Design Studio 22:
Unproductive Products

Scientific Management

Frederick Taylor

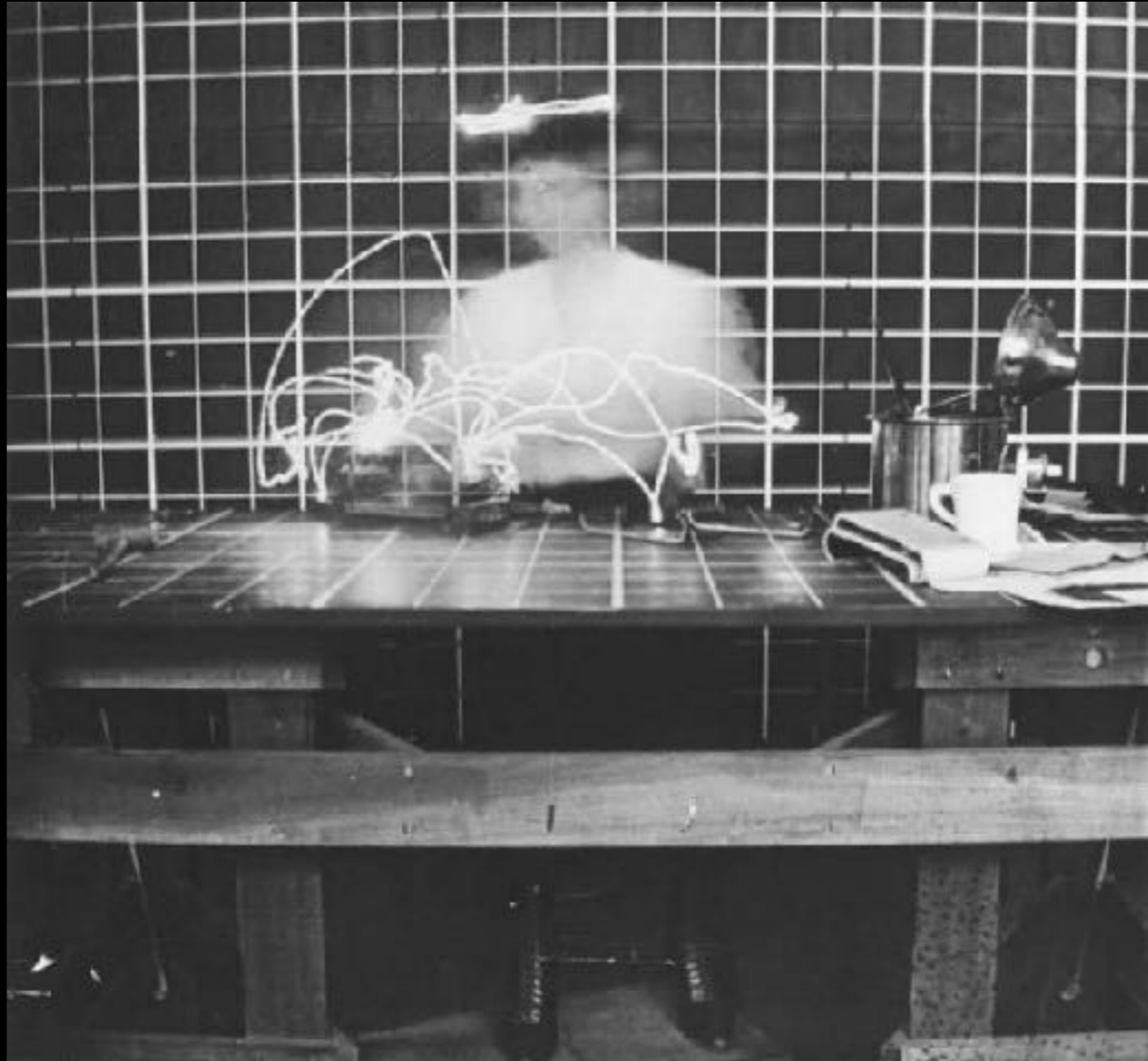"In the past the man has been first; in the future the system must be first."

Time study

1. Replace rule-of-thumb work methods with methods based on a scientific study of the tasks.
2. Scientifically select, train, and develop each employee rather than passively leaving them to train themselves.
3. Provide "Detailed instruction and supervision of each worker in the performance of that worker's discrete task"
4. Divide work nearly equally between managers and workers, so that the managers apply scientific management principles to planning the work and the workers actually perform the tasks.

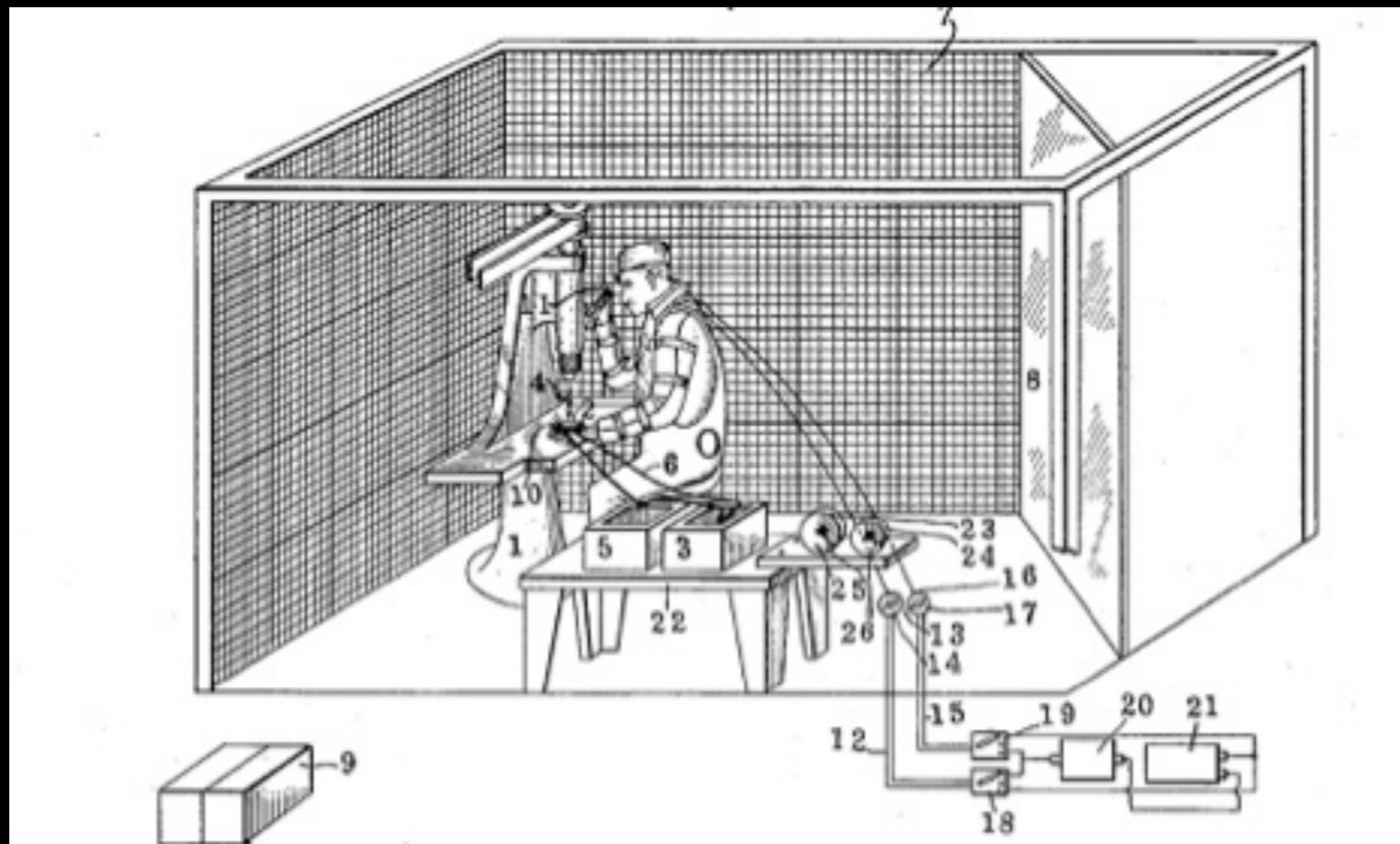The Four Principles of Taylorism
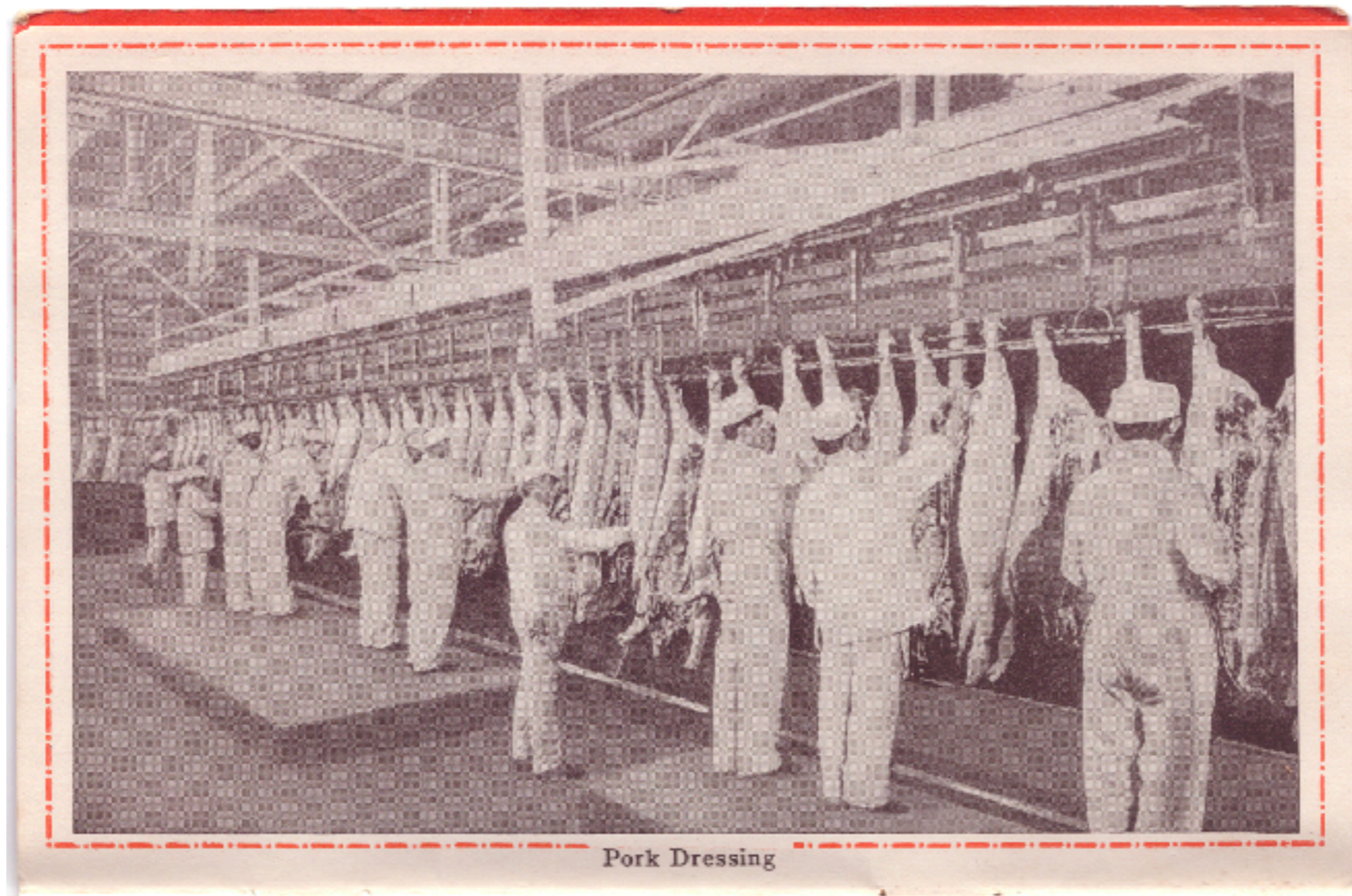
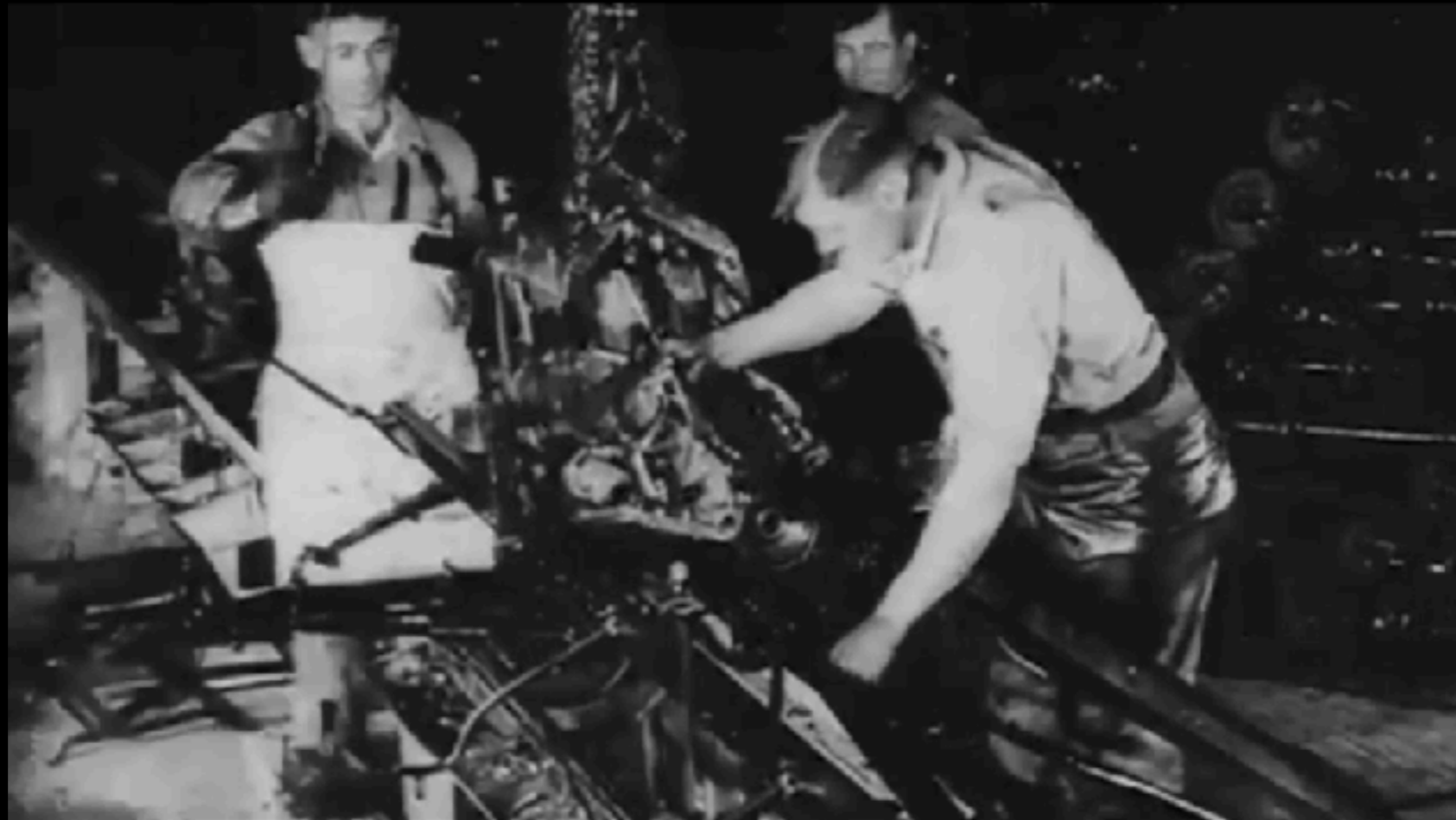Frank and Lillian Gilbreth

Time and Motion Studies, American Photography

Frank and Lillian Gilbreth original films

Gilbreth patent, "Method and Apparatus for the Study and Correction of Motions," 1916

Pork Dressing

Postcard of pork dressing in Texas, undated

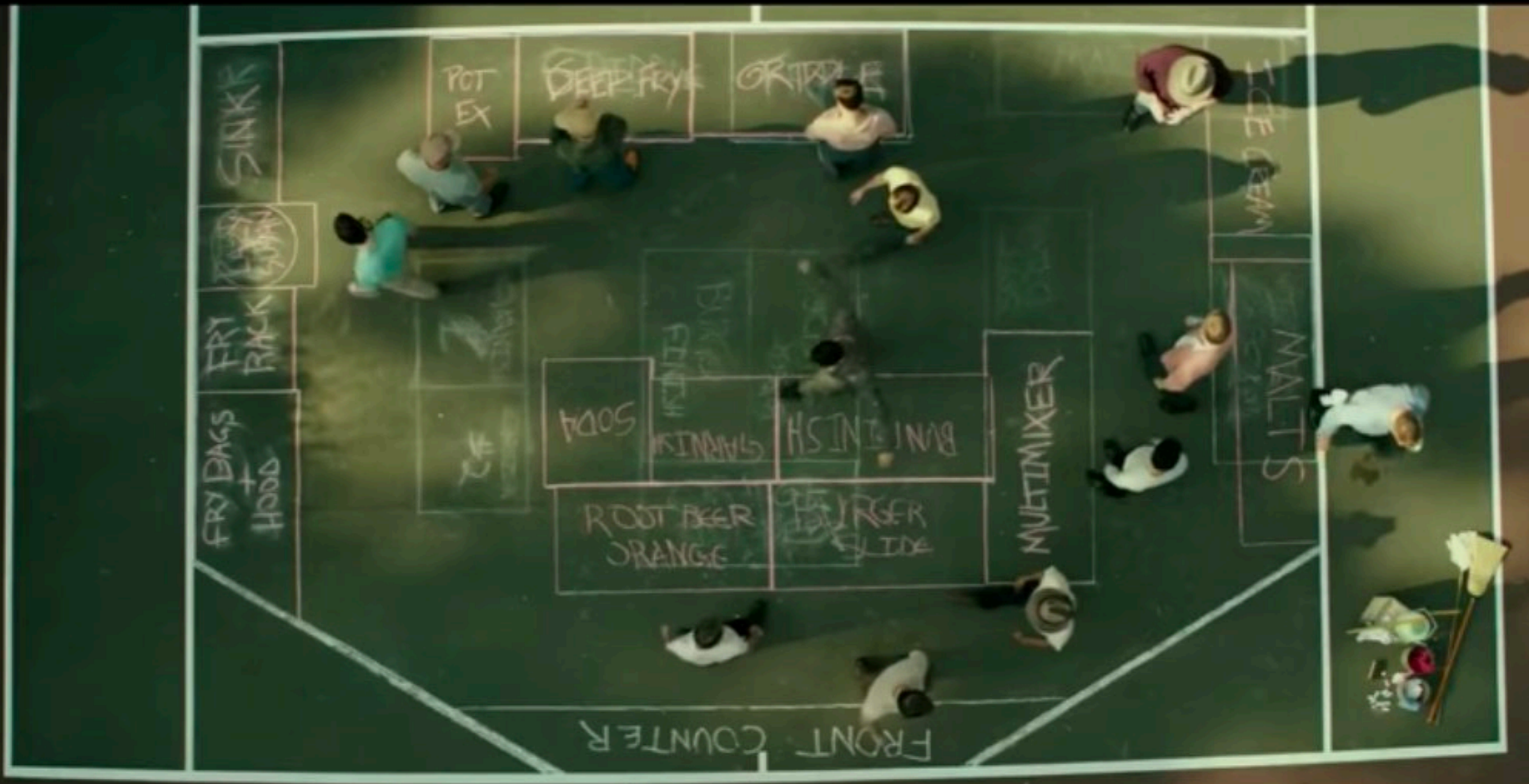The Ford Assembly Line, American Experience

1. The standardization of the product (nothing is handmade, but everything is made through machines and molds by unskilled workers)
2. The employment of assembly lines, which use special-purpose tools and/or equipment to allow unskilled workers to contribute to the finished product
3. Workers are paid higher "living" wages so that they can afford to purchase the products they make

Modern Times, Charlie Chaplin

McDonald's Speedee Service System

McDonald's Speedee Service System
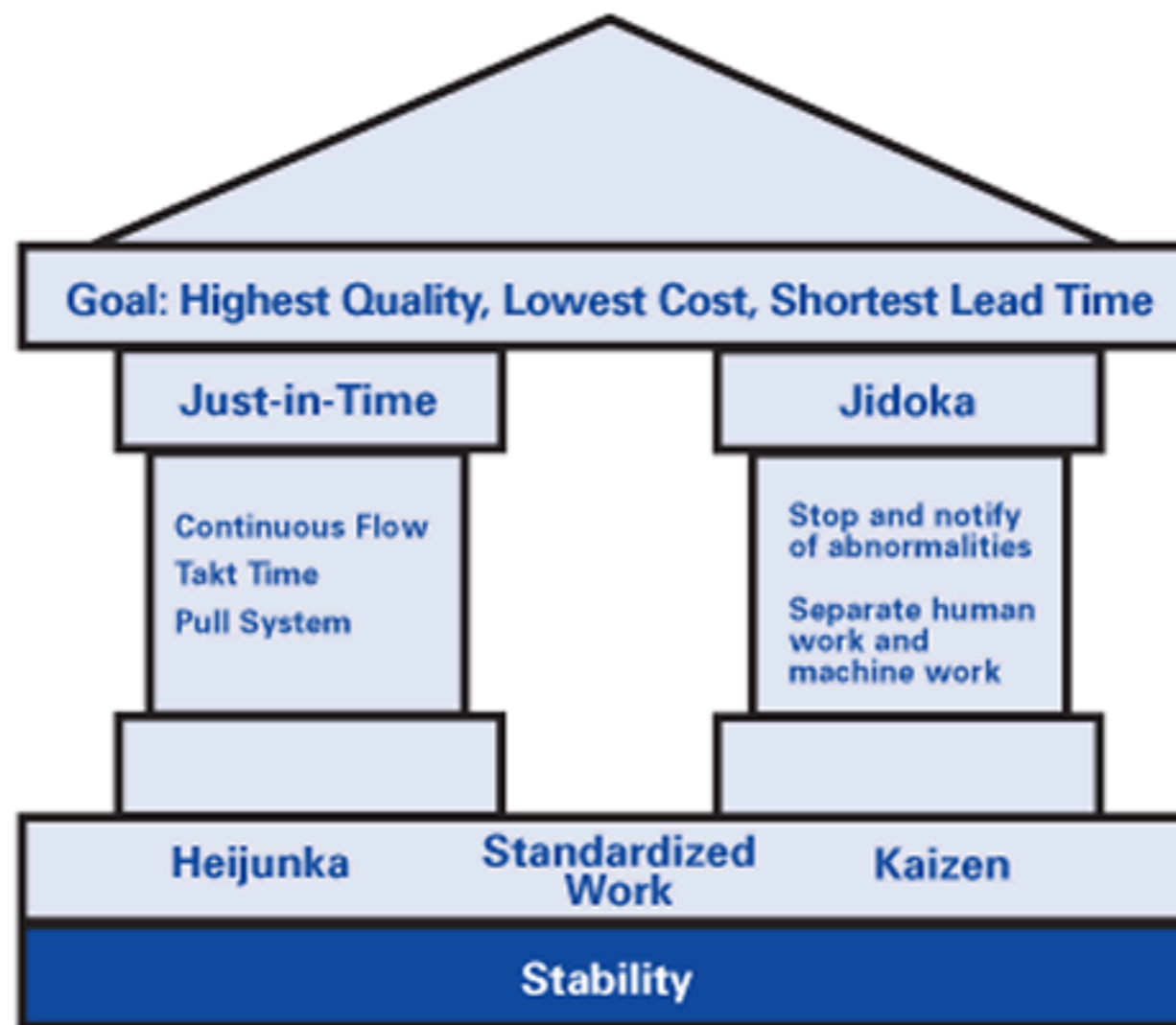
McDonald's Packaging 2022

Piggly Wiggly Supermarket

How Toyota Changed The Way We Make Things, Bloomberg

1. Waste of overproduction (largest waste)
2. Waste of time on hand (waiting)
3. Waste of transportation
4. Waste of processing itself
5. Waste of excess inventory
6. Waste of movement
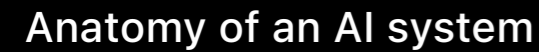7. Waste of making defective products
8. Waste of underutilized workers

"Muda" addressed by Toyota Production System

Toyota Production System "House"

New Taylorism

Amazon Echo

Anatomy of an AI system

An anatomical case study of the Amazon echo as a artificial intelligence system made of human labor
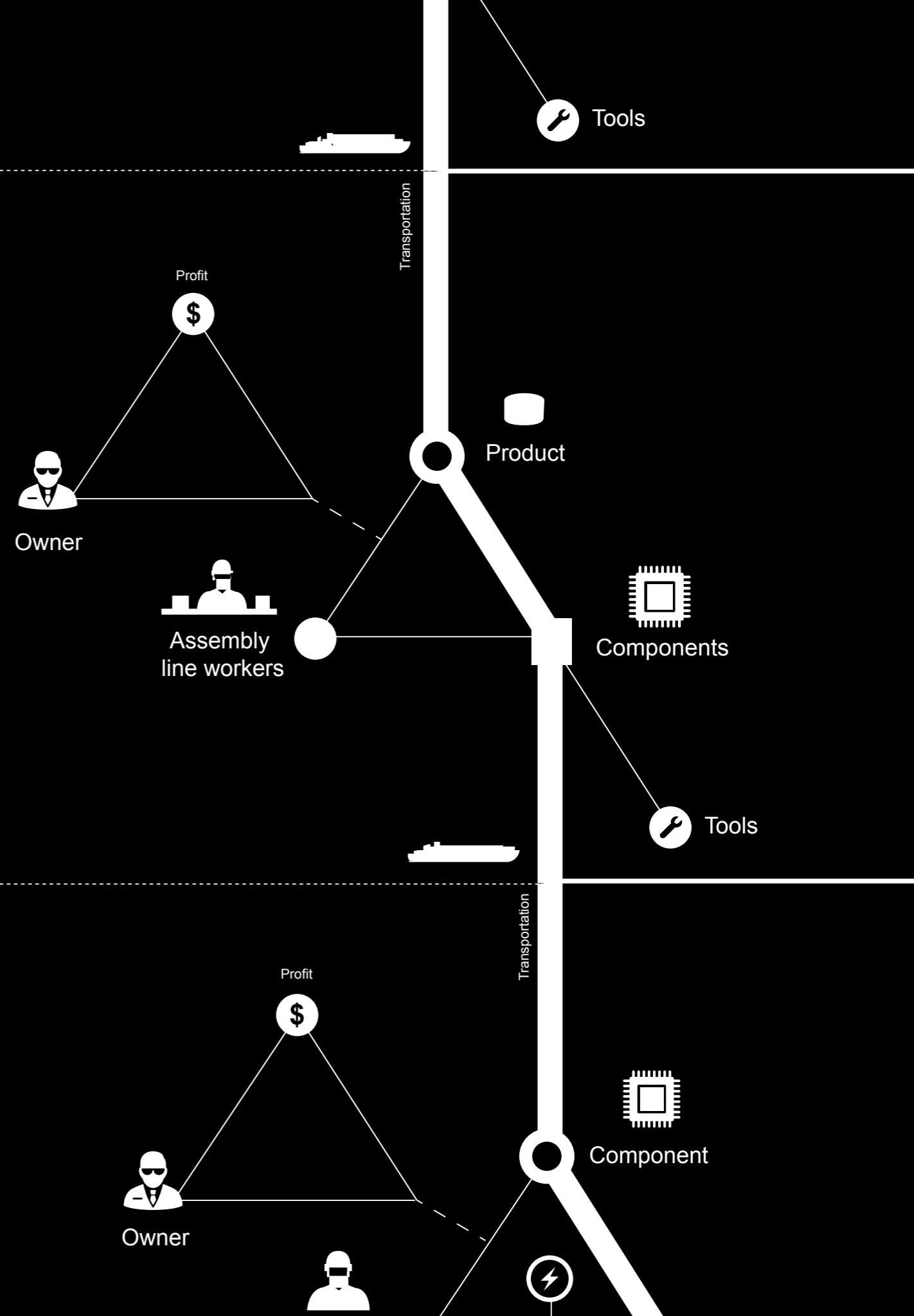

Anatomy of an AI system

Assemblers

ⓘ Issues

Low paid labour
Illegal working hours,
Unfair compensation for unscheduled overtime
Health and Safety issues
Internship system exploitation
Migrant workers rights
Working conditions
Crowded dorms for workers
Workers health care programs

⚠ Hazards

Working

Hazardous working conditions
Explosions
Hazardous chemical exposure
Exposure to dust and toxic substances
Inconsistent health and safety policies, procedures and practices
Major depression and the risk of attempted suicide
Ergonomic hazards : body positions, repetitive work, shift work, and job stress
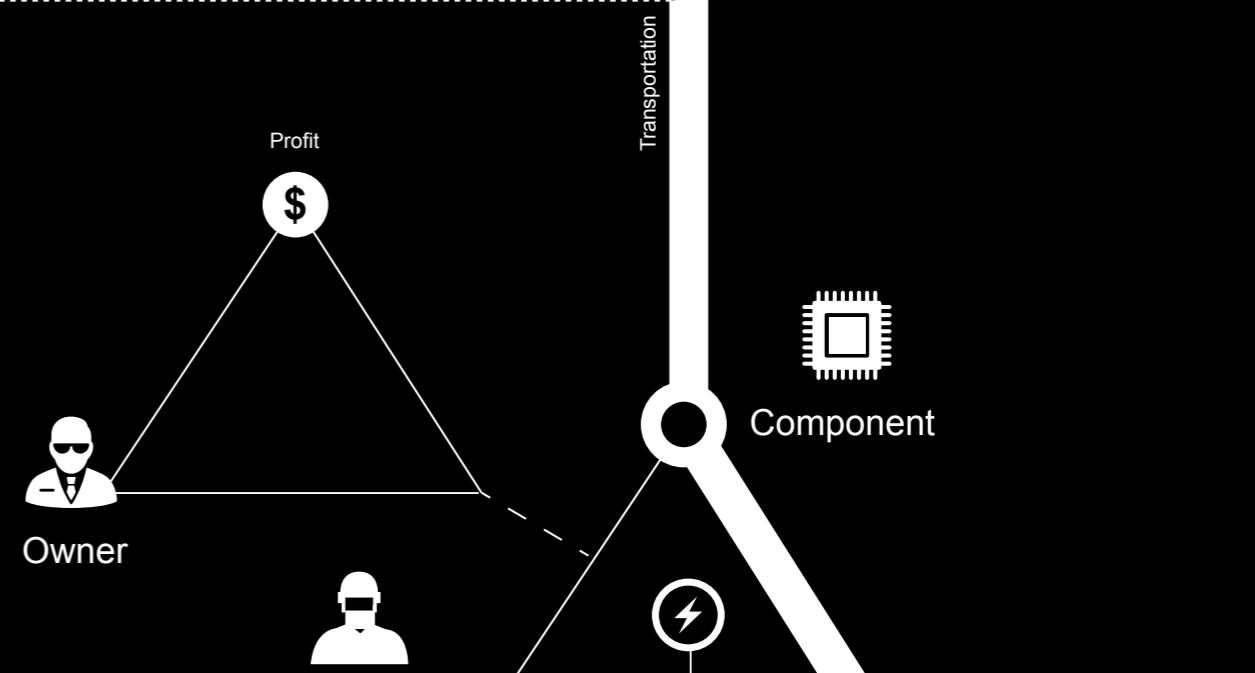
Tools

Transportation

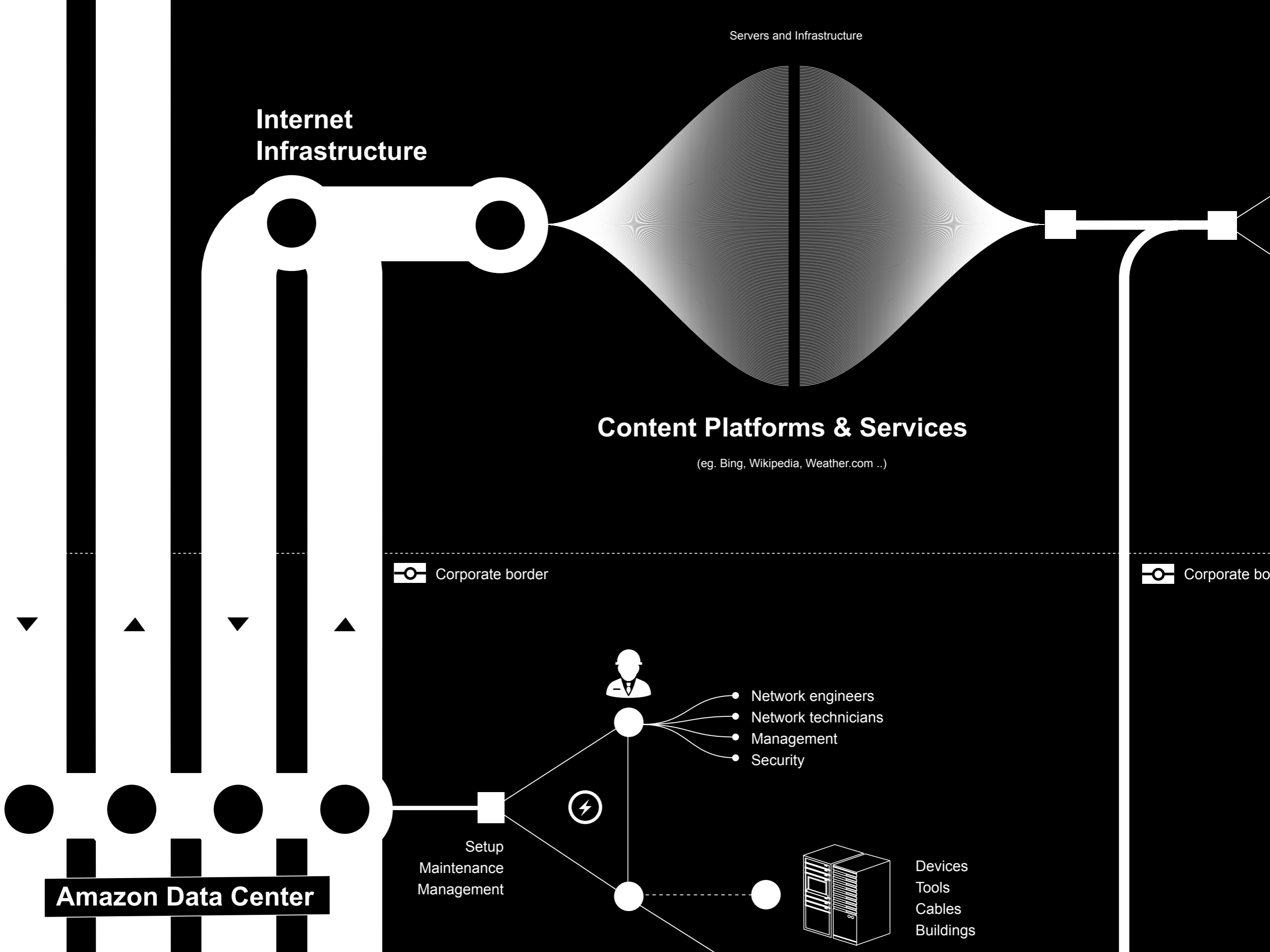Profit

$

Owner

Assembly
line workers

Product

Components

Tools

Transportation

Component manufacturers

ⓘ Issues

Toxic waste
Health hazards

⚠ Hazards

Working

Profit

$

Owner

Component

Servers and Infrastructure

Internet
Infrastructure

Content Platforms & Services
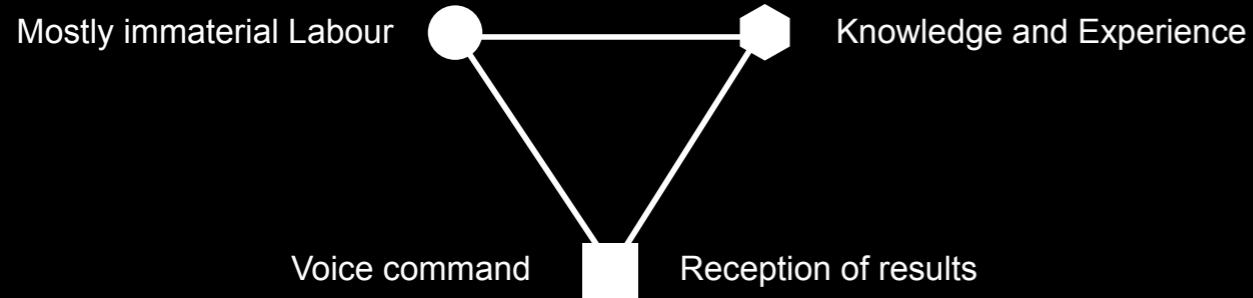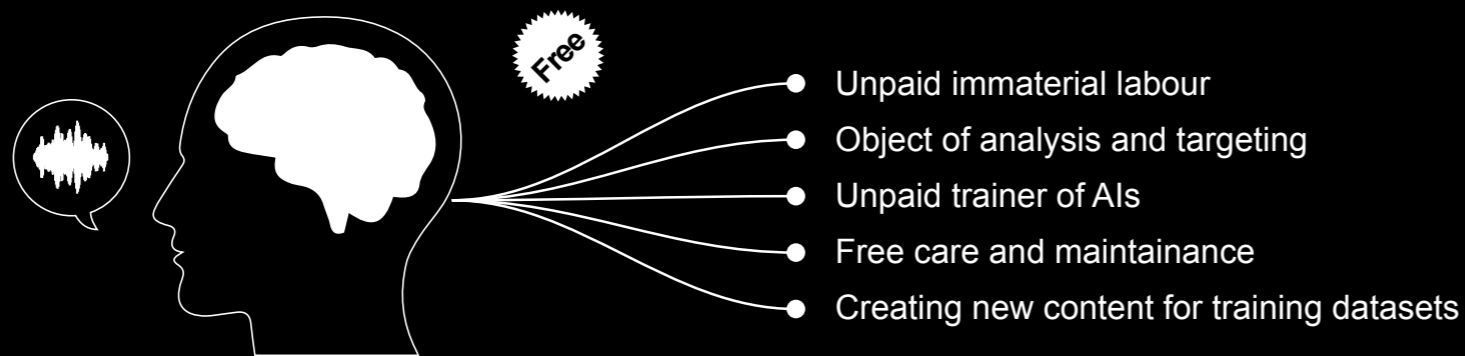
(eg. Bing, Wikipedia, Weather.com ..)

Corporate border

Corporate bo

Network engineers
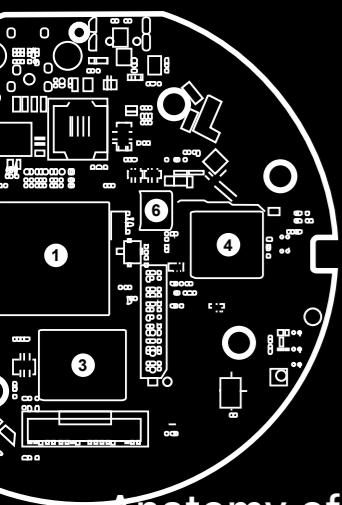Network technicians
Management
Security

Setup
Maintenance
Management

Amazon Data Center

Devices
Tools
Cables
Buildings

Free

- Unpaid immaterial labour
- Object of analysis and targeting
- Unpaid trainer of AIs
- Free care and maintainance
- Creating new content for training datasets

Mostly immaterial Labour

Knowledge and Experience

Voice command

Reception of results

zon **Echo Dot**

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ⓘ **Issues**

Right to repair
Open schematics
Diagnostic tools
Planned obsolescence
Proprietary software
Privacy
Digital Security
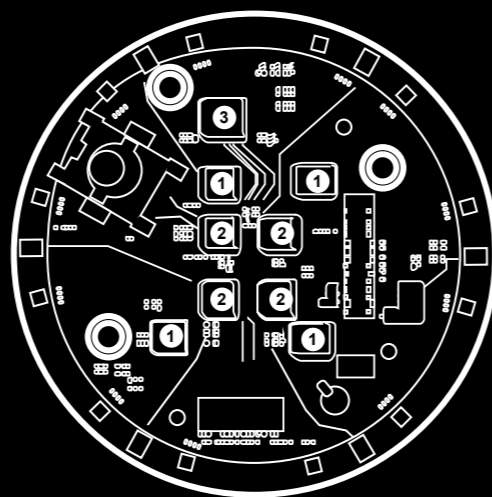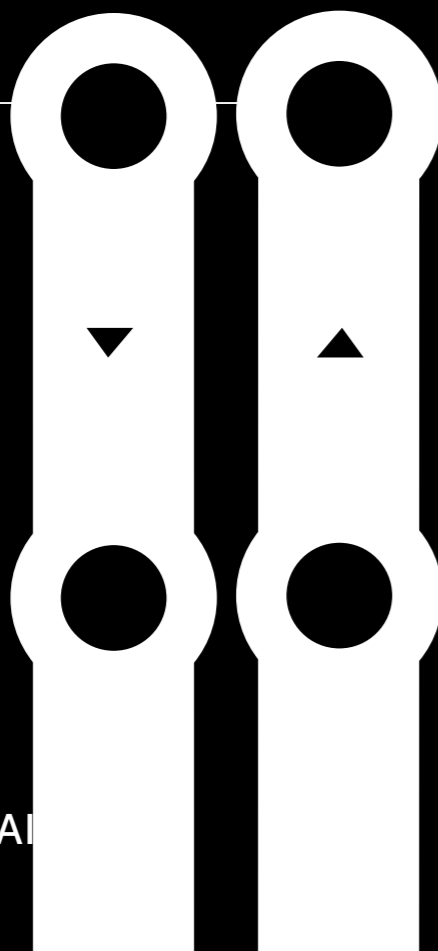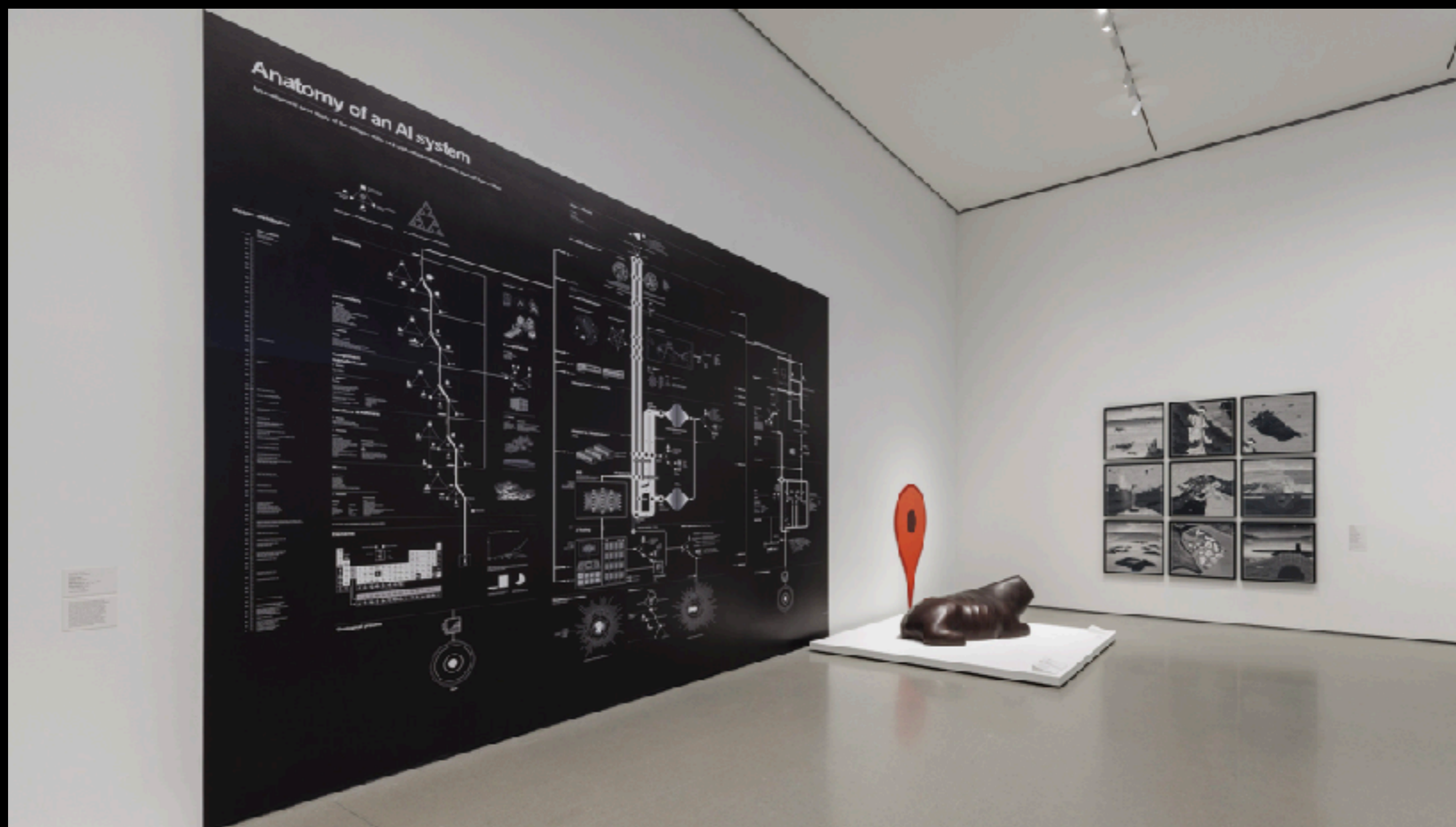
Anatomy of an AI

uments DM3725 Digital Media Processor
16 Meg x 32 x 4 Banks) LPDDR SDRAM
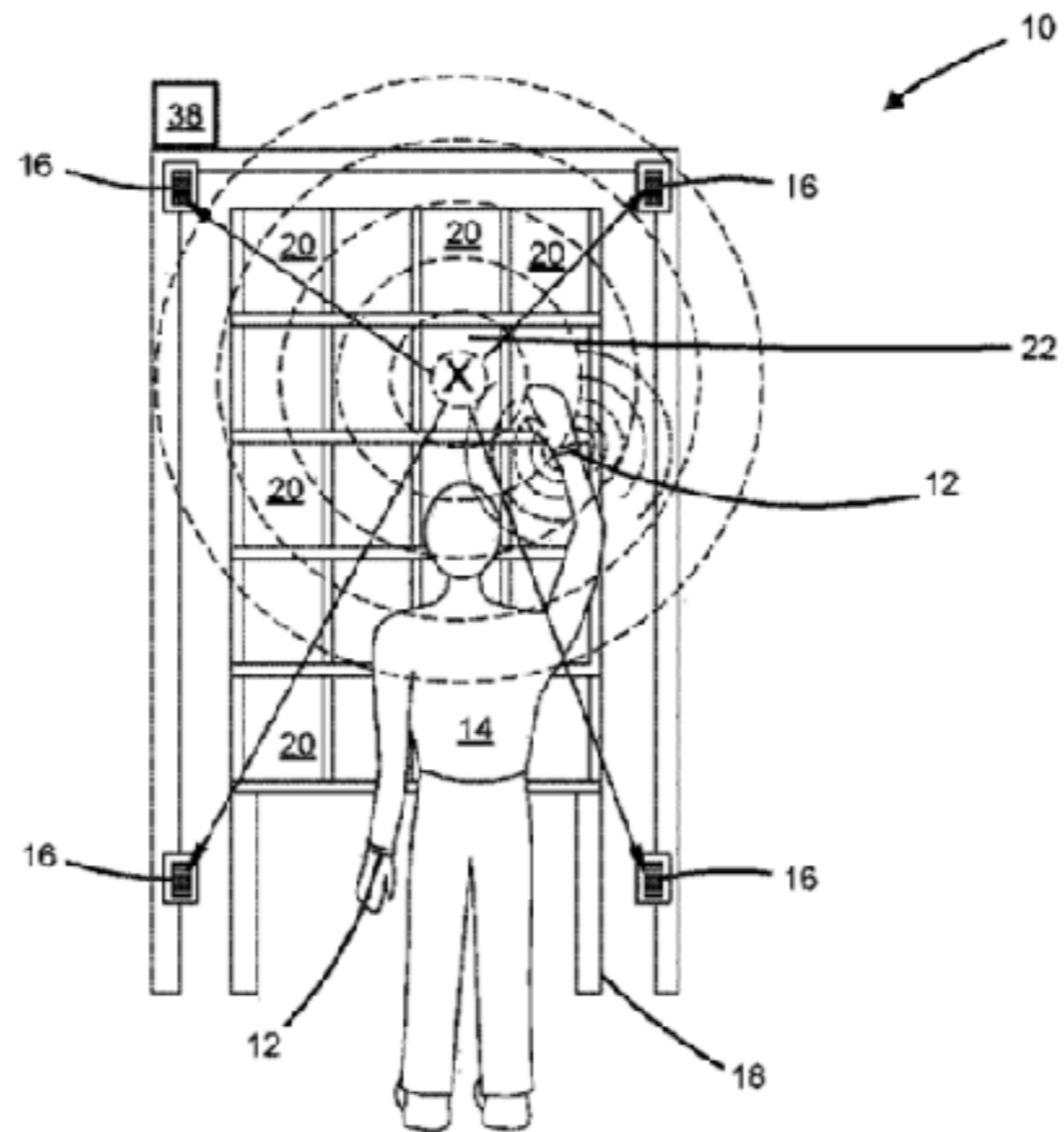
(1) National Semiconductor LP55231 Programmable 9-Output LED Driver (x4)
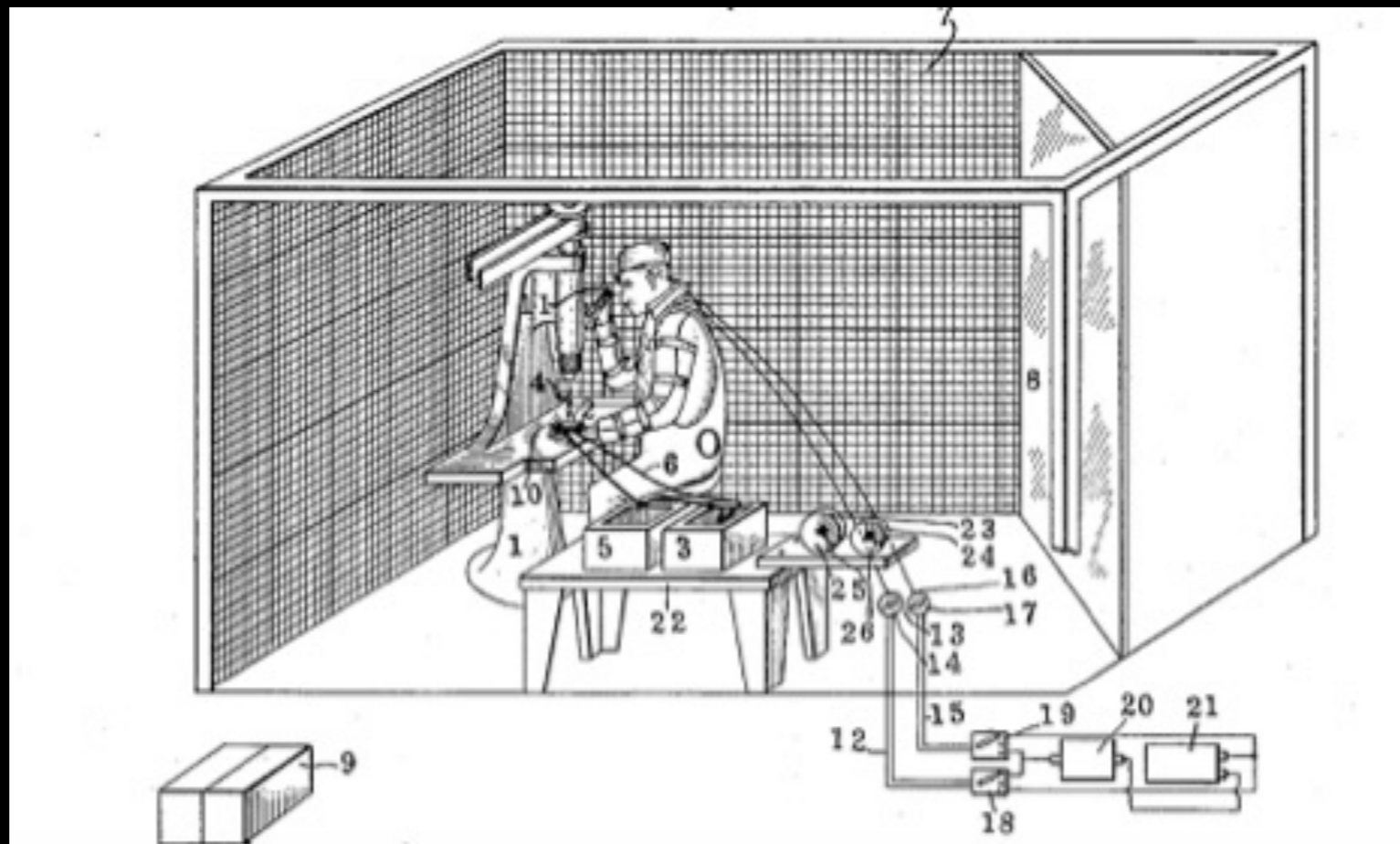(2) Texas Instruments TLV320ADC3101 92dB SNR Low-Power Stereo ADC (x4)

Anatomy of an AI system at MoMA

Amazon Patent for wristbands would use ultrasonic tracking to identify the precise location of a worker's hands as they retrieve items, 2018
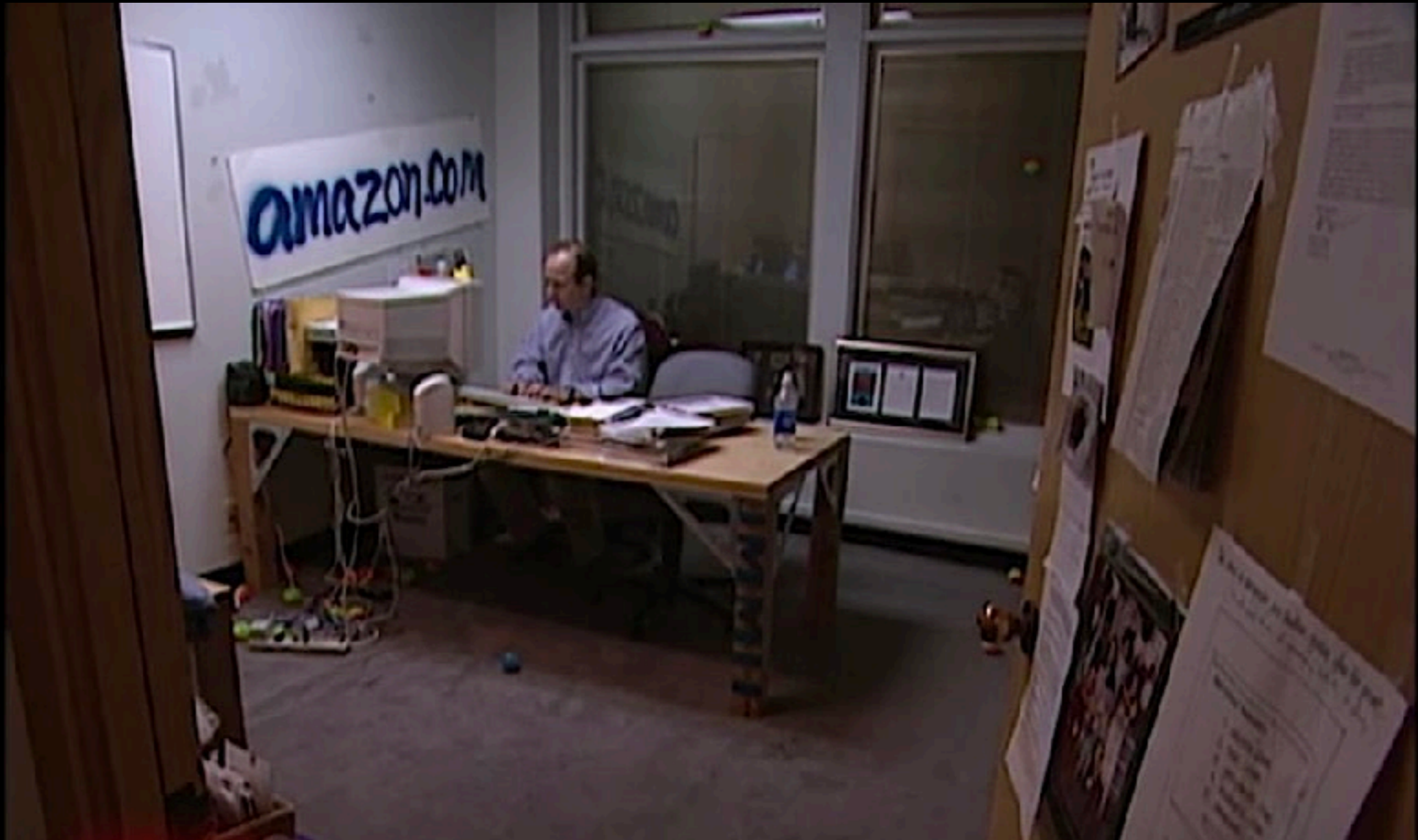
Gilbreth patent, "Method and Apparatus for the Study and Correction of Motions," 1916

Credit Amazon DSP Resources/Vimeo (Screenshot)
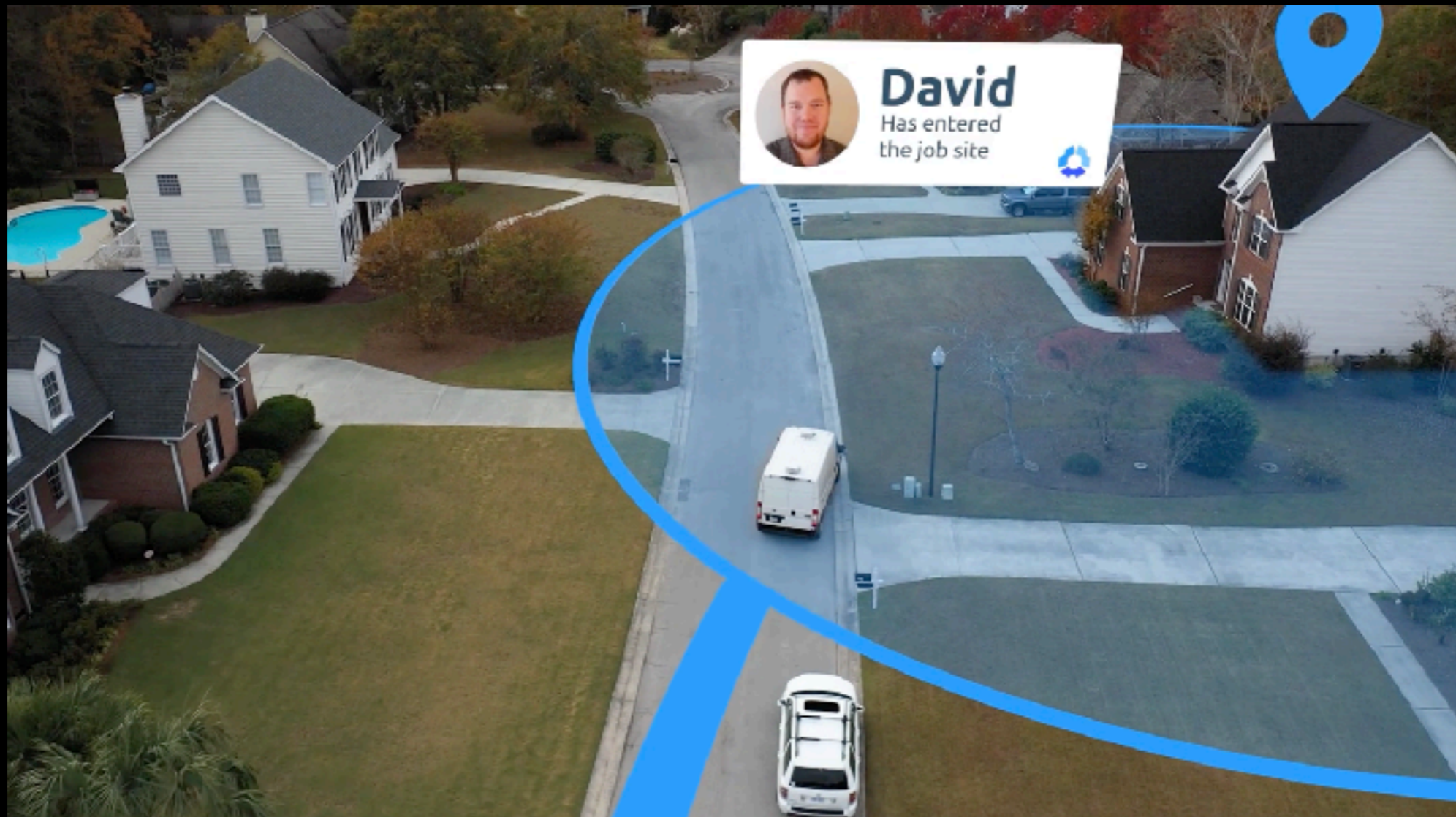
Amazon Driveri

Customer Obsession
Ownership
Invent and Simplify
Are Right, A Lot
Hire and Develop the Best
Insist on the Highest Standards
Think Big
Bias for Action
Frugality
Earn Trust
Dive Deep
Have Backbone; Disagree and Commit
Deliver Results
Strive to be Earth's Best Employer
Success and Scale Bring Broad Responsibility
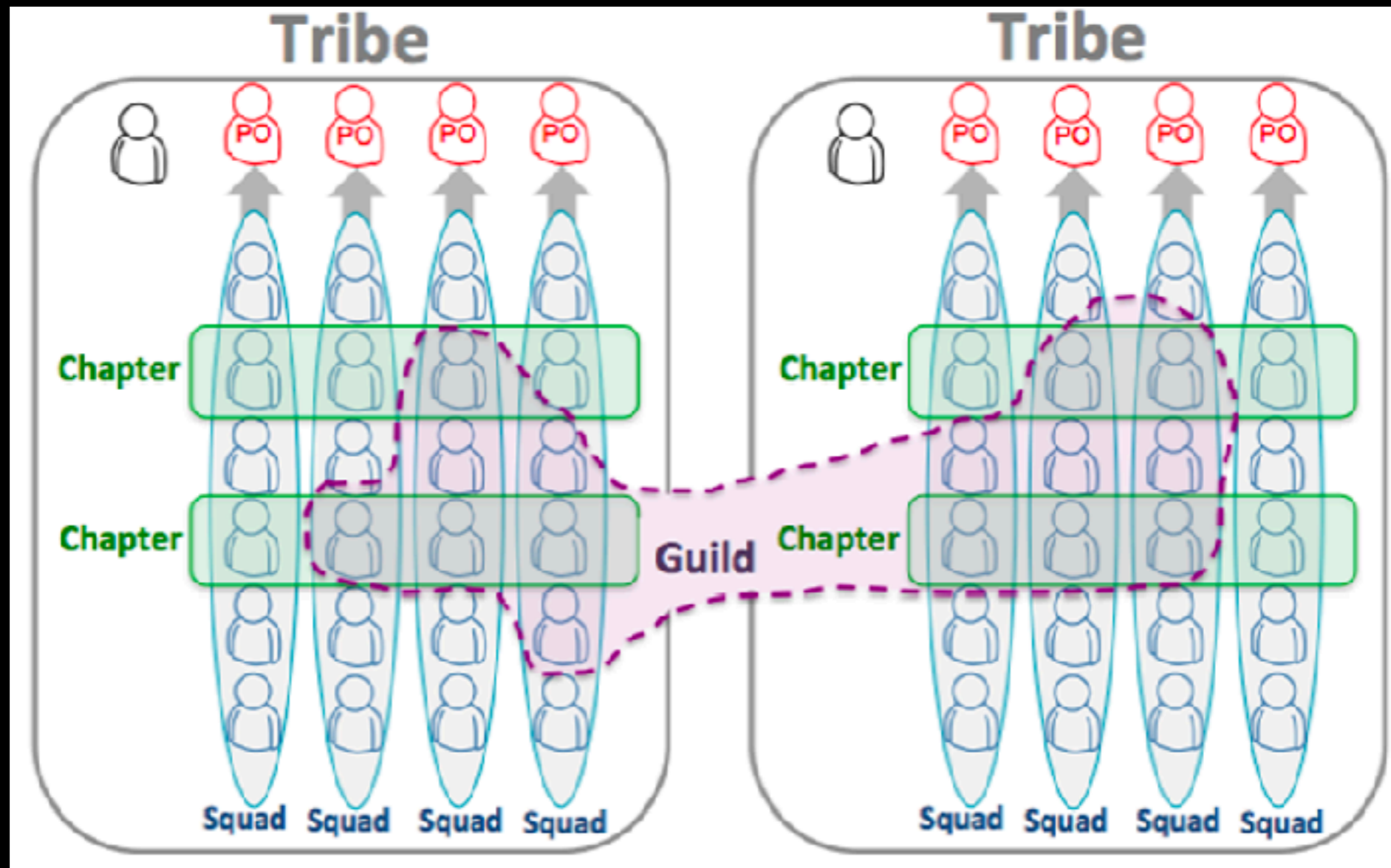
Amazon Leadership Principles

Amazon Leadership Principles

Productivity Software

Still from Hubstaff Promotional Video

Terms and Conditions: The Graphic Novel, Robert Sikoryak

Spotify Management Model

Google

Organize the world's information and make it universally accessible and useful.

1.   Work with great people.
2.   Do one thing really well.
3.   Working is fun.
4.   Be actively involved; You are Google.
5.   Be humble with success.
6.   Don't be evil.
7.   Earn user loyalty.
8.   Sustainable long-term growth.
9.   Cares and supports communities.
10. Aim high; think BIG, take risks.

Google Core Values

Google Core Values

@grimes, #gaming #vibe #🧚 #⚔️

Do you recognize the values and production methodologies in the services and products you use?

Where does production occur in a digital tool? Is it the creation of the software that runs the platform, the moment a user interacts with it, or in the production of the physical product?

products.designing.tools/projects/precepts/