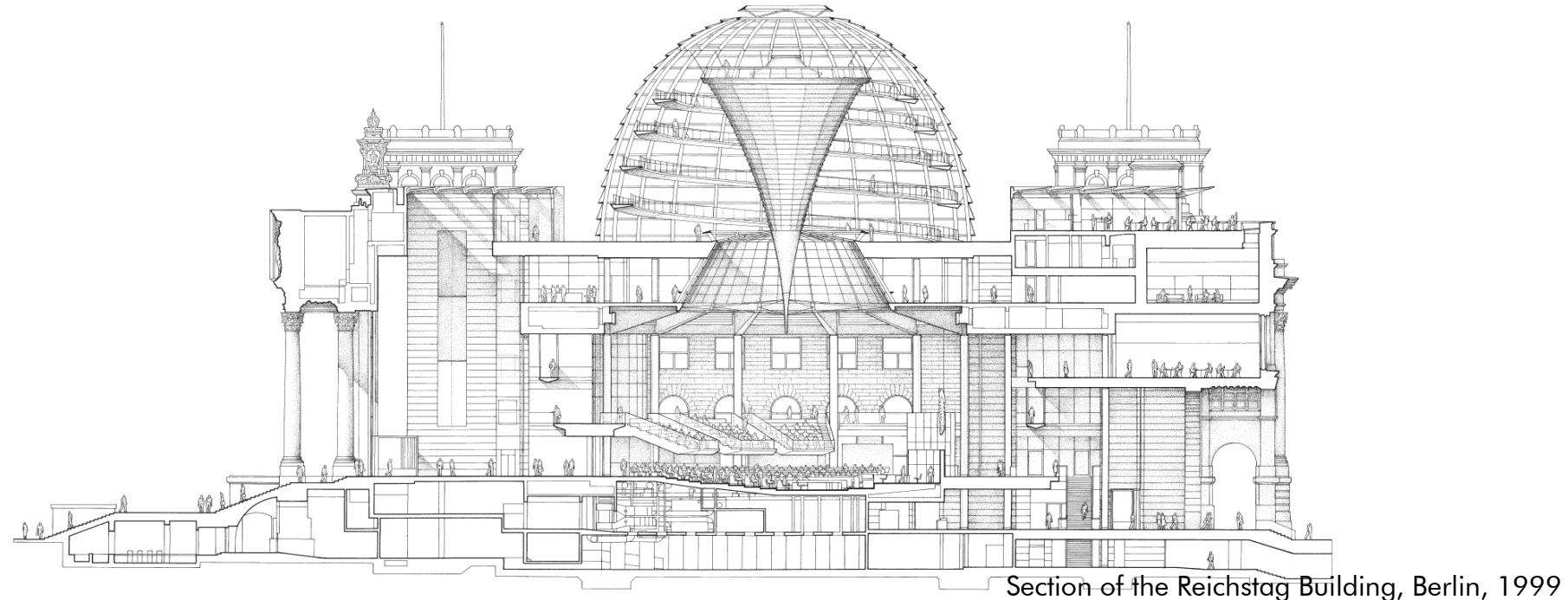


Reichstag Building, Berlin, 2000s

# ASKING QUESTIONS

## What

- What is this building?
- German Parliament Building
- What is the significance of this building?
- German Unification (1871, 1990)
- What is that glass dome?
- Addition from 1992-1999 renovation



Section of the Reichstag Building, Berlin, 1999

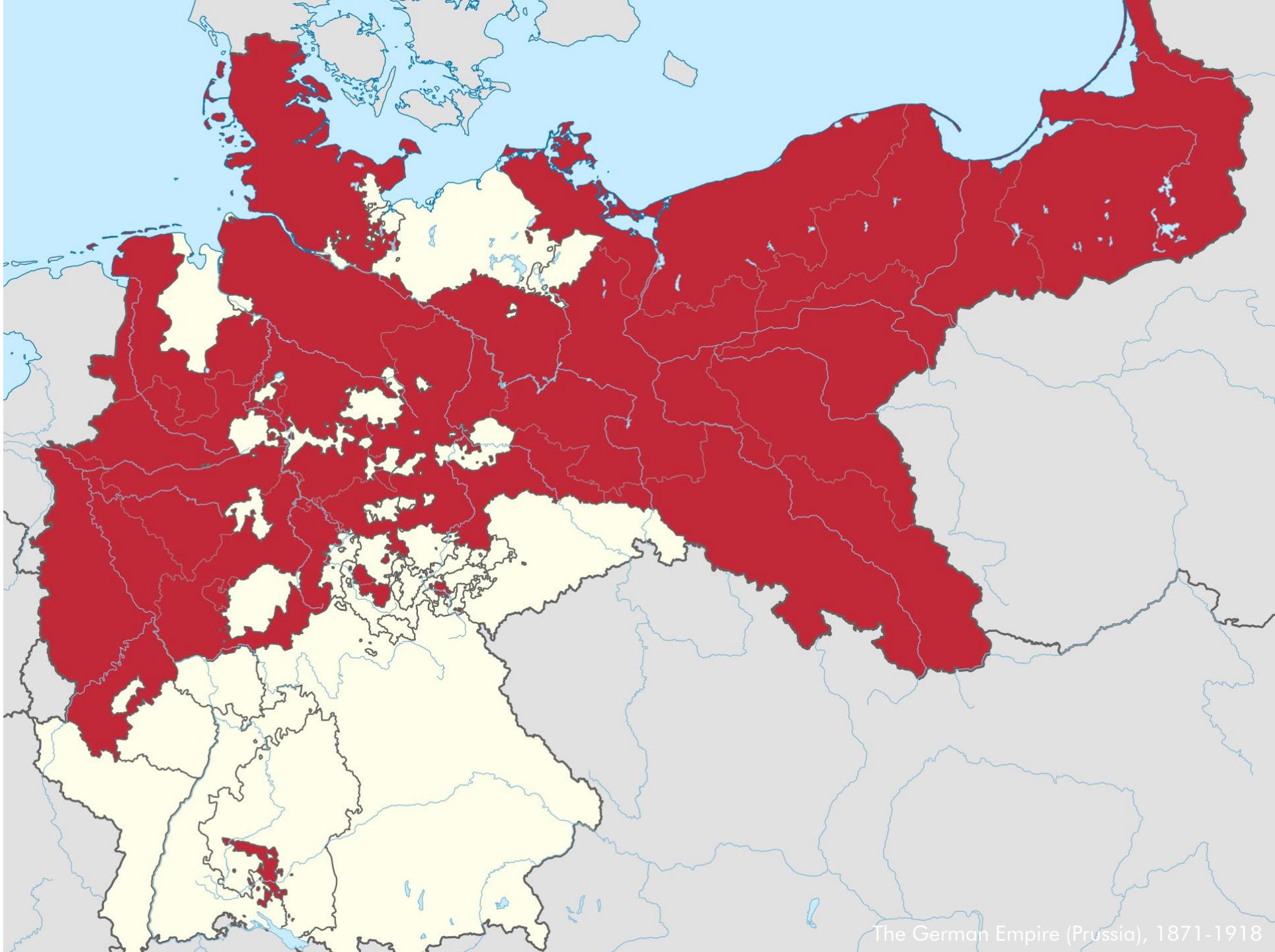


Reichstag Building, Berlin, 2000s

# ASKING QUESTIONS

## What

- What is this building?
- German Parliament Building
- What is the significance of this building?
- German Unification (1871, 1990)
- What is that glass dome?
- Addition from 1992-1999 renovation



The German Empire (Prussia), 1871-1918

# ASKING QUESTIONS

## What

- What is this building?
- German Parliament Building
- What is the significance of this building?
- German Unification (1871, 1990)
- What is that glass dome?
- Addition from 1992-1999 renovation



The Berlin Wall, 1961-1989

# ASKING QUESTIONS

## What

- What is this building?
- German Parliament Building
- What is the significance of this building?
- German Unification (1871, 1990)
- What is that glass dome?
- Addition from 1992-1999 renovation



The fall of Berlin Wall, 1990

# ASKING QUESTIONS

## What

- What is this building?
- German Parliament Building
- What is the significance of this building?
- German Unification (1871, 1990)
- What is that glass dome?
- Addition from 1992-1999 renovation



Reichstag Building, Berlin, 1999

# ASKING QUESTIONS

## When

- When was it originally built?
- **1871-1894**
- When was it renovated?
- **1992-1999**



Reichstag Building, Berlin, 1910

# ASKING QUESTIONS

## Where

- Where is this building located?
- Berlin, Germany



Reichstag Building, Berlin, 1945

# ASKING QUESTIONS

## Who

- Who designed this building?
- Ludwig Bohnstedt (Original)
- Foster & Partners (Renovated)
- Who are these people?
- Normal People

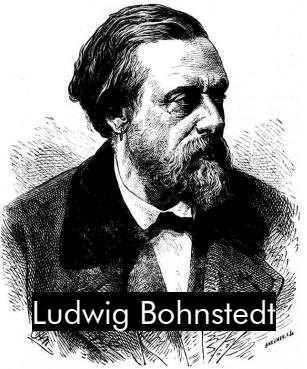


Reichstag Building, Berlin, 1999

# ASKING QUESTIONS

## Who

- Who designed this building?
- Ludwig Bohnstedt (Original)
- Foster & Partners (Renovated)
- Who are these people?
- Normal People



Ludwig Bohnstedt



Sir Norman Foster

# ASKING QUESTIONS

## Who

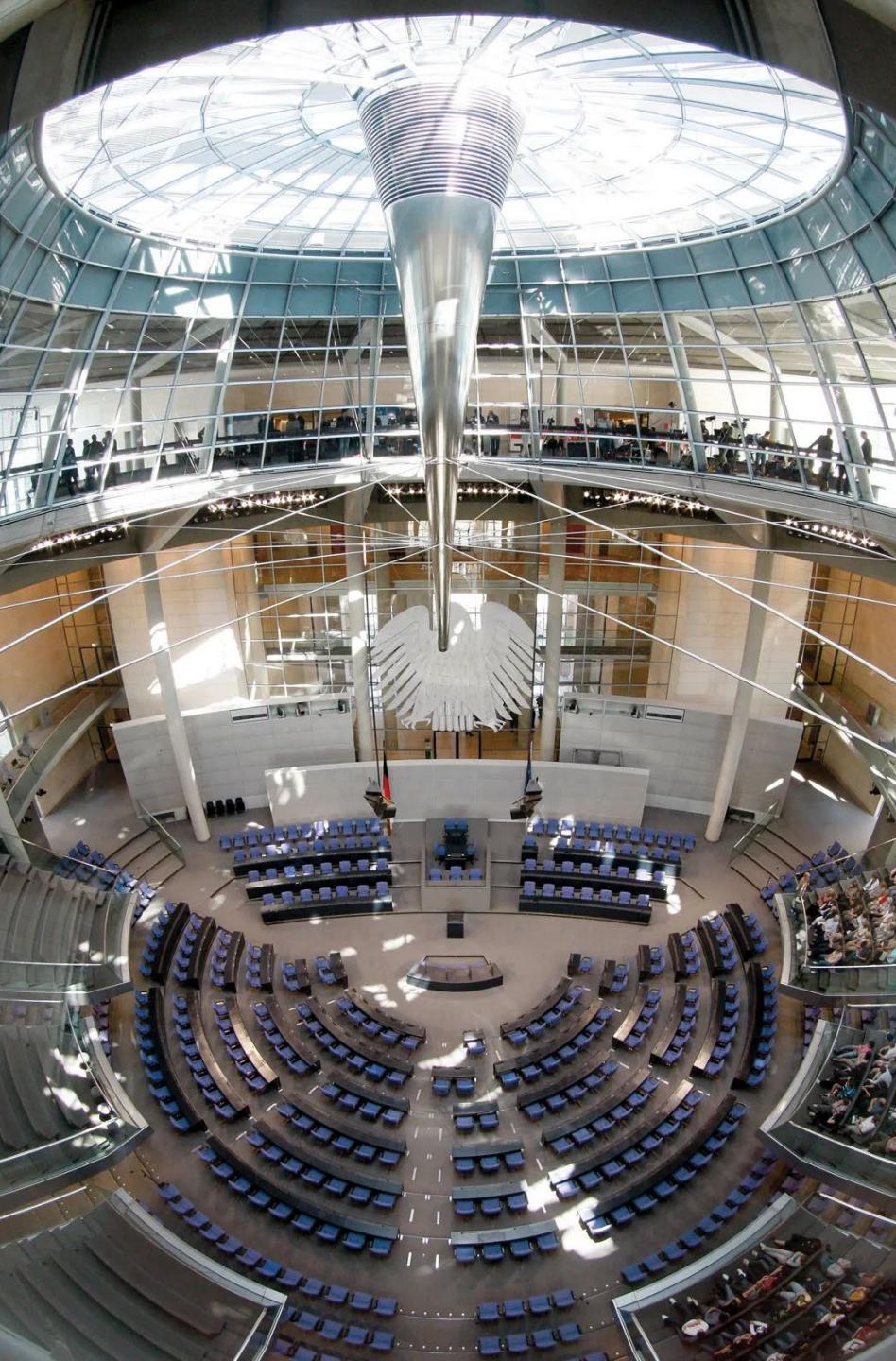
- Who designed this building?
- Ludwig Bohnstedt (Original)
- Foster & Partners (Renovated)
- Who are these people?
- Normal People



# ASKING QUESTIONS

## Who

- Who designed this building?
- Ludwig Bohnstedt (Original)
- Foster & Partners (Renovated)
- Who are these people?
- Normal People



# ASKING QUESTIONS

## Why

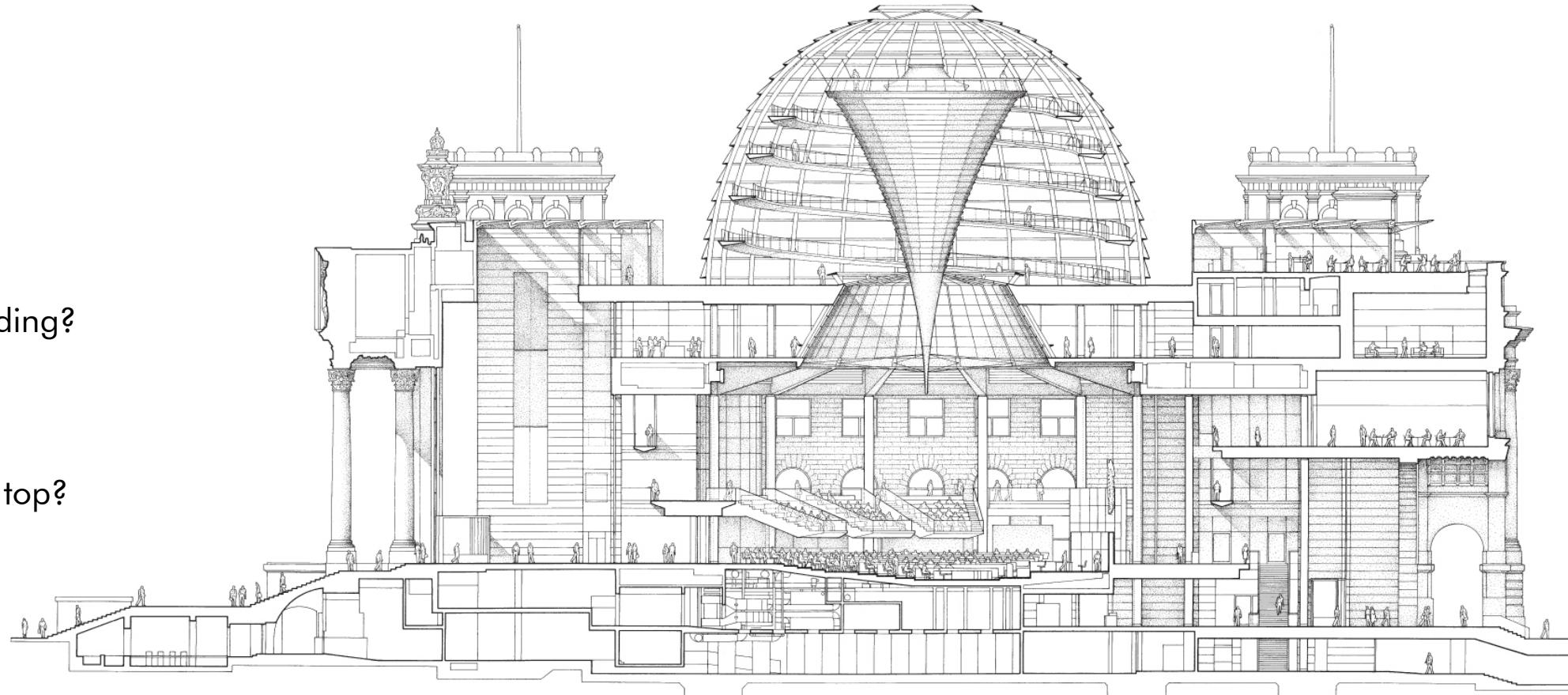
- Why renovating this building?
- State of disrepair
- Rising from the ashes?
- Why placing a dome on top?
- Signaling?



# ASKING QUESTIONS

## Why

- Why renovating this building?
- State of disrepair
- Rising from the ashes?
- Why placing a dome on top?
- Signaling?



Section of the Reichstag Building, Berlin, 1999

# ASKING QUESTIONS

## How

- How is it similar/different to this building?



Thai Parliament Building, 2021

# OBSERVATION

## How

- How is it similar/different to these buildings?



Thai Parliament Building, Bangkok, 2021



United States Capitol, Washington D.C., 1800



Jatiya Sangsad Bhaban, Dhaka, 1982



Reichstag, Berlin, 1999

# OBSERVATION

## How

- How is it similar/different to these buildings?



Thai Parliament Building, Bangkok, 2021



United States Capitol, Washington D.C., 1800



Jatiya Sangsad Bhaban, Dhaka, 1982



Reichstag, Berlin, 1999

# ASKING QUESTIONS

Let's Practice

# ASKING QUESTIONS

## What

- What is this chair?
- What is significance it?
- What is it made out of?



# ASKING QUESTIONS

Who



# ASKING QUESTIONS

**When**



# ASKING QUESTIONS

**Where**



# ASKING QUESTIONS

Why



# ASKING QUESTIONS

How



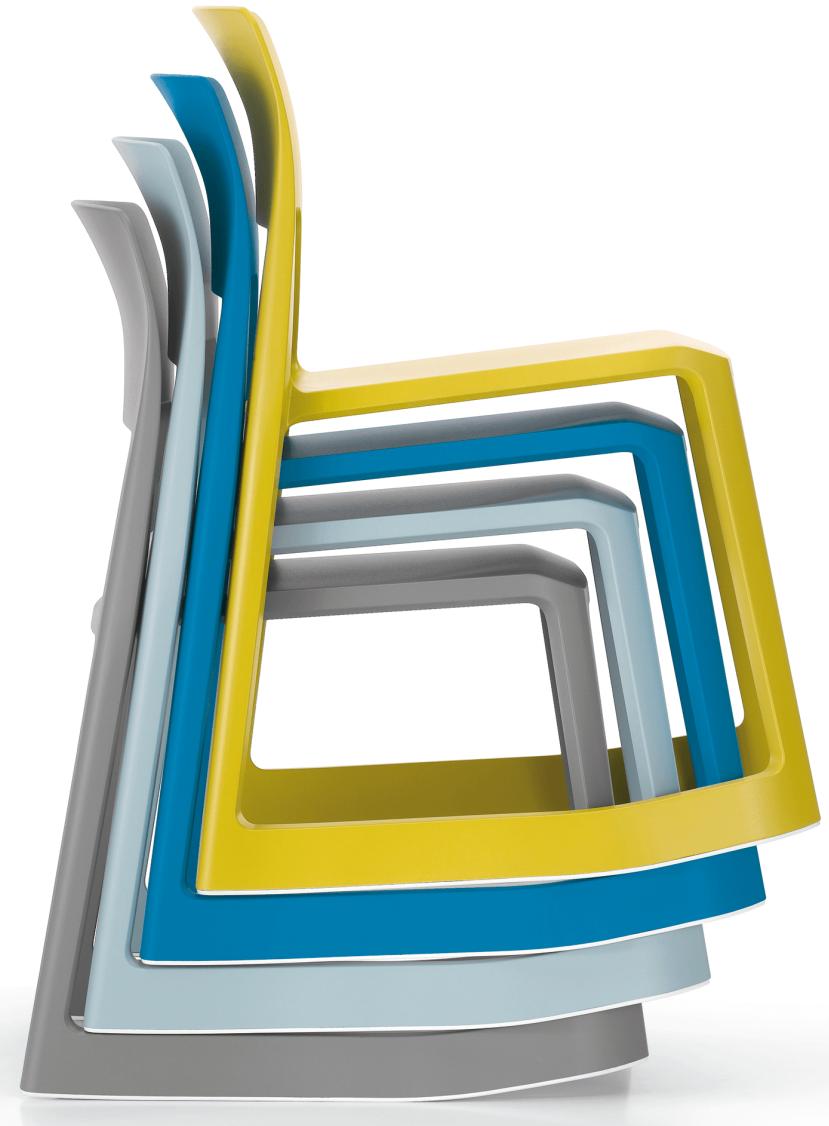
# ASKING QUESTIONS

**TIP-TON**



# ASKING QUESTIONS

**TIP-TON**



# ASKING QUESTIONS

## MYTO CHAIR



ASKING  
QUESTIONS

ULTRADUR

□ • BASF



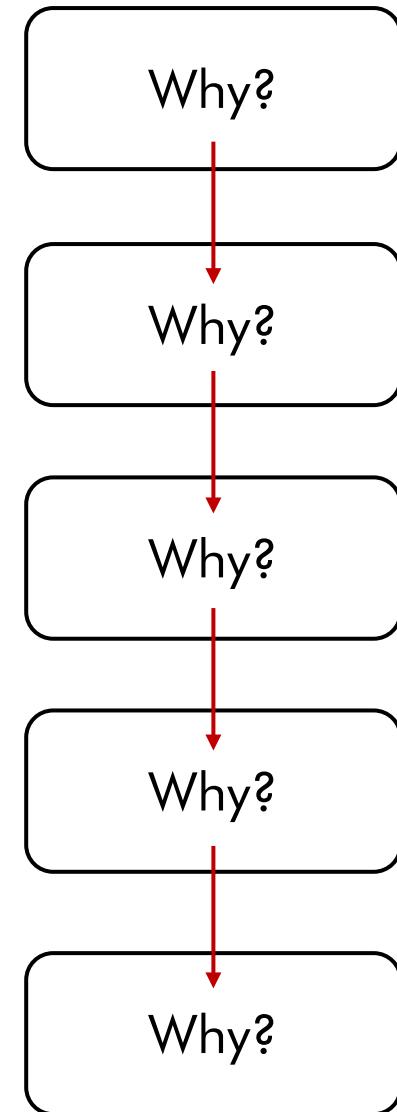
# ASKING QUESTIONS

**5 Whys**

# ASKING QUESTIONS

## 5 Whys

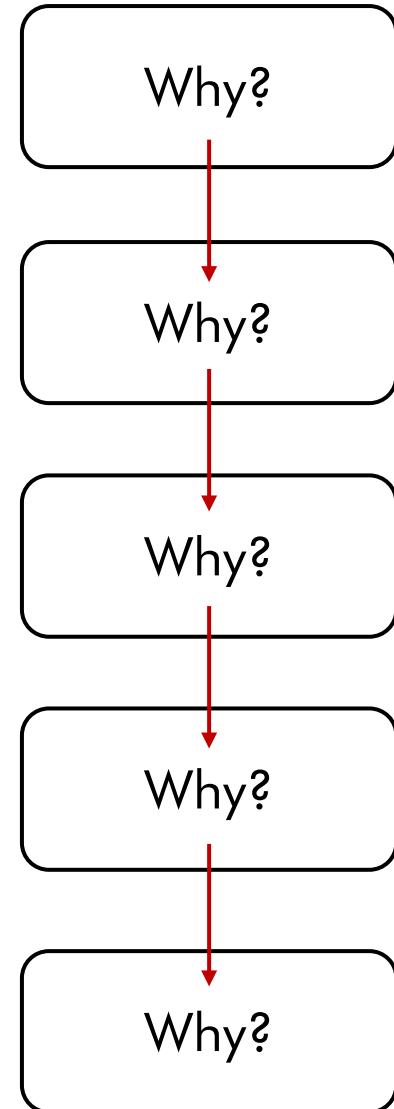
- Root-cause analysis



# ASKING QUESTIONS

## 5 Whys

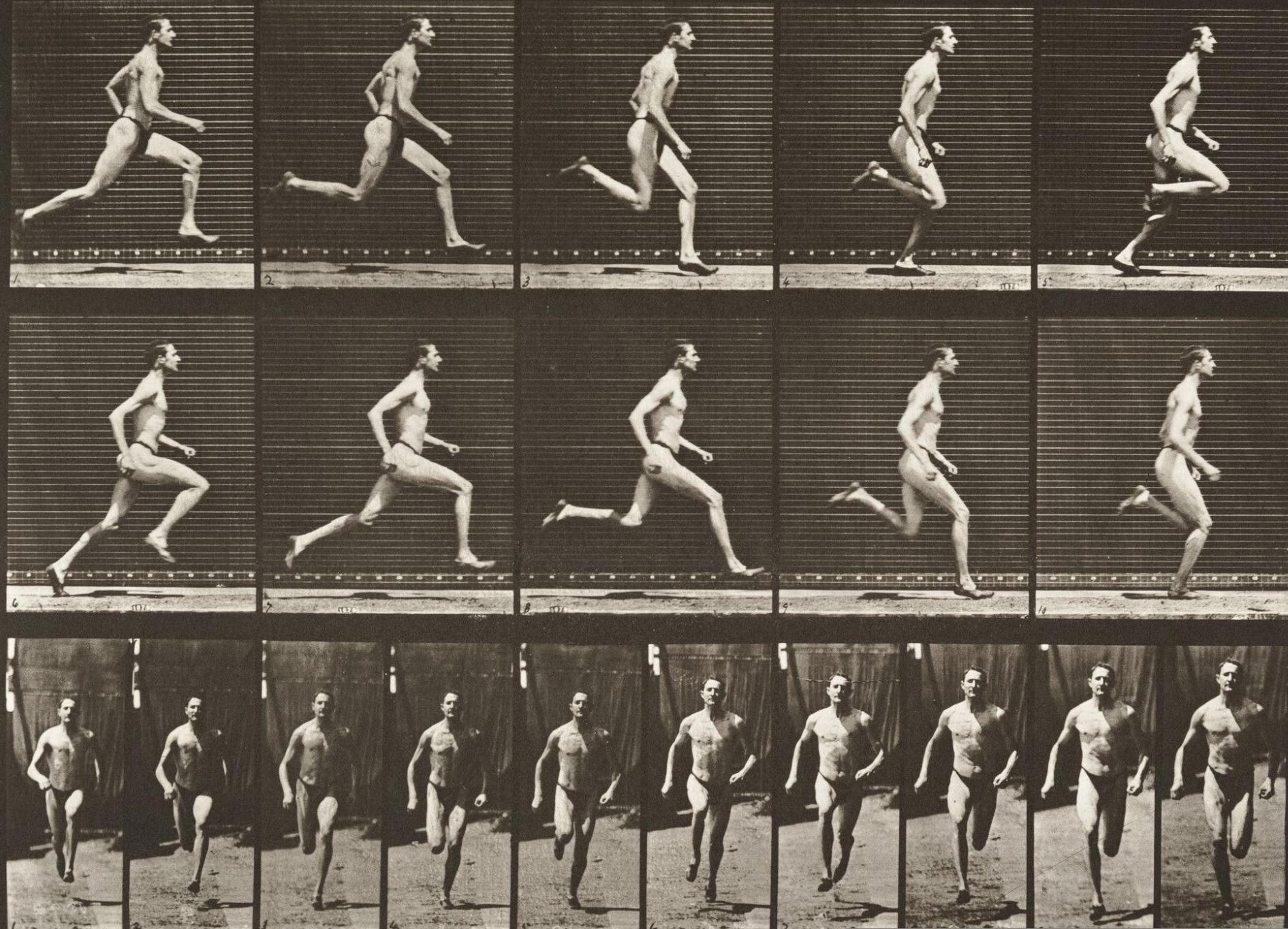
- Root-cause analysis



# OBSERVATION

## What to observe?

- Patterns / Language
- Behaviors
- Recurrences
- Abnormalities

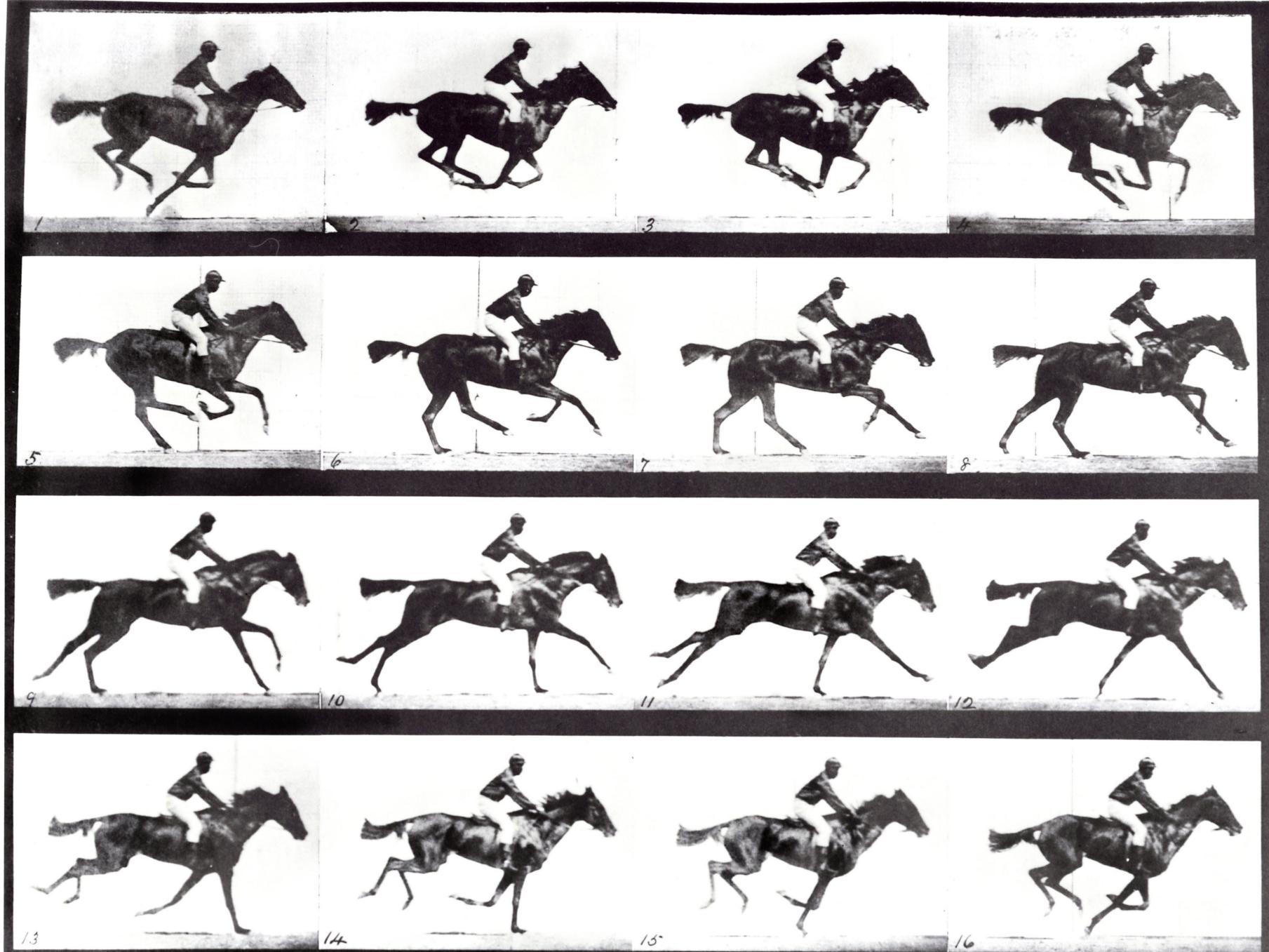


Animal Locomotion, Eadweard Muybridge, 1887

# OBSERVATION

## What to observe?

- Patterns / Language
- Behaviors
- Recurrences
- Abnormalities



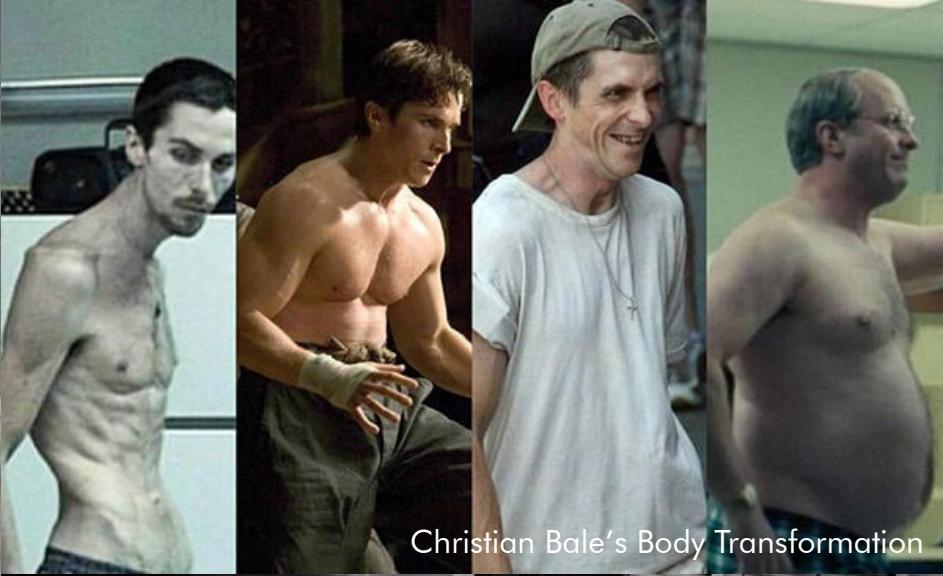
# OBSERVATION

## Research Methods

- Read
- Watch
- Interview
- Document
- Experiment
- Replicate
- Analyse



Paul Newman Reading, 1973



Christian Bale's Body Transformation



Vivian Maier, Charoenkrung Road, Bangkok 1959

Remember Thipsamai Pad Thai?

# OBSERVATION

**Wat Saket**



Wat Saket, Bangkok, 2017

# OBSERVATION

2022



Google

# OBSERVATION

2004



# OBSERVATION

Rattanakosin Island



# OBSERVATION

Rattanakosin Island



# OBSERVATION

High Ground



Wat Saket Area, Bangkok, 2017

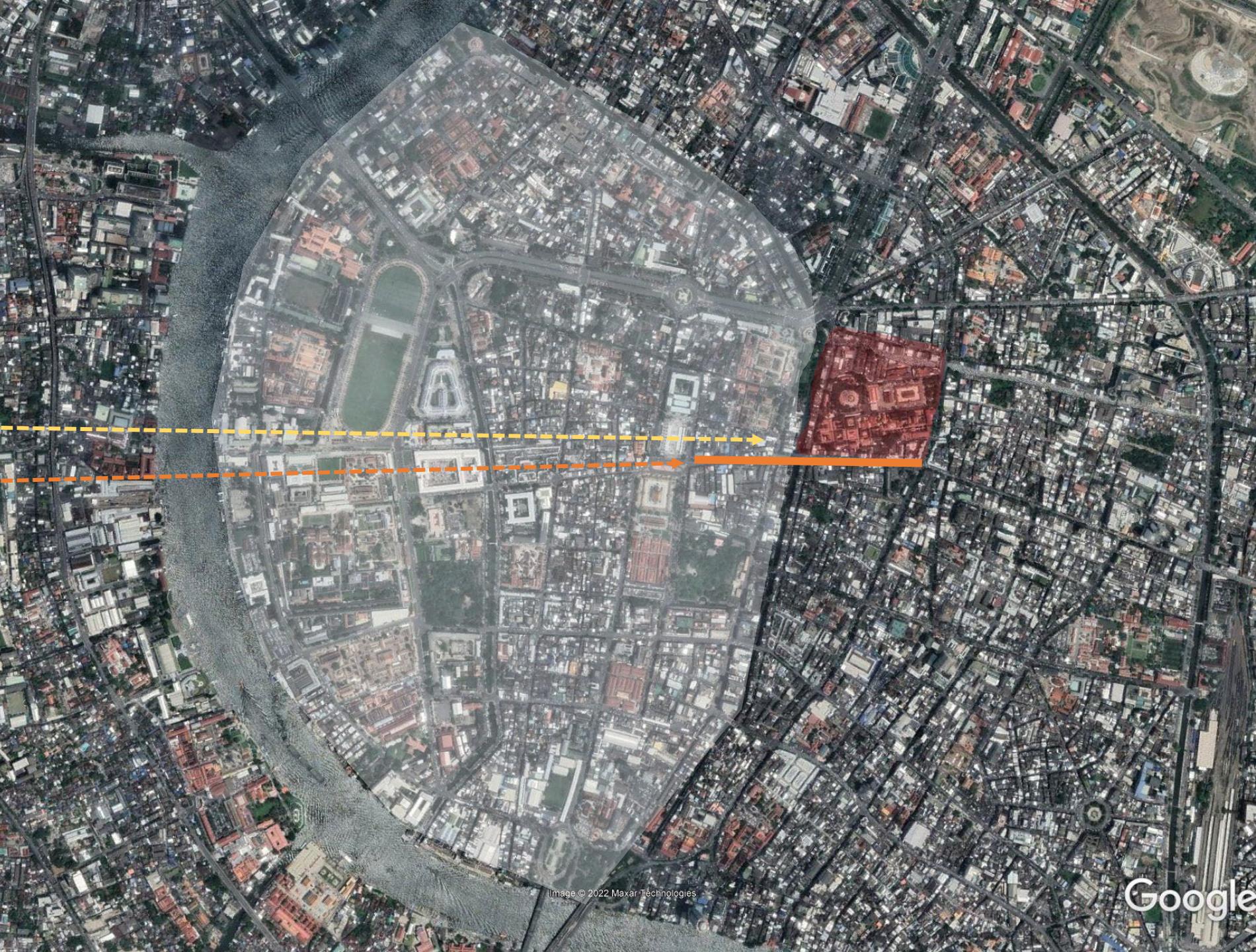
# OBSERVATION

???



# OBSERVATION

- Thipsamai Pad Thai
- Bumrungmuang Rd.



# OBSERVATION

'Ghost Gate'



# OBSERVATION

Shanghai Alley



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Shanghai Alley



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Shanghai Alley



Wat Saket Area, Bangkok, 2017

# OBSERVATION

High Ground



Wat Saket Area, Bangkok, 2017

# OBSERVATION

## Typologies



Wat Saket Area, Bangkok, 2017

# OBSERVATION

'Shophouses'



Wat Saket Area, Bangkok, 2017

# OBSERVATION

'Shophouses'



Wat Saket Area, Bangkok, 2017

# OBSERVATION

'Shophouses'



Wat Saket Area, Bangkok, 2017

## OBSERVATION

## Timber



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Timber



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Storage



# OBSERVATION

Storage



# OBSERVATION

## Storage



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Storage



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Storage



# OBSERVATION

Storage



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Cross Cut Saw



Radial Arm Saw

# OBSERVATION

Jointer



# OBSERVATION

Planer



Radial Arm Saw

# OBSERVATION

Router / Spindle Molder



# OBSERVATION

Sanding



# OBSERVATION

Assembling



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Carving



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Working next to the street



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Tooling



Wat Saket Area, Bangkok, 2017

# OBSERVATION

Tooling



# OBSERVATION

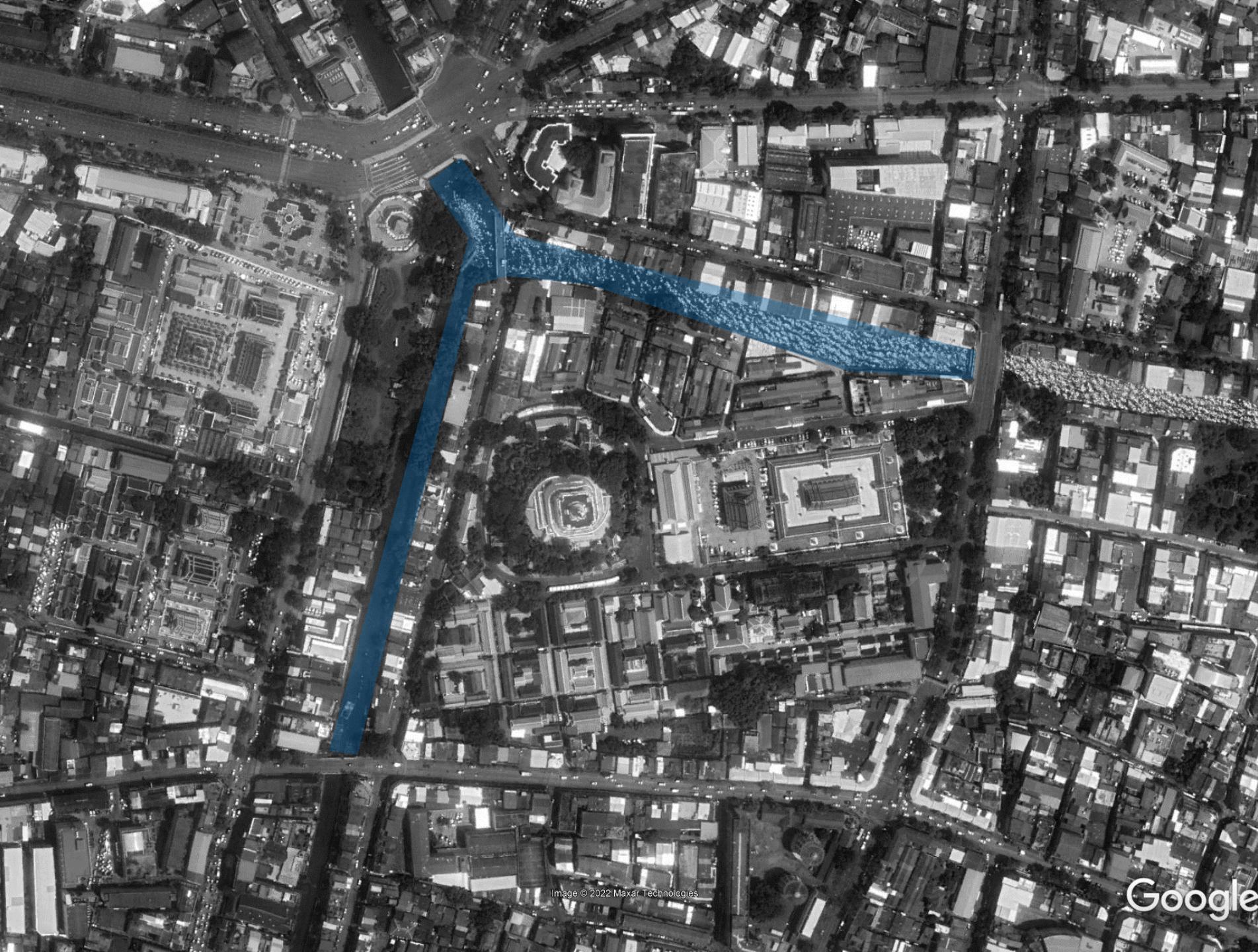
Canal?



Wat Saket Area, Bangkok, 2017

# OBSERVATION

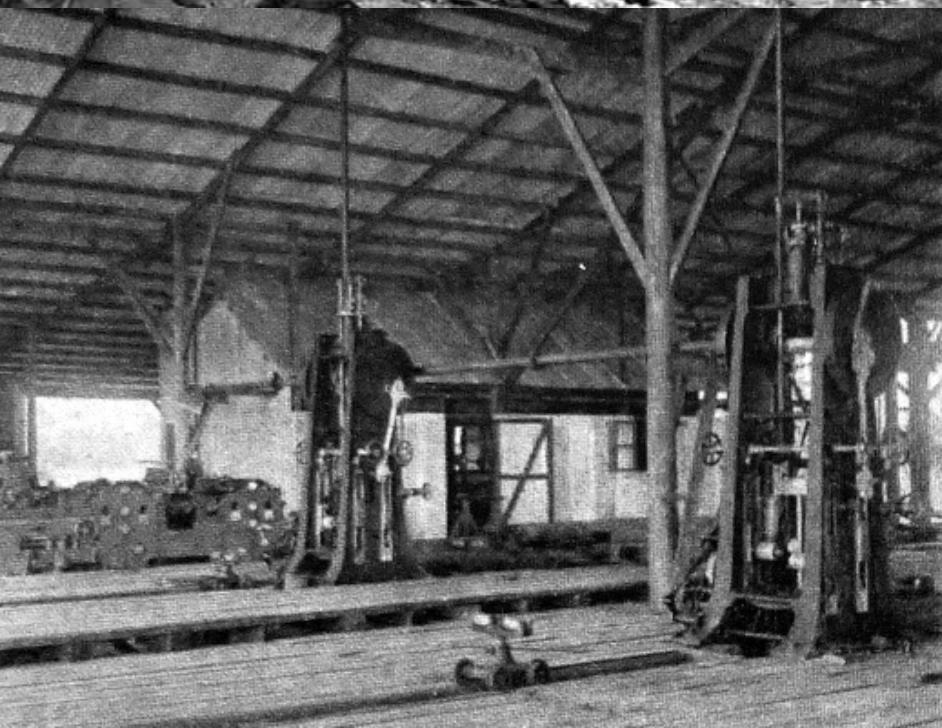
Water?



Google

# OBSERVATION

Water?



Timber Industry in Thailand, Early 1900s

# OBSERVATION

Water?



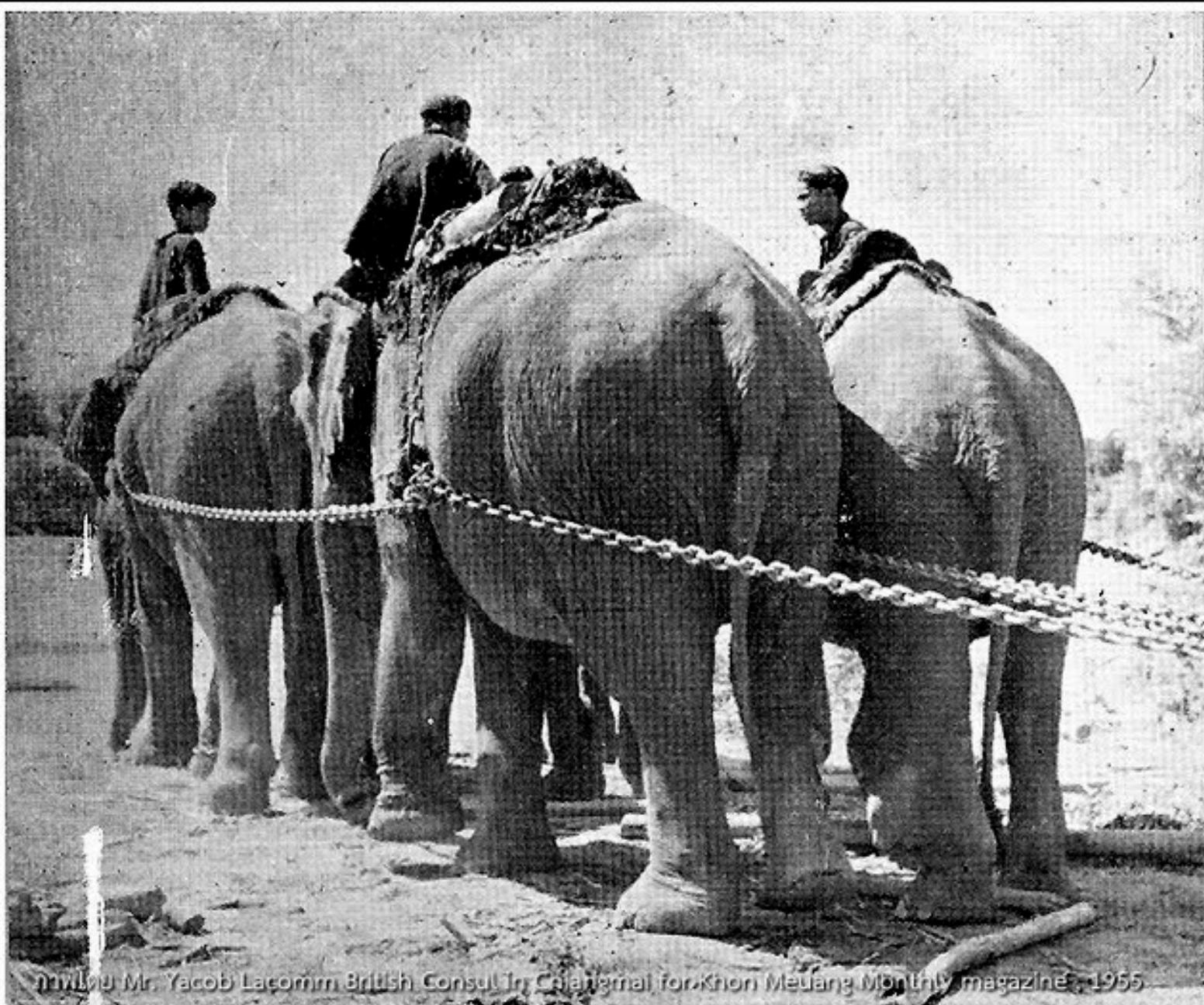
กิจกรรม ภาคที่ห้า

160. Forestry

Timber Industry in Thailand, Early 1900s

# OBSERVATION

Water?



ภาพถ่าย Mr. Jacob Lacomm British Consul In Chiangmai for Khon Medang Monthly magazine, 1955.



△ △ ช้างงาน



คณเมือง วารสารรายเดือน  
ปีที่ ๑ ฉบับที่ ๑๑ พฤษภาคม ๒๕๕๘

# OBSERVATION

Water?



ภาพโดย Mr. Yacob Lacomm British Consul in Chiangmai for Khon Meuang Monthly magazine : 1955



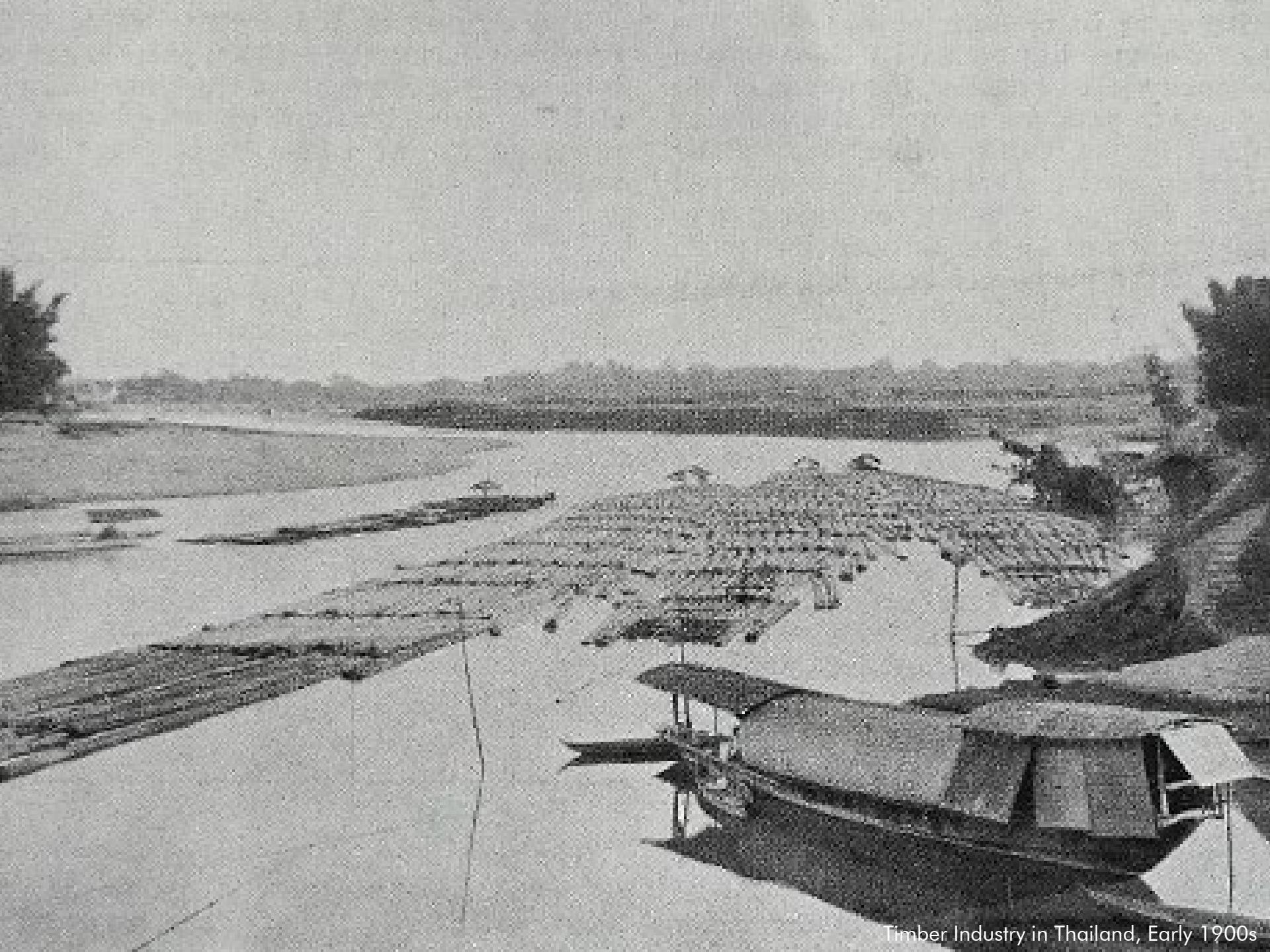
ข้างงาน



คนเมือง วารสารรายเดือน  
ปีที่ ๑ ฉบับที่ ๑๑ พฤษภาคม ๒๕๕๘

# OBSERVATION

Water?



Timber Industry in Thailand, Early 1900s

# OBSERVATION

Water?



Timber Industry in Thailand, Early 1900s

## OBSERVATION

Water?



Timber Industry in Thailand, Early 1900s

# OBSERVATION

Water?

| Names of Articles.              |     |     |     |     |     | 1904.     | 1905.     | 1906.     | 1907.     |
|---------------------------------|-----|-----|-----|-----|-----|-----------|-----------|-----------|-----------|
| Hides ...                       | ... | ... | ... | ... | ... | £ 58,215  | £ 71,288  | £ 119,323 | £ 92,943  |
| Rice ...                        | ... | ... | ... | ... | ... | 4,520,470 | 4,600,653 | 5,546,974 | 4,853,253 |
| Sticklac ...                    | ... | ... | ... | ... | ... | 28,516    | 48,330    | 43,480    | 22,893    |
| Fish, Salt, Platu ...           | ... | ... | ... | ... | ... | 20,739    | 38,750    | 63,297    | 43,212    |
| Fish, Salt, other than Platu... | ... | ... | ... | ... | ... | 25,876    | 35,616    | 40,363    | 41,127    |
| Pepper ...                      | ... | ... | ... | ... | ... | 72,560    | 55,145    | 67,494    | 57,265    |
| Teak ...                        | ... | ... | ... | ... | ... | 560,174   | 817,396   | 819,654   | 1,021,002 |
| Silk Piece Goods ...            | ... | ... | ... | ... | ... | 24,389    | 16,657    | 27,381    | 34,523    |
| Treasure ...                    | ... | ... | ... | ... | ... | 84,414    | 21,075    | 21,235    | 139,226   |
| All other Goods ...             | ... | ... | ... | ... | ... | 219,256   | 224,820   | 258,983   | 259,526   |
| Goods re-exported ...           | ... | ... | ... | ... | ... | 35,566    | 59,370    | 73,957    | 79,230    |
| Total ...                       | ... | ... | ... | ... | ... | 5,650,175 | 5,989,100 | 7,082,141 | 6,644,200 |



# Untitled Map

Write a description for your map.

Legend

2004

Chaopraya River around Rama IX Bridge area, 2004

# Untitled Map

Write a description for your map.

Legend

2014



Chaopraya River around Rama IX Bridge area, 2014



Chaopraya River around Rama IX Bridge area, 2023

## CONTEXT

---

- Environmental
- Socio-Economic
- Historical
- Adaptation



Monolith, 2001 Space Odyssey, 1968

# CONTEXT

**'Out of Context'**



Utah monolith, 2016-2020

# CONTEXT

What is **Context**?

# CONTEXT

## Settings/Background/Environment

- **Tangible** – Physical location
- **Intangible** – Cultural association



The set of 'The Hunt for Red October', 1990

# CONTEXT

Context



Disneyland Attendee

# CONTEXT

Context



Courtroom

# CONTEXT

Context



Street food condiments

# CONTEXT

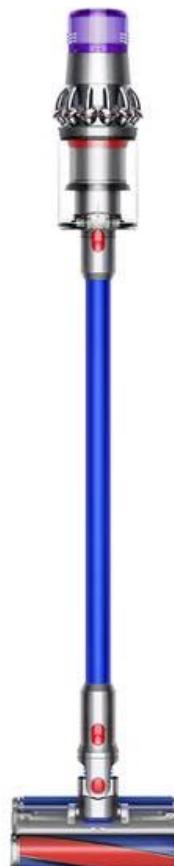
'Any **good design** considers the context of the product, audience and business'



Chong Nonsi intersection, Bangkok 2016

# CONTEXT

'Context determine the  
**purpose and function** of a  
design'



dyson v11



dyson digital slim



Dyson Digital Slim

# CONTEXT

'Context **gives meaning** to what we see'



Church of Light, Tadao Ando, 1989

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions



Edward Burtynsky, Makoko #2, Lagos, Nigeria, 2016

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions



Shangri-la, Tibet

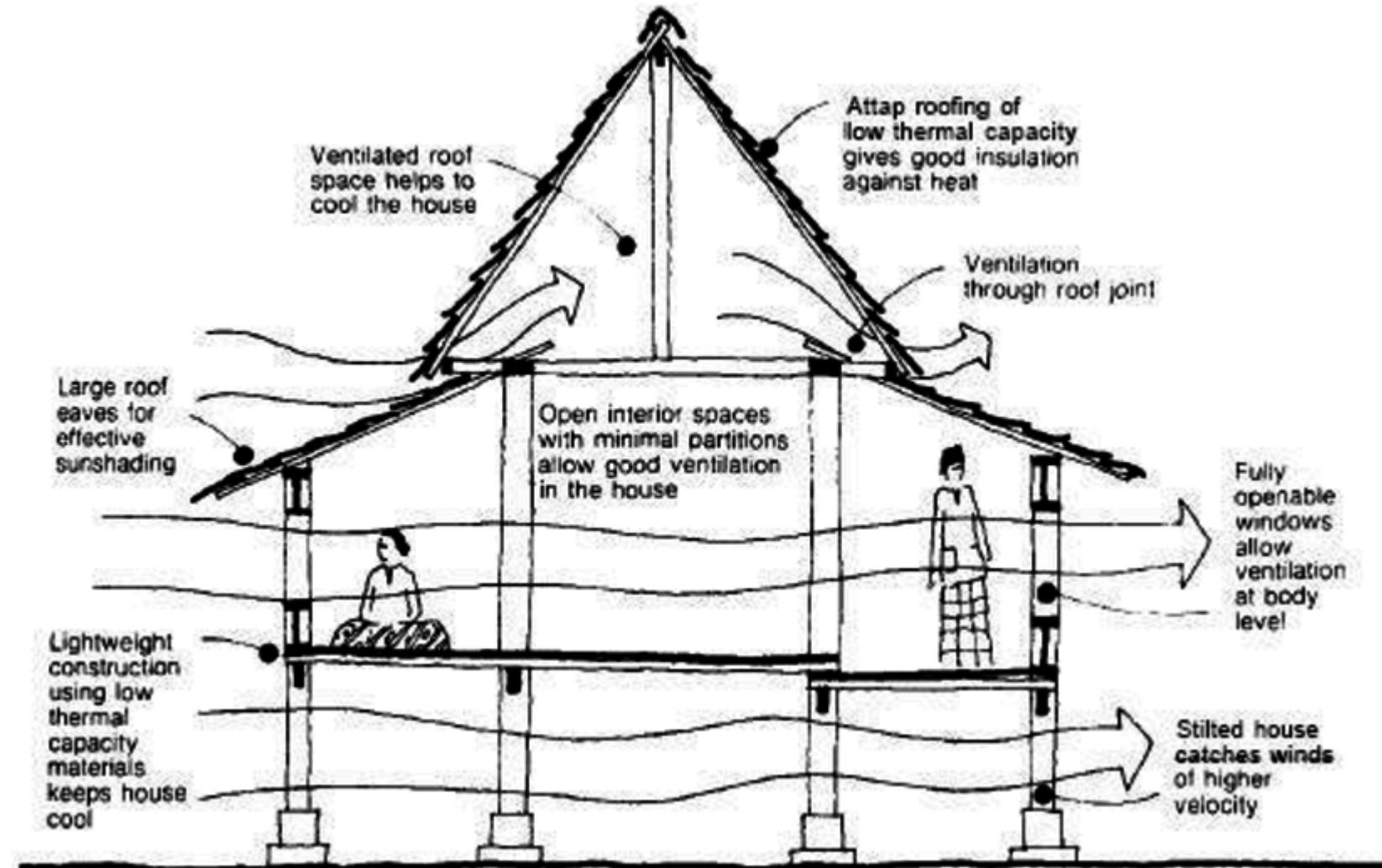


Phuket, Thailand

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions

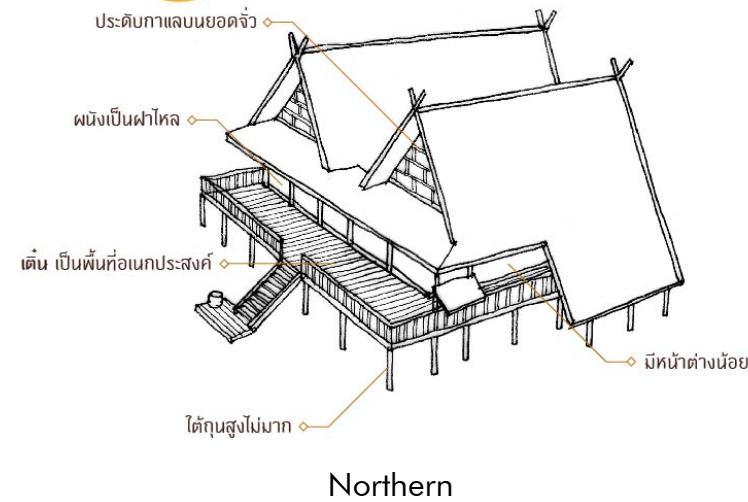


Section of a typical tropical dwelling

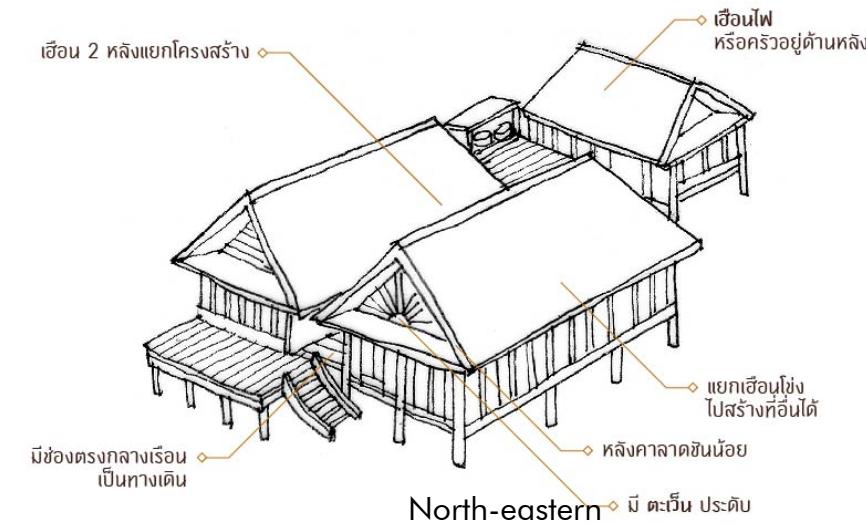
# ENVIRONMENTAL CONTEXT

## Environmental Factors

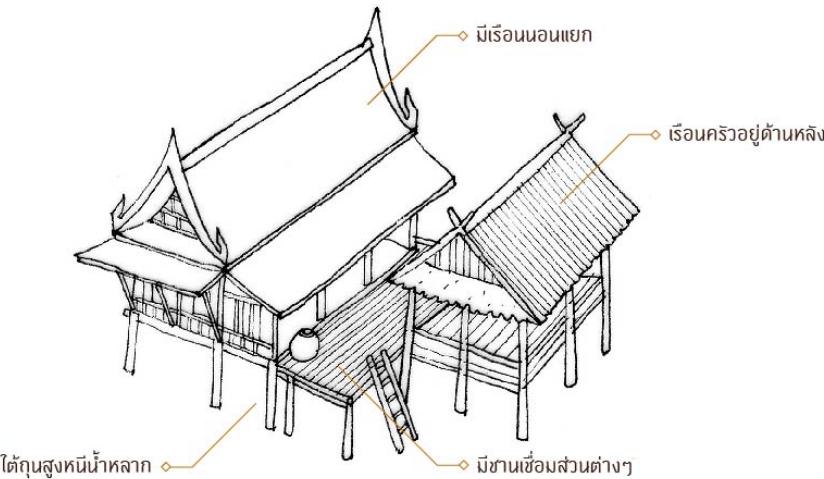
- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions



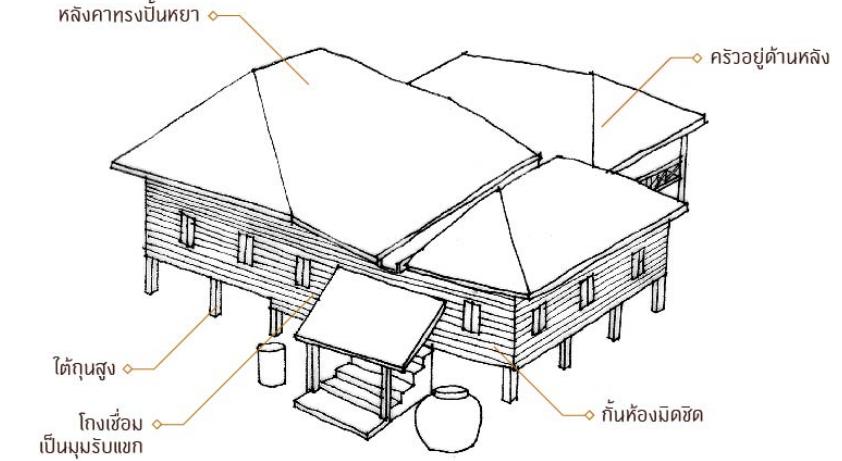
Northern



North-eastern



Central



Southern

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions



Fishing Structure, Stanleyville, Congo



Fishing Station, Vieste, Italy



Delta Shelter, Olson Kundig, 2014



Ho Keou, Yunnan Province, China

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions

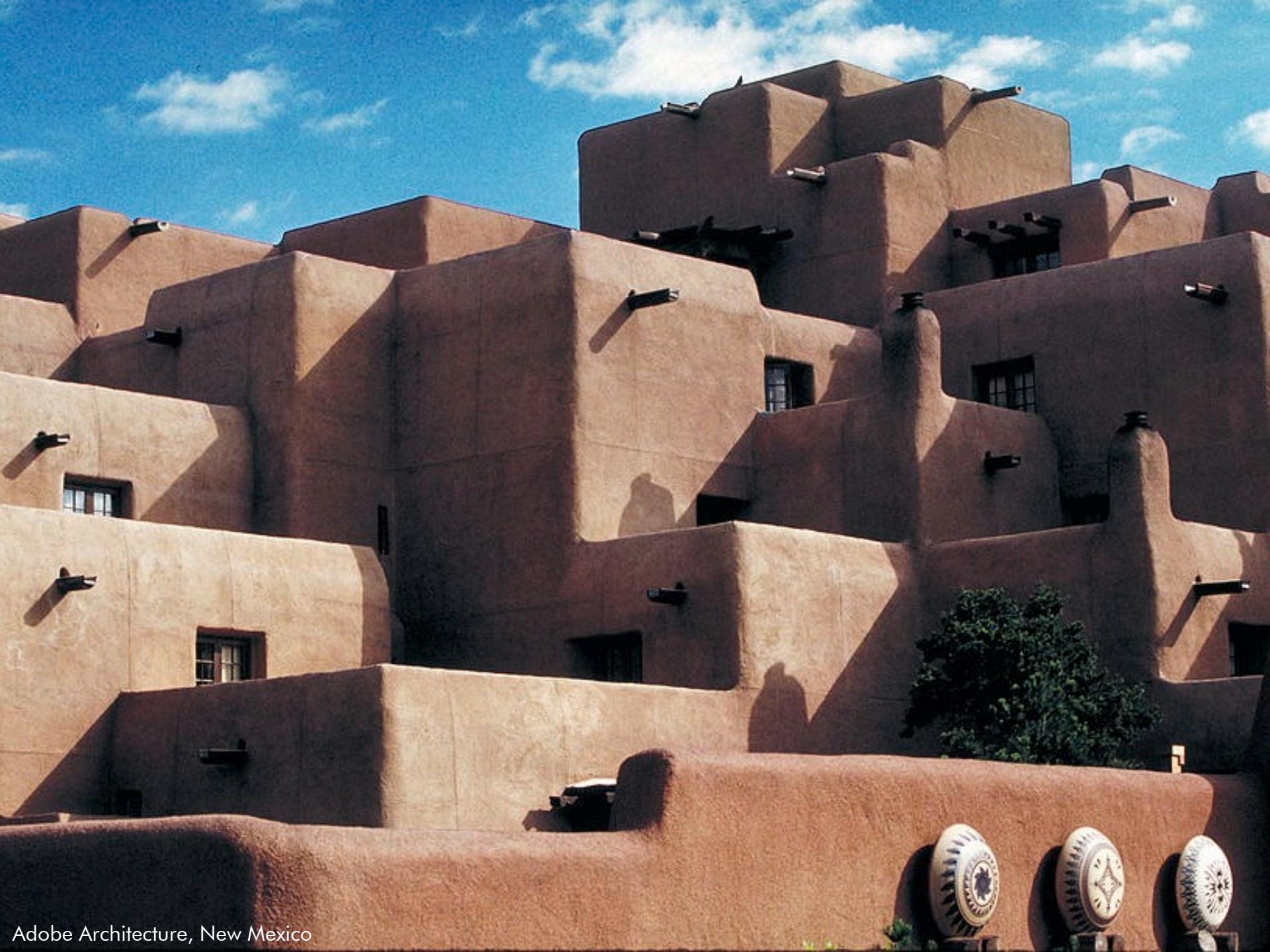


Horreos en Combarro, Galicia, Spain

# ENVIRONMENTAL CONTEXT

## **Environmental Factors**

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions



Adobe Architecture, New Mexico

# ENVIRONMENTAL CONTEXT

## **Environmental Factors**

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions

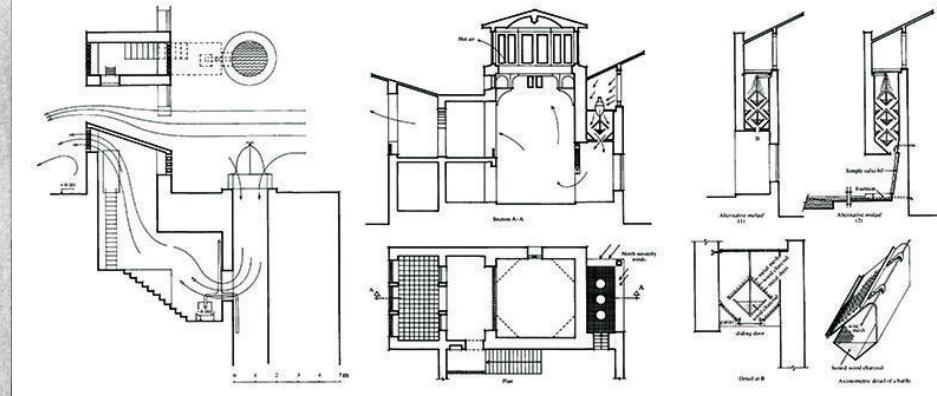
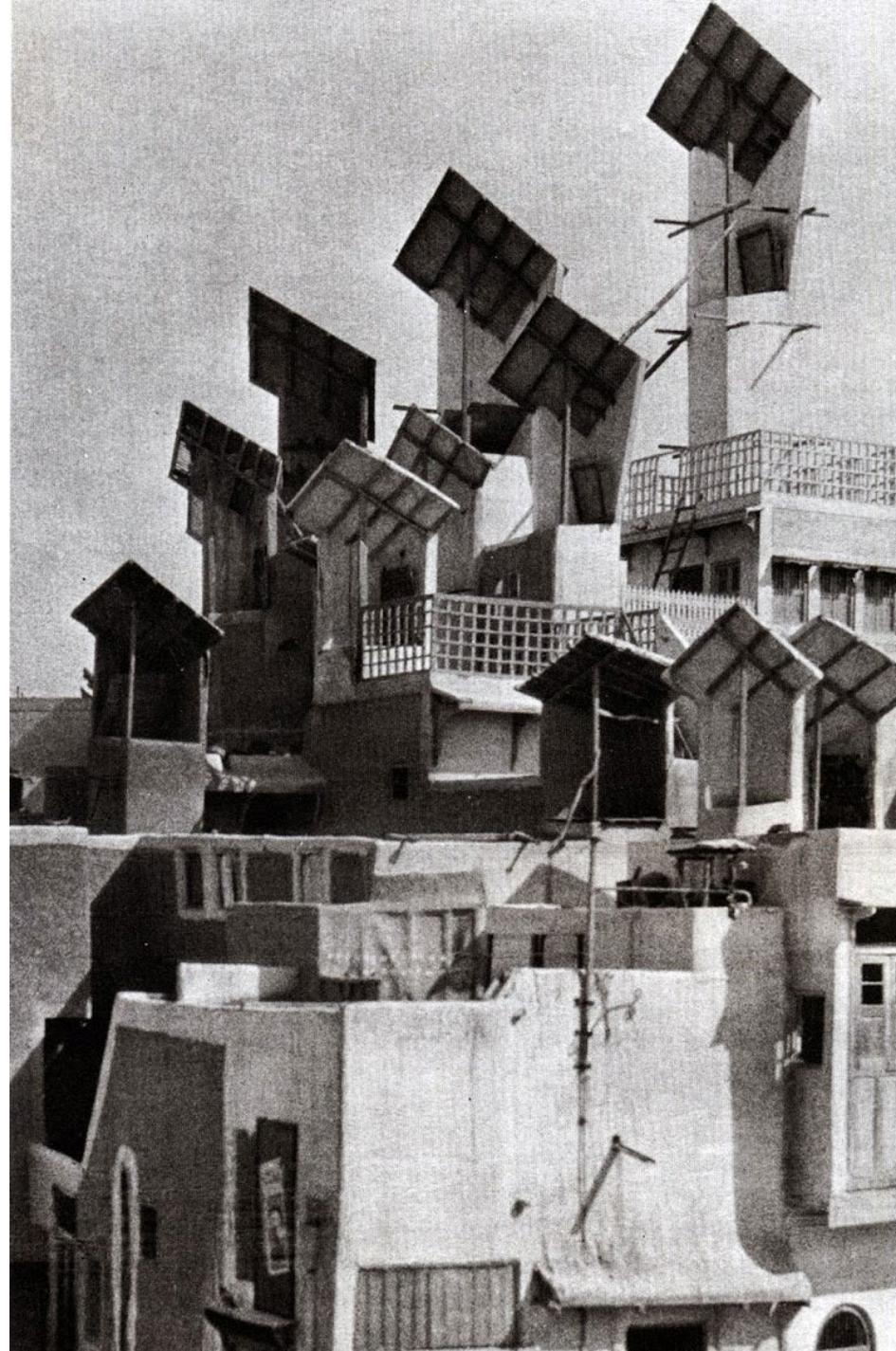


Copper House, Studio Mumbai, 2012

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions



Sectional diagram of the windcatcher



Windcatcher, Hyderabad, Pakistan

# ENVIRONMENTAL CONTEXT

## **Environmental Factors**

- Geography / Terrain /  
Latitude / Longitude / Altitude
- Climate / Sun-path /  
Precipitation / Soil condition
- Material Availabilities /  
Practices
- Natural Disasters /  
Environmental Conditions



Shimane, Japan

# ENVIRONMENTAL CONTEXT

## **Environmental Factors**

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions

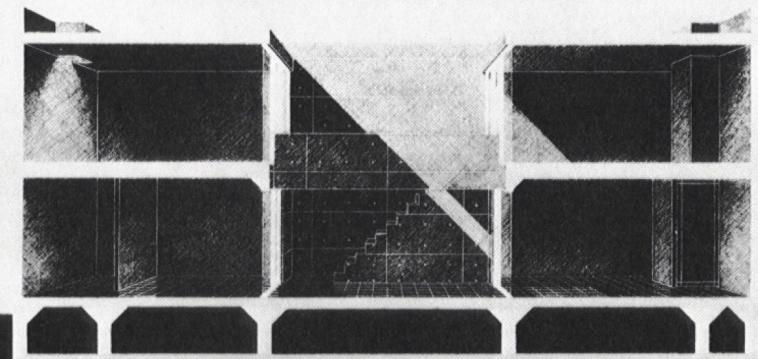


PM2.5 Pollution in Bangkok, 2022

# ENVIRONMENTAL CONTEXT

## Environmental Factors

- Geography / Terrain / Latitude / Longitude / Altitude
- Climate / Sun-path / Precipitation / Soil condition
- Material Availabilities / Practices
- Natural Disasters / Environmental Conditions

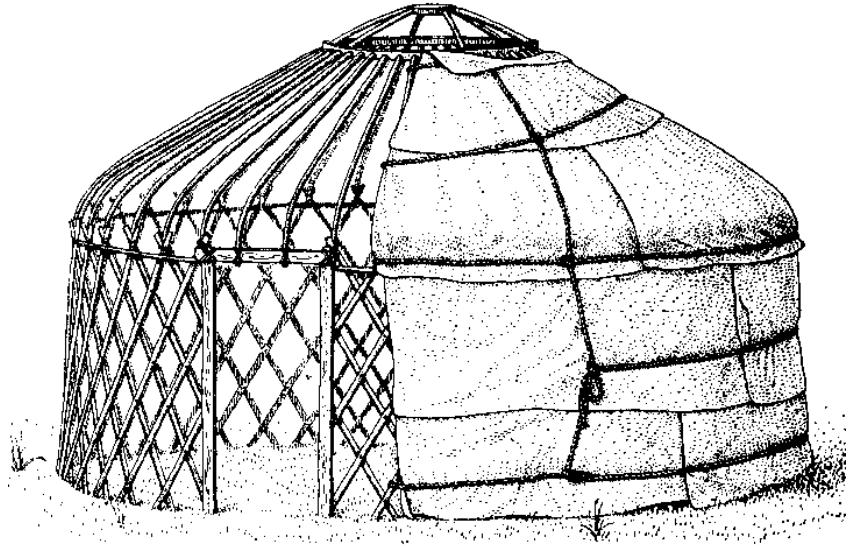


Row House in Sumiyoshi, Tadao Ando, 1976

# SOCIO-ECONOMIC CONTEXT

## Social-Economic Factors

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Mongolian Gher



Assembling process

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Rural Thai House

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Wat Benchamabophit, 1911

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Hall House, Europe, 1600s

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Salisbury Cathedral, United Kingdom, 1220

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Salisbury Cathedral, United Kingdom, 1220

# SOCIO-ECONOMIC CONTEXT

## Social-Economic Factors

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Kintsugi



Ise Grand Shrine



Ariel View of Ise Grand Shrine

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Kids working inside textile factory, Early 1900s

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Kids working with lathes, Mumbai, India

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Edward Burtynsky, Shipbreaking #11, Chittagong, Bangladesh, 2000

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Edward Burtynsky, Shipbreaking #5, Chittagong, Bangladesh, 2000

# SOCIO-ECONOMIC CONTEXT

## **Social-Economic Factors**

- Tradition / Lifestyle
- Community / Belief
- Social Standards / Regulations



Cobalt Mining, DRC, 2022

# CULTURAL CONTEXT

## **Cultural / Historical Factors**

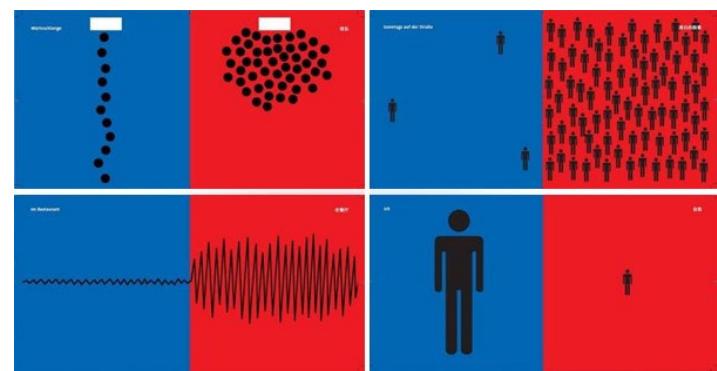
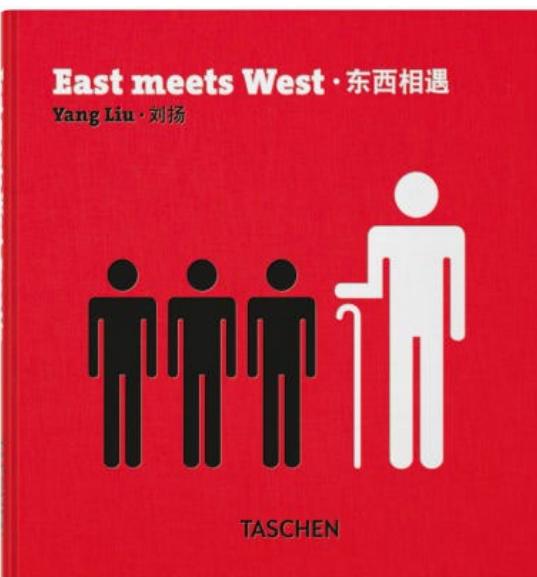
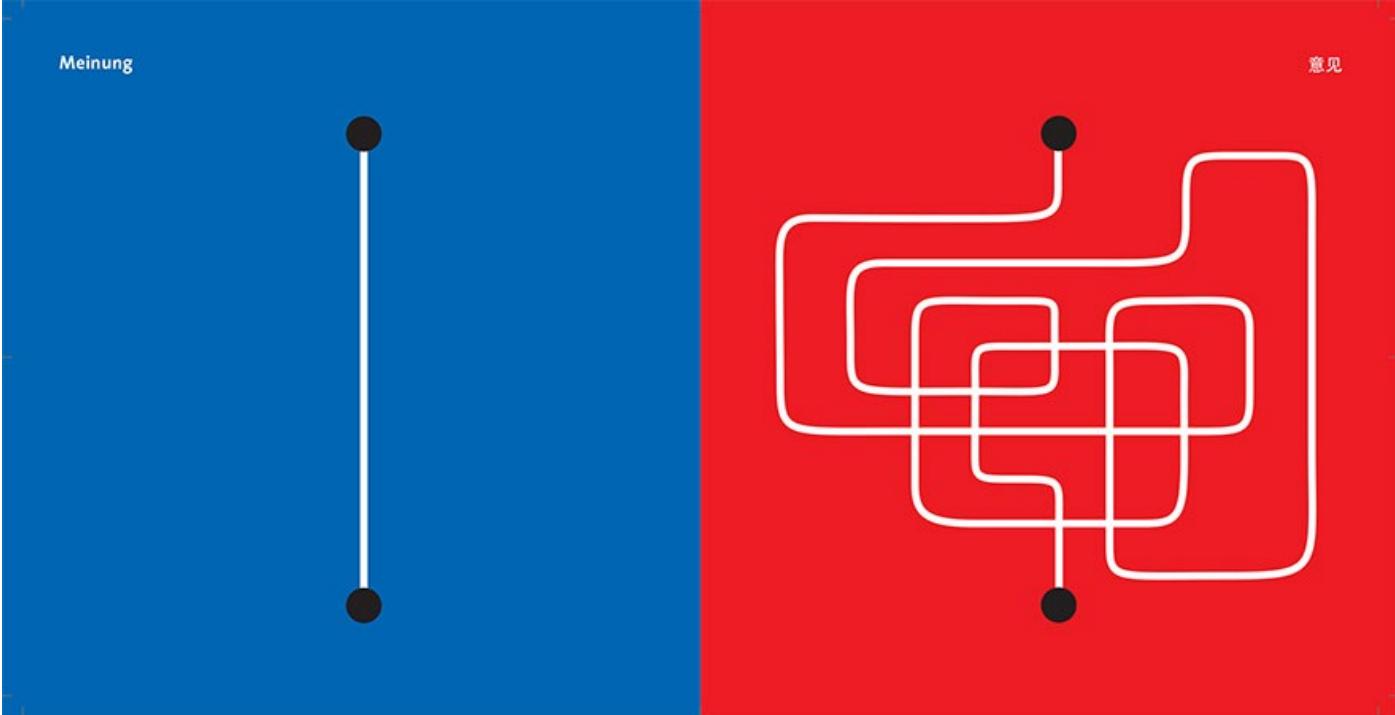
- Cultural Differences
- Perception & Interpretation



# CULTURAL CONTEXT

## Cultural / Historical Factors

- Cultural Differences
- Perception & Interpretation



East Meets West, Yang Liu

# CULTURAL CONTEXT

## Cultural / Historical Factors

- Cultural Differences
- Perception & Interpretation



Swiss Railway Clock

# CULTURAL CONTEXT

## Cultural / Historical Factors

- Cultural Differences
- Perception & Interpretation

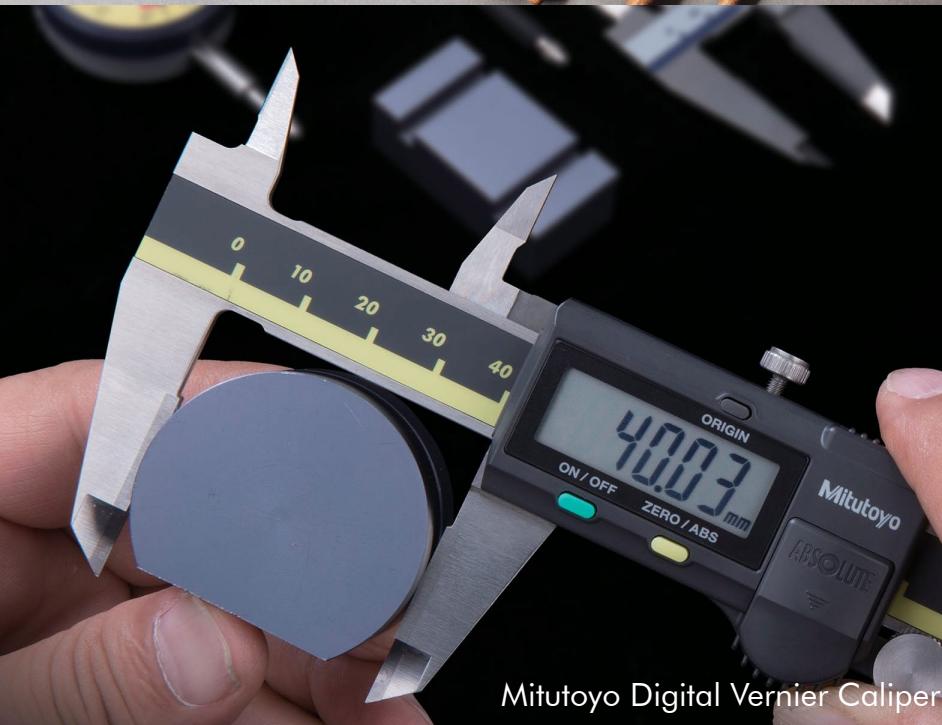


Rolex Explorer

# CULTURAL CONTEXT

## Cultural / Historical Factors

- Cultural Differences
- Perception & Interpretation



# Mitutoyo



# DESIGN ADAPTATION



## Adaptable

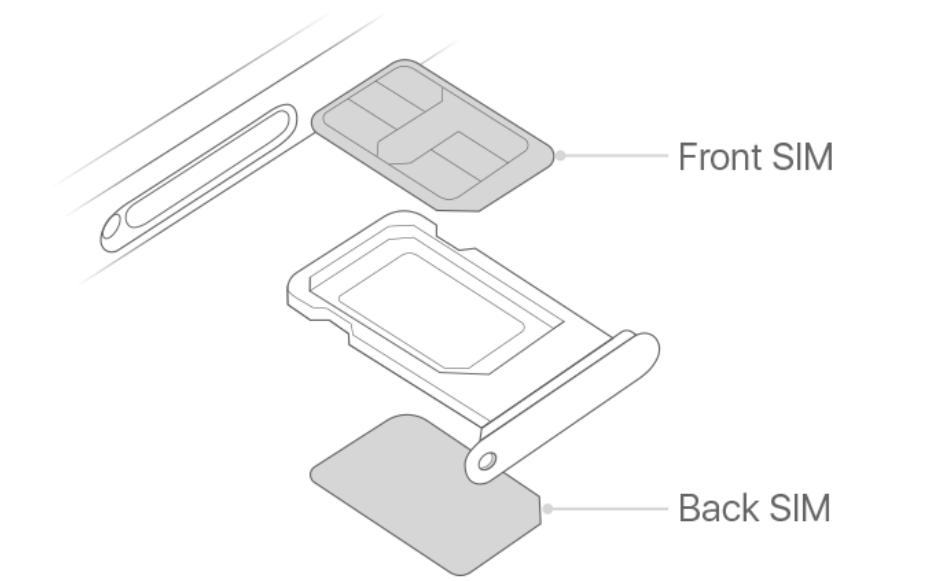
- To the Context / Application / Purpose



# DESIGN ADAPTATION

## Adaptable

- To the Context / Application / Purpose



iPhone with duo SIM cards



# DESIGN ADAPTATION

## **Adaptable**

- To the Context / Application / Purpose



Variations of Bicycle Design

# DESIGN ADAPTATION

## Adaptable

- Out of context



International Space Station

# DESIGN ADAPTATION

## Adaptable

- Out of context



International Space Station

# DESIGN ADAPTATION

## Adaptable

- Out of context



International Space Station

BREAK

WALLET  
EXERCISE

# **Wallet Exercise**

# WALLET EXERCISE

## Instructions

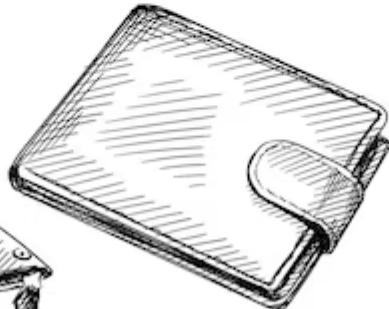
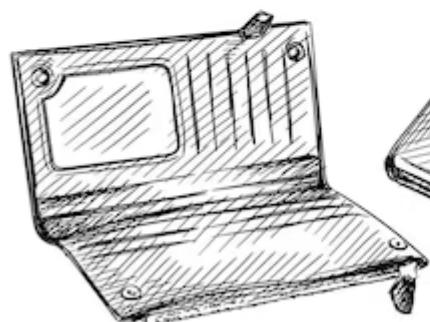
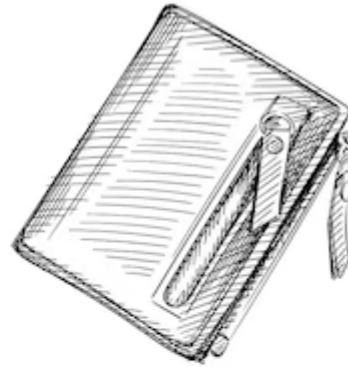
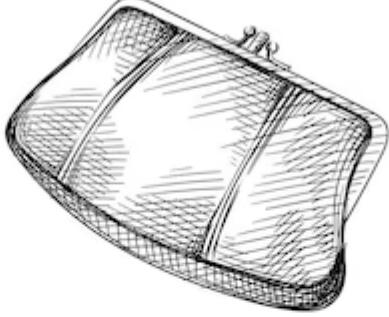
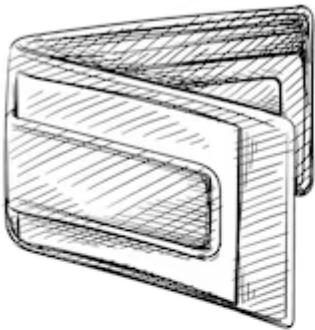
- Pair-up
- Download .pdf of the exercise from Teams



# Design the **IDEAL** wallet.

**Draw** 5min

Sketch your idea here!



Your NEW  
mission:

# Design something useful and meaningful for your partner.

## Start by gaining empathy.

### 1 Interview

10min (2 sessions x 5 minutes each)

Notes from your first interview

### 2 Dig deeper

10min (2 sessions x 5 minutes each)

Notes from your second interview



Switch roles & repeat Interview

Switch roles & repeat Interview

# Reframe the problem.

## 3 Capture findings 3min

**needs:** things they are trying to do\*

\*use verbs

**insights:** new learnings about your partner's feelings/  
worldview to leverage in your design\*

\*make inferences from what you heard

## 4 Define problem statement 3min



name

needs a way to

user's need

Unexpectedly, in his/her world,

insight

## Ideate: generate alternatives to test.

**5 Sketch 3-5 radical ways to meet your user's needs. 10min**



write your problem statement above

**6 Share your solutions & capture feedback. 10min (2 sessions x 5 minutes each)**

Notes



Switch roles & repeat sharing.

## **Iterate based on feedback.**

### **7 Reflect & generate a new solution. 3min**

Sketch your big idea, note details if necessary!

# Build and test.

## 8 Build your solution.

Make something your partner can interact with!

[not here]

20min



## 9 Share your solution and get feedback.

+ What worked...

- What could be improved...

? Questions...

! Ideas...

10min (2 sessions x 5 minutes each)

# WALLET EXERCISE

## Instructions

- Pair-up
- Download .pdf of the exercise from Teams



See you next week!