

WORKPLACE TRANSFORMATION

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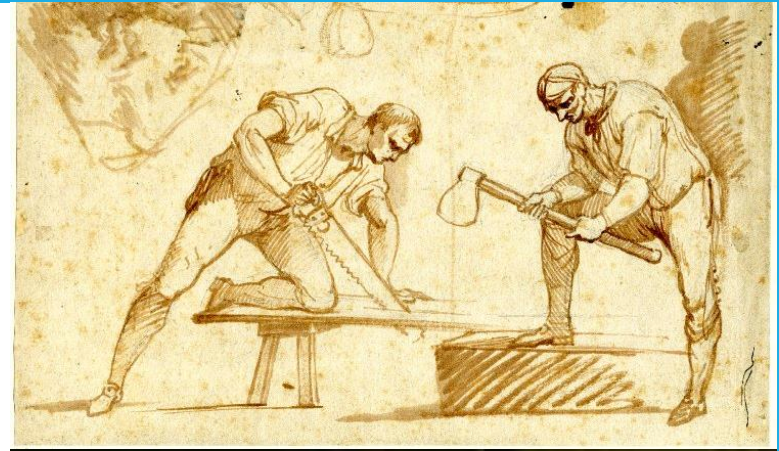
805-182 Computer: the Internet and Society

What's a workplace?

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

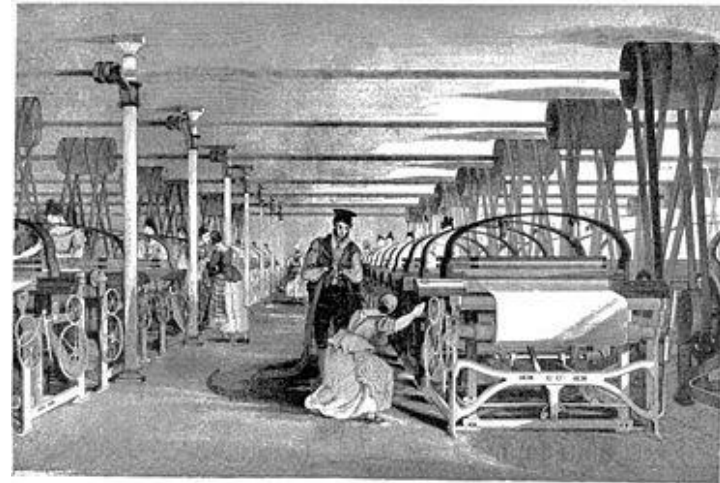
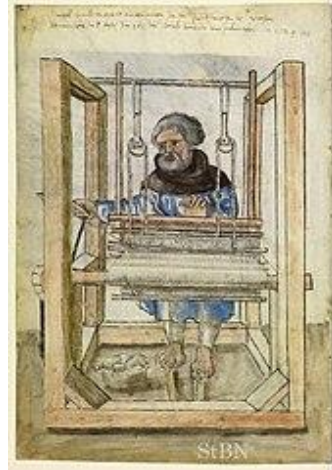
Working from Home is NOT new

- 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?



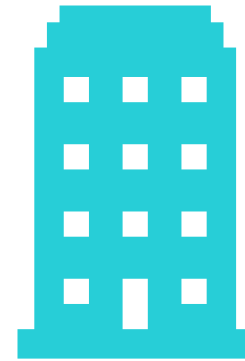
Popularity of Iron and Steel

- 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?

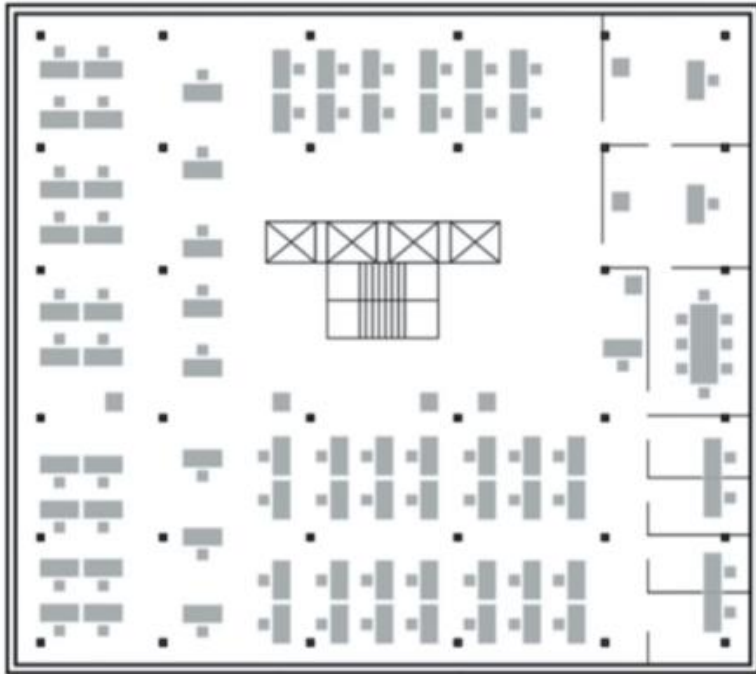


Which skyscraper is currently the tallest building? How tall is it?



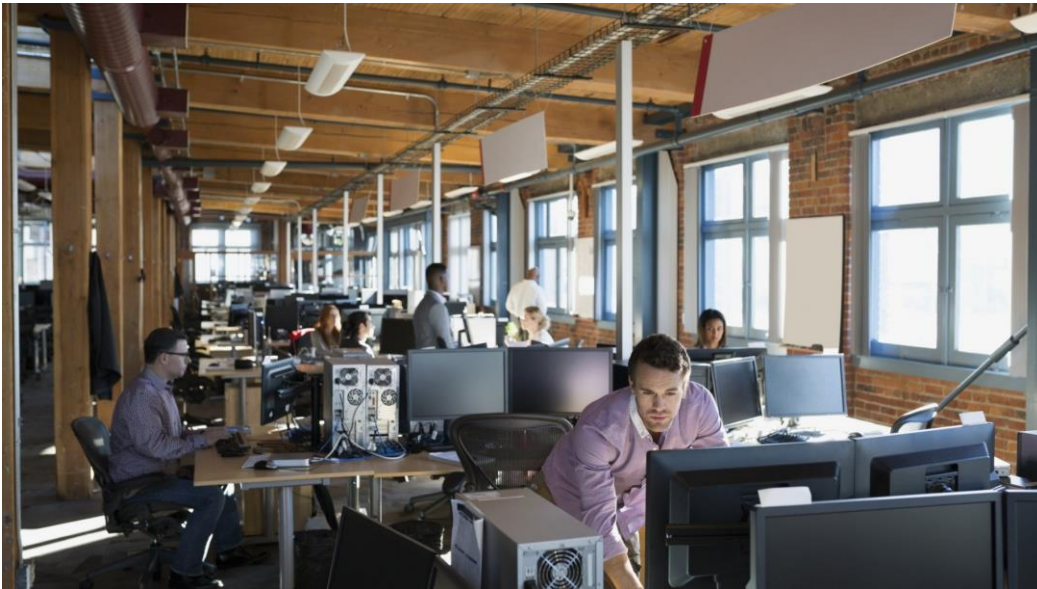
With Skyscraper, offices become very popular

- 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)

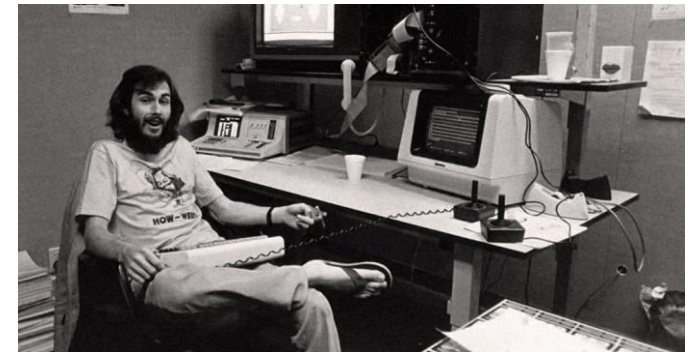
Cubicle Farm in 1980

- 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

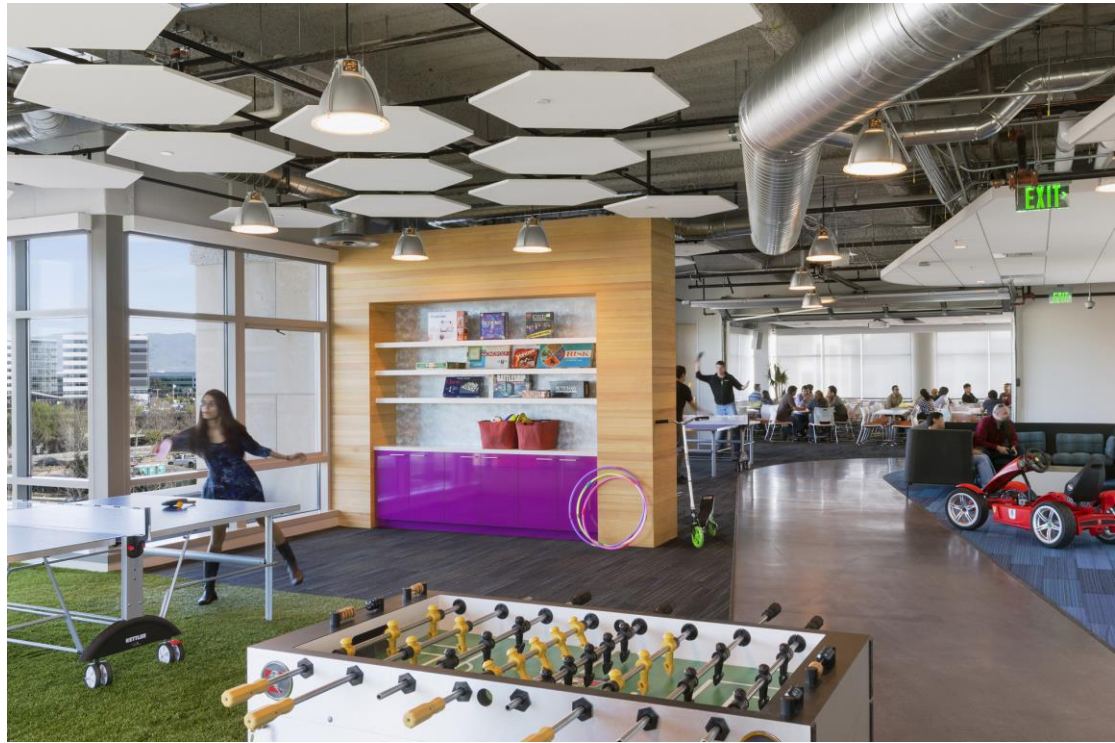


Modern Office: Atari in 1980's

- 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



The Amazon logo is displayed in white on a dark blue background. It consists of the word "amazon" in a lowercase, sans-serif font, with a curved orange arrow underneath it that starts under the 'a' and ends under the 'n', pointing to the right.

amazon

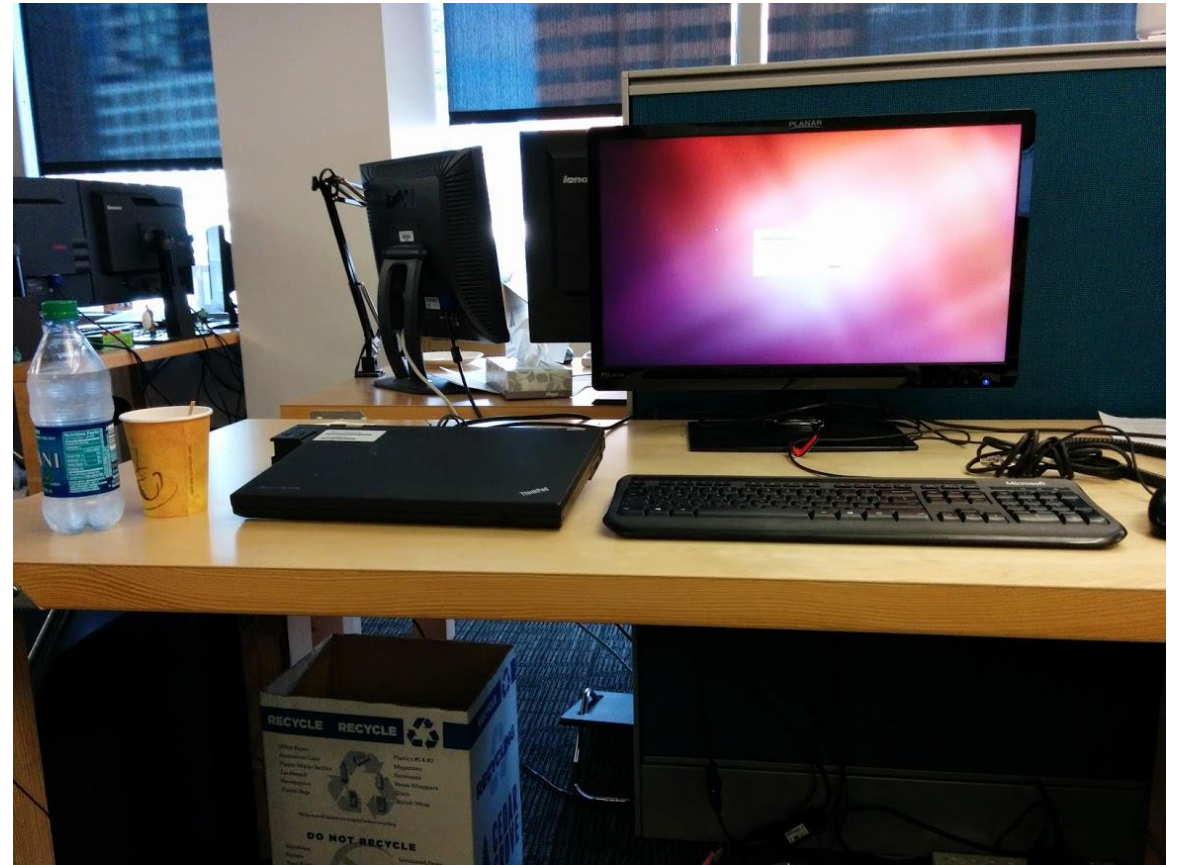
5 YEARS
AGO, I DID
AN
INTERNSHIP
AT AMAZON,
SEATTLE

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



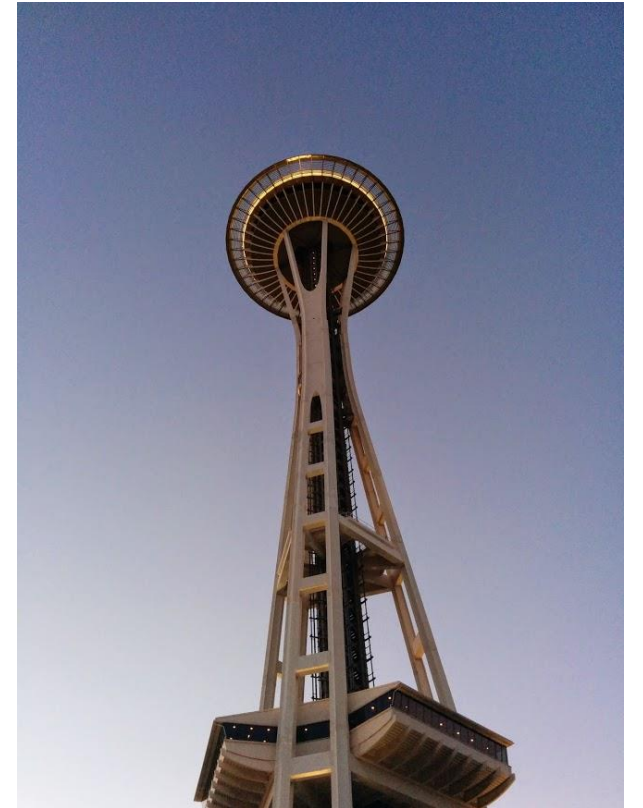
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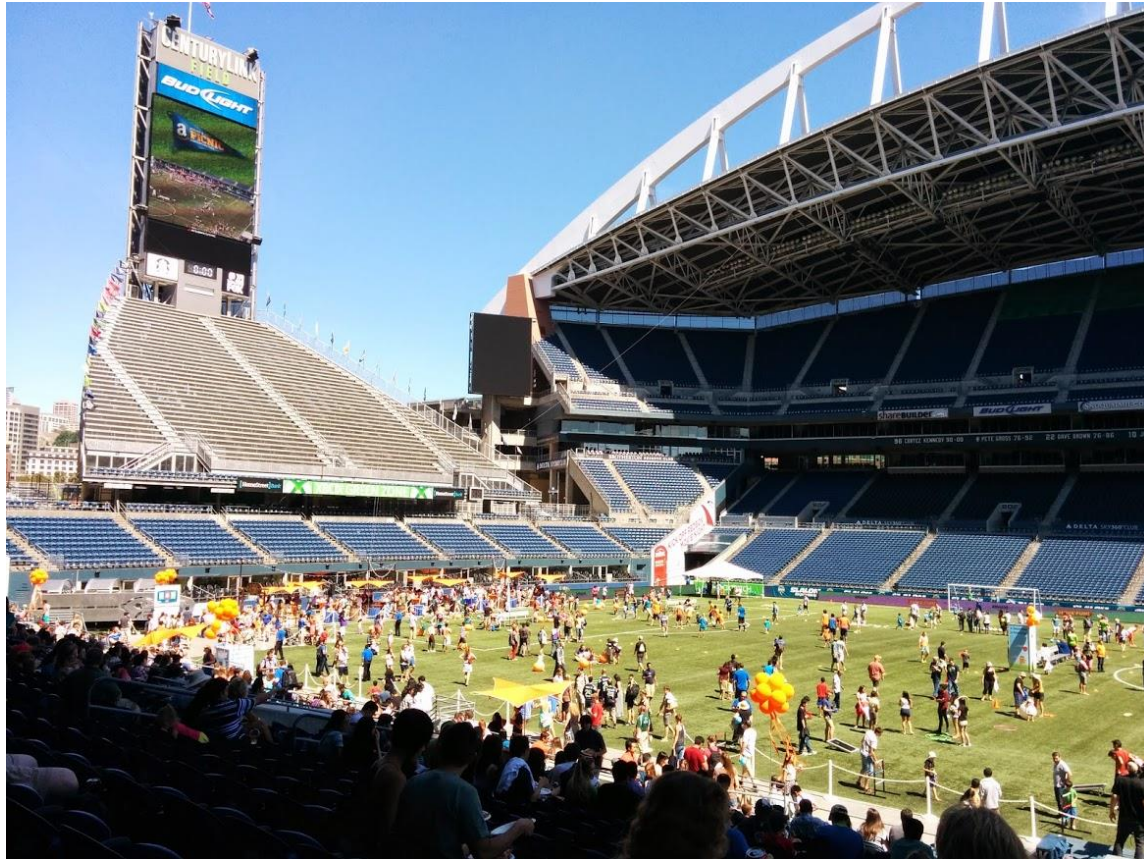
Activities: Whirly ball



Seattle



Other Activities



Modern office focuses on workers' happiness!

+ they paid really well 😊

WORKPLACE TRANSFORMATION DURING/POST COVID-19

Pandemic Disruption (Covid-19)

The collage features several news articles and advertisements. On the left, a screenshot of **THE NEW YORKER** shows a 'DAILY COMMENT' by Bernard Avishai titled 'THE PANDEMIC ISN'T A BLACK SWAN BUT A PORTENT OF A MORE FRAGILE GLOBAL SYSTEM', dated April 21, 2020. Below it, a 'COVID-19 SPECIAL' article from **THE STRAITS TIMES** is titled 'Working from home: Productivity, staff engagement likely to be hit' and includes a photo of a person working at a desk. In the center, a **Forbes** article by David Hessekiel asks 'Is COVID-19 Changing Corporate Social Impact Programs Forever? Let's Hope So.' and includes a photo of a person at a computer. On the right, a **cna** article by Anthony Oundjian is titled 'Commentary: COVID-19 could make remote working a permanent feature. That has several implications for firms' and includes a photo of hands on a laptop. At the bottom right, a dark advertisement for **TCS** states 'TCS, India's largest IT employer. Aims to have only 25% workforce in office by 2025, rest can work from home.' Below the advertisement, a snippet of another article is visible: 'Working in shopping malls? It's happening from the US to China for Google, Soho3Q.'

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, Microsoft Team)
- 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