WORKPLACE TRANSFORMATION

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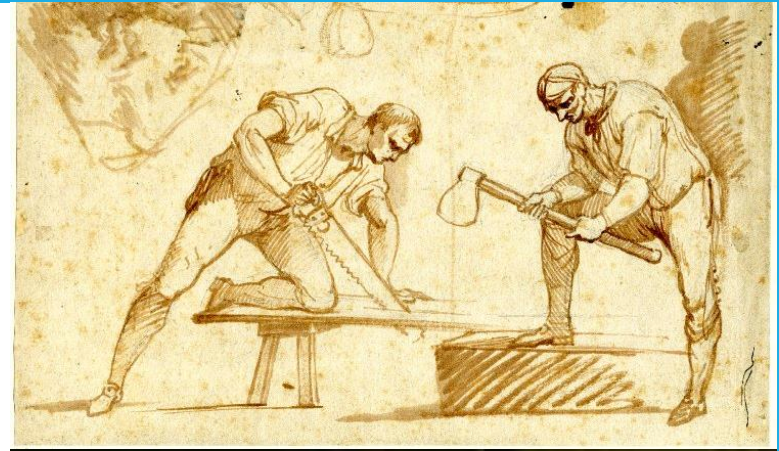
805-182 Computer: the Internet and Society

What's a workplace?

- A place in which people are working
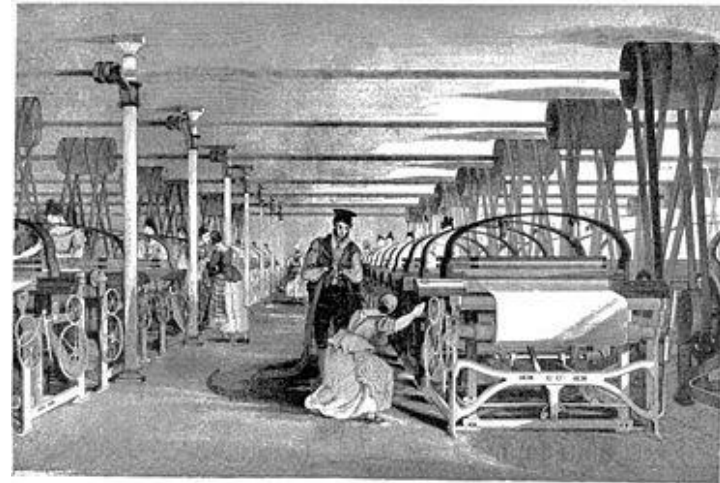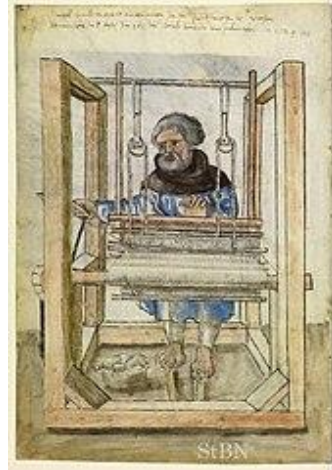
- Where do people work now during Covid-19?

Working from Home is NOT new

- Before 1760 (the Industrial Revolution), everyone works from home

- Limited Occupation: carpenter, farmer, shopkeeper, tailor, etc

- Your co-workers live at the same place or nearby

The Industrial Revolution

- Transition from making products manually by hands to using machines to make products

- Use technologies to support **mass production**

- This requires a space to store machines AND have humans operate those machines

Task: 10-minute

What was the world's first office **building**?

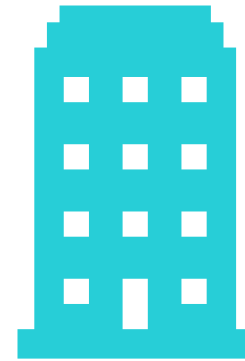When was it created?

What was it used for?

Popularity of Iron and Steel

- The Industrial Revolution made iron and steel very cheap!

- People used them to construct tall buildings

- **Skyscraper (>=10 floors) first existed in this era**

Task: 10-minute

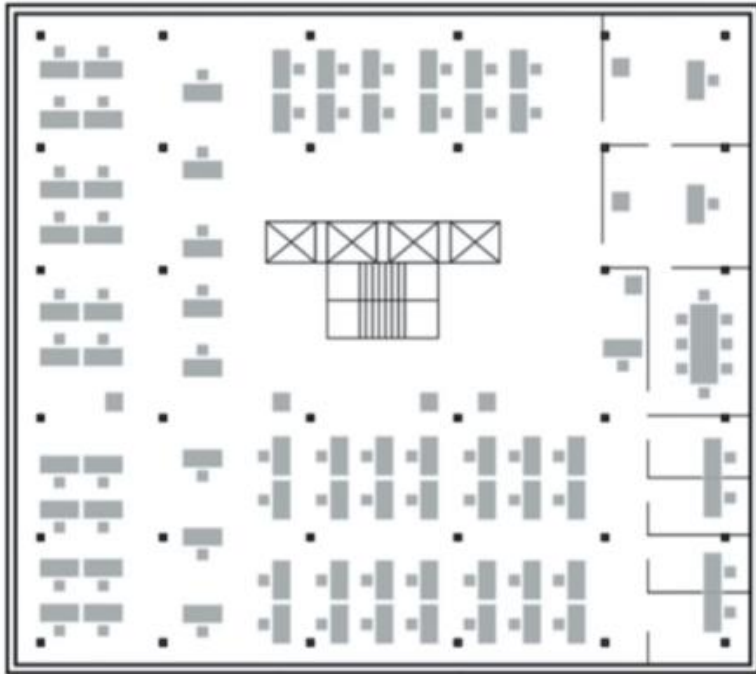What was the world's first skyscraper? How tall was it?

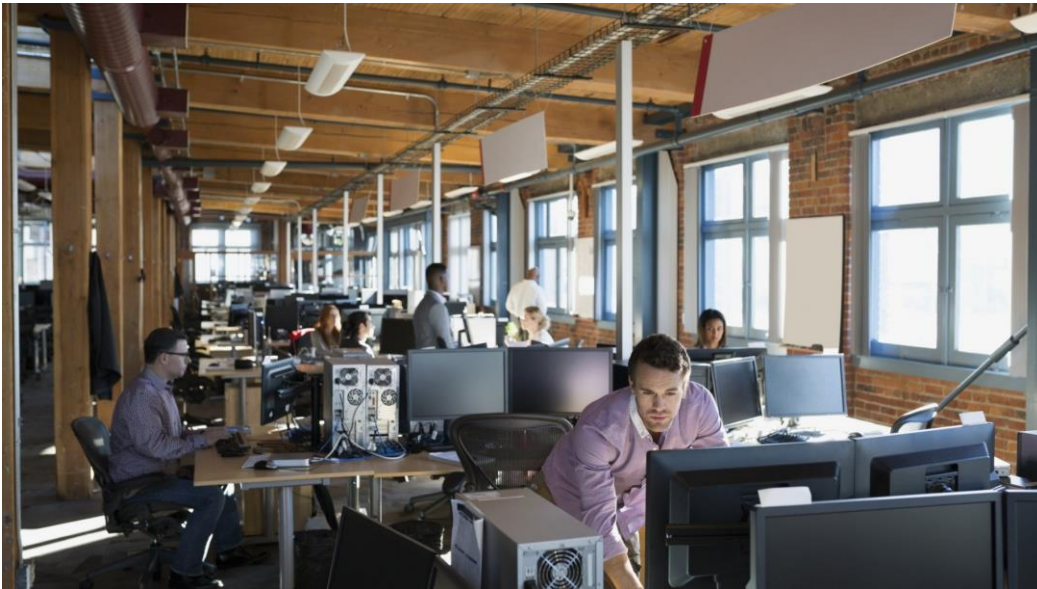Which skyscraper is currently the tallest building? How tall is it?

With Skyscraper, offices become very popular

- Challenge: how to *efficiently* design an office space?

- First office design, called the **Taylorist Office**
  - Workers sit together in an open room
  - Managers or owners sit in a private office to observe workers

- Designed mainly for efficiency but not for workers' happiness
  - Workers are cramped in a small area
  - Noise problem: a space full of telephones and typewriters
  - No social interaction between workers

Office Design

- After that, office designs focused more on workers' quality of life

Open-plan office: divide office into teams, encourage communication

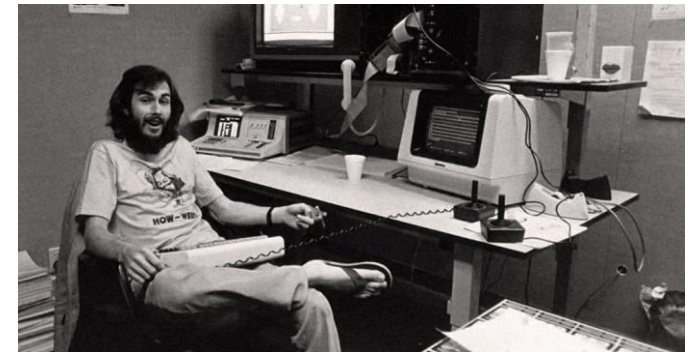Action office: increase more functionalities (e.g., storage space, ergonomic chairs)

Cubicle Farm in 1980

- During this time, computers became publicly available

- New office design: cubicle farm

- Pros: Use computers to replace manual work, increase productivity

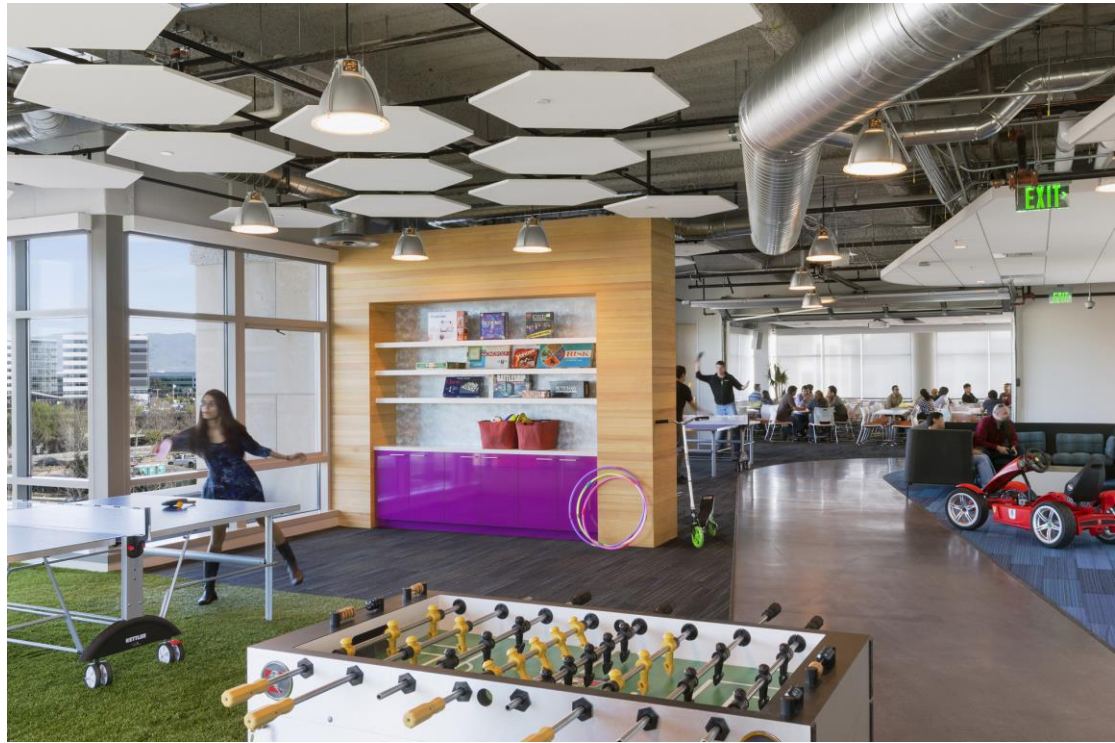- Cons: Workers were unhappy, looking at computers all the time

Modern Office: Atari in 1980's

- Workers' happiness and output are the main priorities

- Bigger workspace

- Flexible office rules:
  - Can come and leave anytime
  - Can play games or have social events at work
  - Can wear anything to work

- As long as you get your work done, you are good!
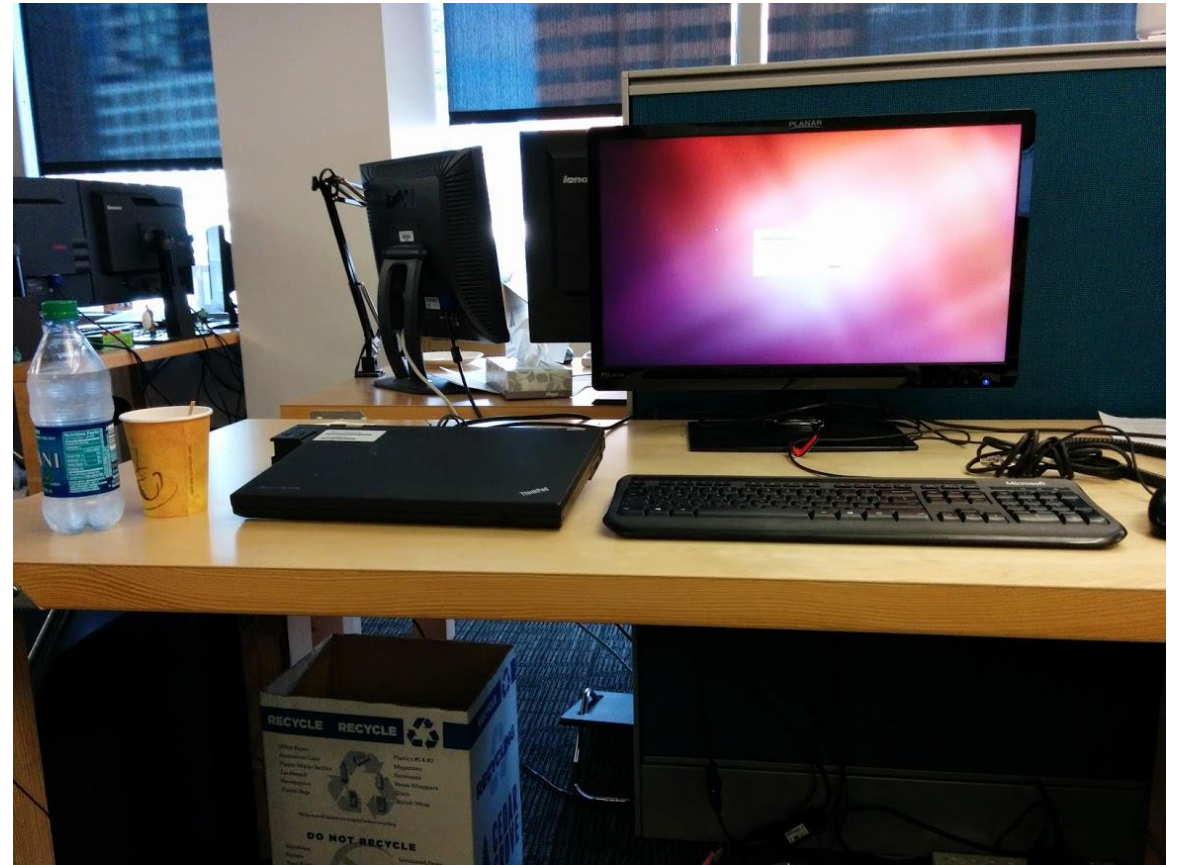
Modern Office

5 YEARS AGO, I DID AN INTERNSHIP AT AMAZON, SEATTLE

Background: Amazon

- # 1 e-commerce platform in the US

- Buy and sell products online

- Other services: grocery stores (i.e., Wholefoods), IoT products (e.g., Ring doorbell), game-streaming platform (i.e., Twitch), cloud service (i.e., AWS)

My Office at Amazon (Internship)

- Work as a software developer intern

- Open-plan office: sitting in the same area with my other teammates

- No hierarchy: my boss sits next to me, my manager sits right behind me, no private room
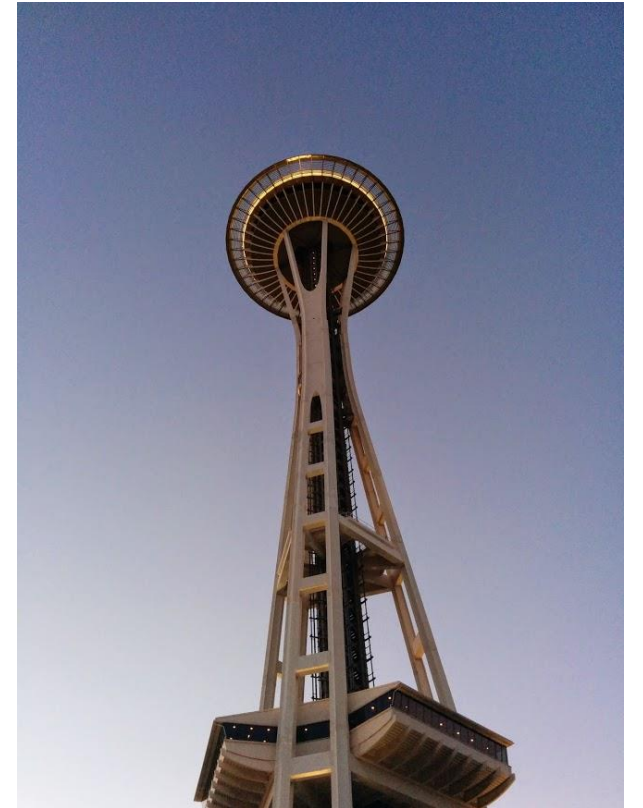
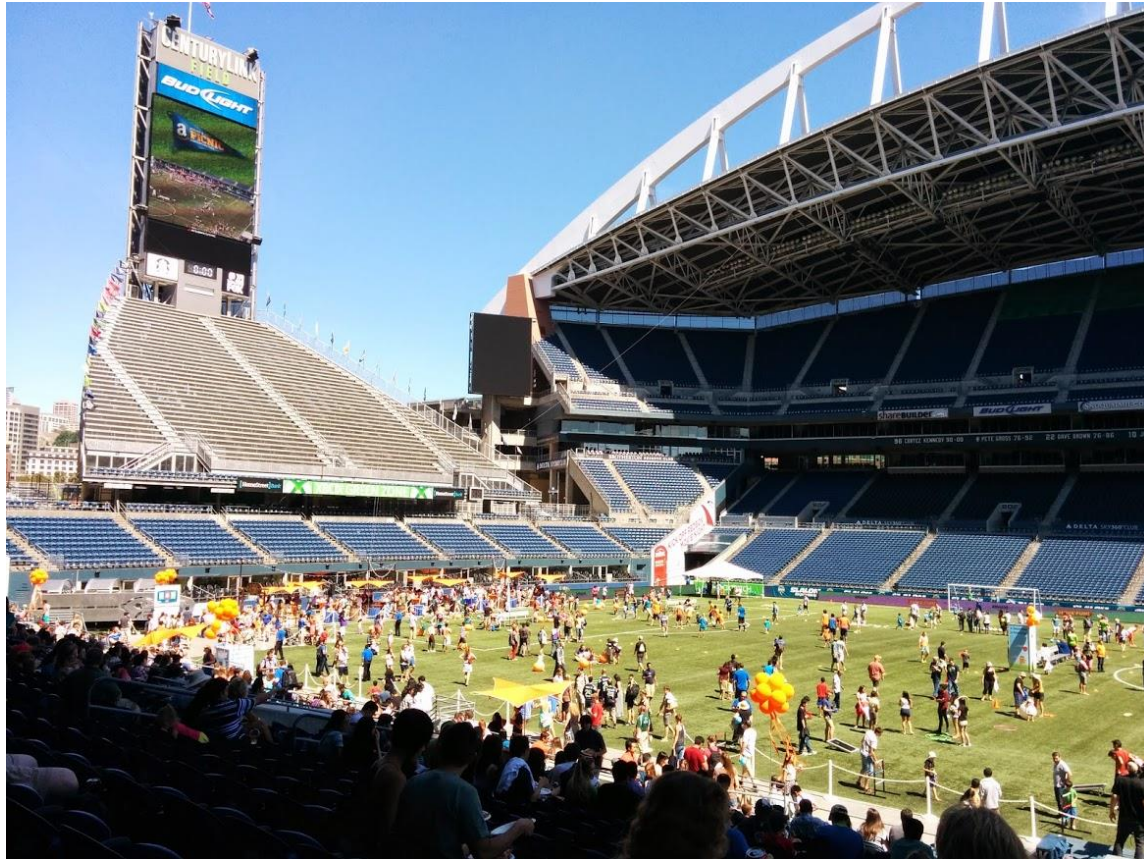- Easy for communication

My Office at Amazon (Internship)

Activities: Whirly ball

Seattle

Other Activities

Modern office focuses on workers' happiness!

+ they paid really well ☺

WORKPLACE TRANSFORMATION DURING/POST COVID-19

Pandemic Disruption (Covid-19)

Work From Home (Remote Working)

- This work-from-home situation is different from the one in the past (before the industrial revolution)

Challenges:

- Co-workers live far away – communication problem

- The need for remote computers/technology – a physical computer at office no longer works

Technologies to support work from home

- High speed home internet

- Teleconference software (e.g., Zoom, Skype)

- Instant communication software (e.g., WeChat, Messenger)

- Project management platforms (e.g., Asana, MicrosoftTeam)

- Network security platforms (e.g., VPN)

Which software/platform uses cloud computing?

Which software/platform generates big data?

Some jobs can't be done remotely...now

- Hair salon / massage / beauty services

- Fire fighter

- Food delivery

- Surgeon

- Policemen

- Truck/taxi driver

They require physical contacts

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Will remote working become the new normal?

- No one knows for sure

- My opinion: maybe not

- Some tasks require physical interaction in order to be efficient/productive

- What about working remotely for 2-3 days a week and working in office for the rest of the weekdays?

- I have been doing this and it works surprisingly well for me

What if workers can work remotely 2-3 days a week?

- Office design will be different

- Only come to office for tasks that require physical interaction

- Don't need to have a large space anymore

- Same desk/computer can be shared by many people (who don't work on the same day)

Remote Working: Workers' Happiness?

- "When working from home, we often lose the human interaction, structure, and collaboration that we typically get in an office setting,"

- "It can be a challenge to concentrate, which may impact your productivity and work quality,"

- "Over time, these factors can impact mental health and possibly contribute to burnout."

  https://greatist.com/health/working-from-home-depression

- How to increase workers' happiness when they work remotely/from home?

ONLINE EDUCATION

Covid-19 forces education to be online

Big question: is the society ready for online education?

InformationAge, Return of the king, and ABC will answer this question for me ☺

Reminder

- Quiz 2 will be due tomorrow morning

- Let me know if there's any trouble or question

- **NO CHEATING IS ALLOWED!!!!!**

Q/A