

# Careers of the Near Future

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Mart 2022



# Human Resources Needs of the Near Future

- Purpose of this presentation is...
  - ✓ To help you be aware of the professions that will develop / regress in the near future, and
  - ✓ To examine what we should pay attention to when choosing a profession.



# Two Global Developments

## Shaping the Near Future

Industry 4.0 originating  
from Germany



advanced areas in  
which these  
processes will  
develop

human resources  
needs areas that  
these advanced  
areas will need

Society 5.0 originating  
from Japan



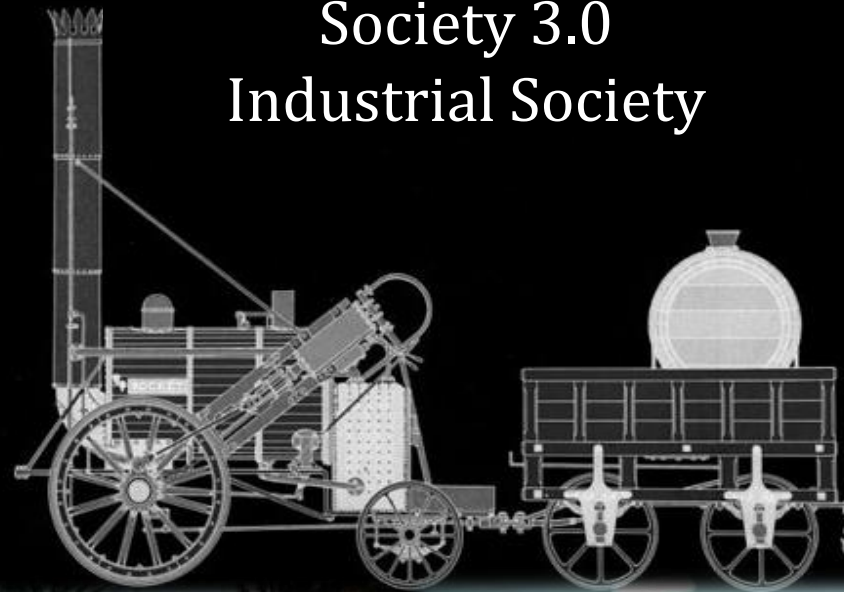
# Society 5.0

Technology-Based Human-Centered Society: Economy + social problems, physical + virtual world

Society 1.0  
Hunting Society



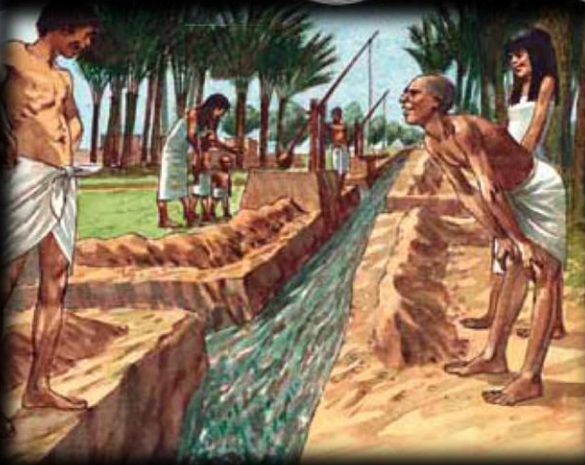
Society 3.0  
Industrial Society



Society 5.0  
Human-Techno



Society 2.0  
Agricultural Society



Society 4.0  
Information Society

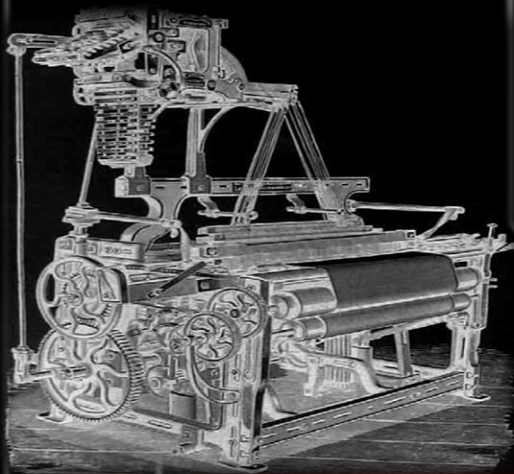


# Industry 4.0

## Industry 1.0 through Industry 4.0

### First Industrial Revolution

Thanks to the mechanical production facilities obtained with the help of water and steam



### Second Industrial

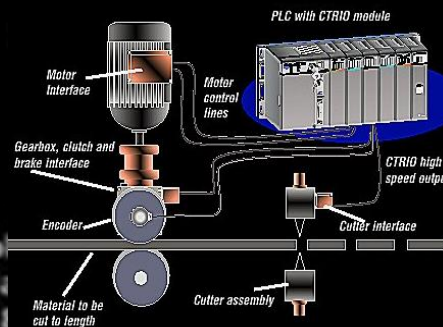
The result of the division of labor and mass production with the help of electrical energy



### Third Industrial Revolution

Thanks to advanced automation in production thanks to the use of electronics and informatics

*High-speed cut-to-length application*



### Fourth Industrial Revolution

Through the use of cyber-physical systems



Industry 4.0 is a name given to the current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, IoT, cloud computing, and cognitive computing. Industry 4.0 is also commonly referred to as the fourth industrial revolution.

First mechanical loom  
1784

First production line  
slaughterhouse, 1870

First PLC Medicon  
084, 1969

Today

Time

DFKI (2011)

# Choosing a Profession

## an Important Decision, Since

- our profession determines...
  - ✓ our character,
  - ✓ our living environment,
  - ✓ our economy,
  - ✓ our social status



# Awareness in Choosing a Profession

**Choice of profession may occur spontaneously or under influence of some factors**

- Our family members who are close to us...
- Friends...
- TV, Radio, School, Cafe, v.s...



# Factors Affecting Career Choice

## Salary Related and Non-Salary Factors

- **Factors Not Related to Salary**

- happiness, comfort, security during and after work hours



- **Factors Related to Salary**

- Knowledge, skills, assurance, union membership, wages, sustainability...





# Factors Not Related to Salary

## Peace, comfort, security at work

- **Institutional** structure of the workplace
- **socialization**, social security, **comfort**
- distance from home
- work hours, holidays
- career opportunities



# Factors Related to Salary

## Reasons for high salary...

- **Education** level / ability
- **Experience**, capacity to produce work
- Cost of living in the city
- Working conditions, wear
- **Organization**, union membership



# Factors Related to Salary

## Demand / supply factors

- **Demand Factor**

- ~ If the **demand for the products** produced is high, the salary in the enterprise is also high.

- **Supply Factor**

- ~ High salary in fields where it is **difficult to find and retain staff**



# We Take the Easy Way When Choosing Profession

**We are heavily influenced by our parents**

- The children of engineer families also become engineers.
- Likewise, architects, doctors etc...



# A Very Meaningful Example...

on return to home, will be working with me...

- **pharmacist friend's daughter** studying pharmacy.
- Why is that?
- "**When she returns home, she will work with me** and earns her living," she says.
- There are many similar examples...



# Professional Knowledge and Work Environment as a Legacy

Familiarity with the profession that is frequently addressed...





**Salary for Simple Jobs** ↔ **Working Hours**  
**Salary for Advanced Jobs** ↔ **Performance Related**

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- Although Steve Jobs' annual salary was \$1,
- He received \$5.5 Million from one Project...



# Success in a Globalizing World

**Not those who know, but those who can**

- Economist who teaches the stock market but never played in the stock market
- overweight dietitian
- bald hair strengthening consultant
  - cannot be convincing







# Some Countries Have Identified Future Business Areas

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- Young talents, scholarships and incentives are directed to these areas of advancement
- E.g:
  - Mexico Proyecta 100,000 scholarship program
  - Saudi Arabia King Abdullah Scholarship Program
  - Brazil Science Without Borders
  - Turkey YÖK 100/2000
- **TRNC Ministry of Education Areas of Advancement**

# IT Experts Gap in the World

**We hear these phrases a lot....**

- Big IT shortage in the world,
- USA, Germany: elements do not meet market needs
- Unemployment in informatics is half of the overall unemployment rate



# Definition of IT Specialist is Important

**When you say IT specialist, the person mentioned is...**

- Advanced Software Developer
- Corporate Information System developer,
- Programmers who can solve problems such as Computer Security
- Big data management



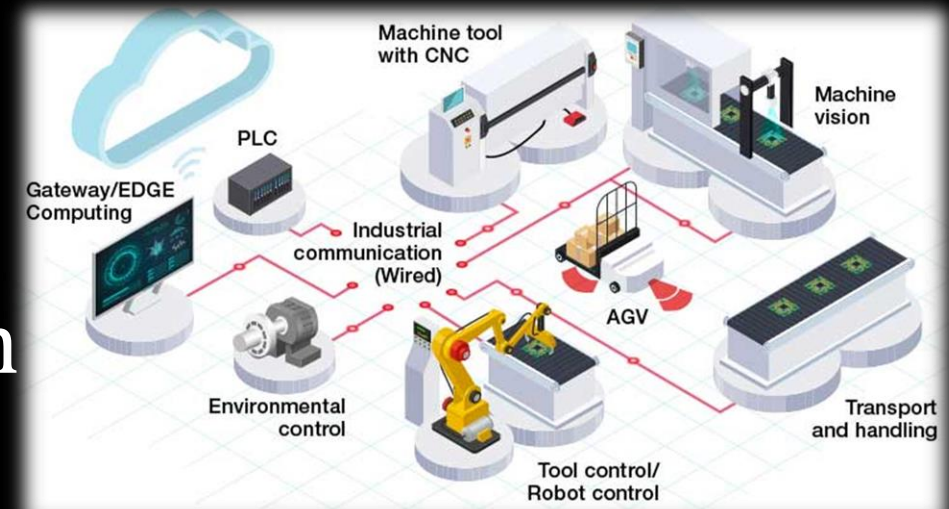
# Fields That Are Always In Demand

Smart systems become widespread, demand for advanced software developers will increase

- Robot Operating System (ROS)
- Internet programming languages
- **Natural Language Processors**
- **Data scientists**
- **Metaverse character designers**
- Online reservation, e-commerce
- Industry-4 and its applications
- Machine–Machine Communication (M2M, MMC)



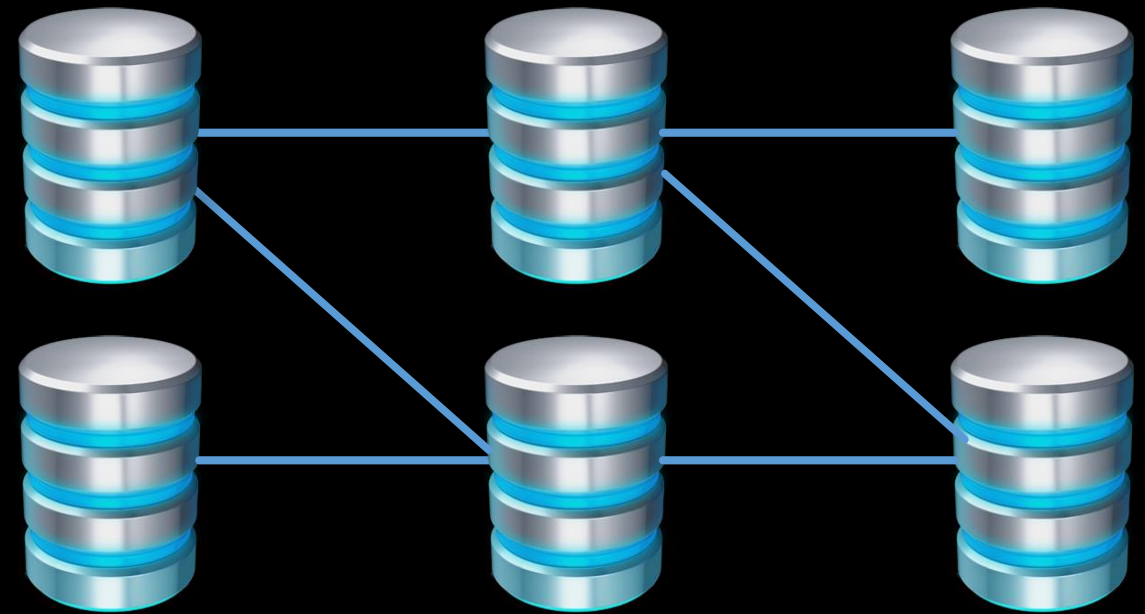
<https://ausergcon.com.au>



# Computer Network and Information System Manager

## Medium / large Wide Area Networks (WAN)...

- Medium / large Facebook / Instagram / Youtube
- Big Data, where millions of images, videos and texts are constantly uploaded
- Data and database management is always in demand
  - Wide Area Networks (WAN)...



# Engineering

**Computer, Software, Construction, Machinery, Electrical and Electronics, Information Systems, Biomedical, Mechatronics, Industry**

- Open in the world market in both numerical and targeted quality
- Out of 4 Students in universities in the USA,
  - 1 choose Business Admin.
  - 1 choose Engineering,
  - the other 2 people took one of the hundreds of fields.

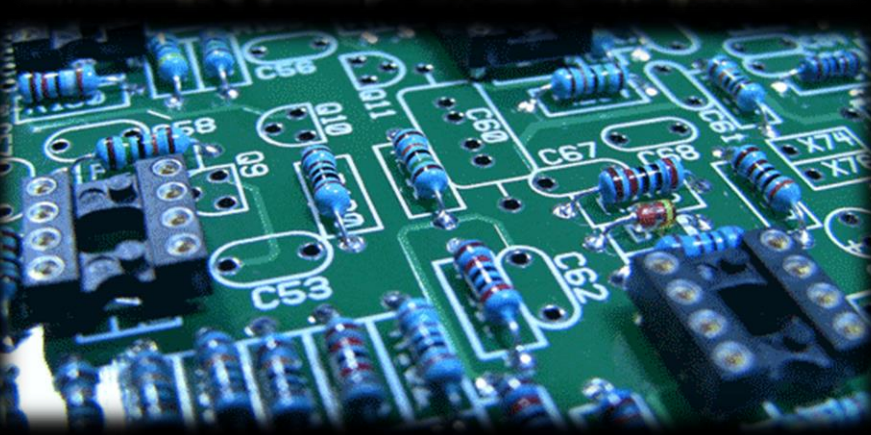
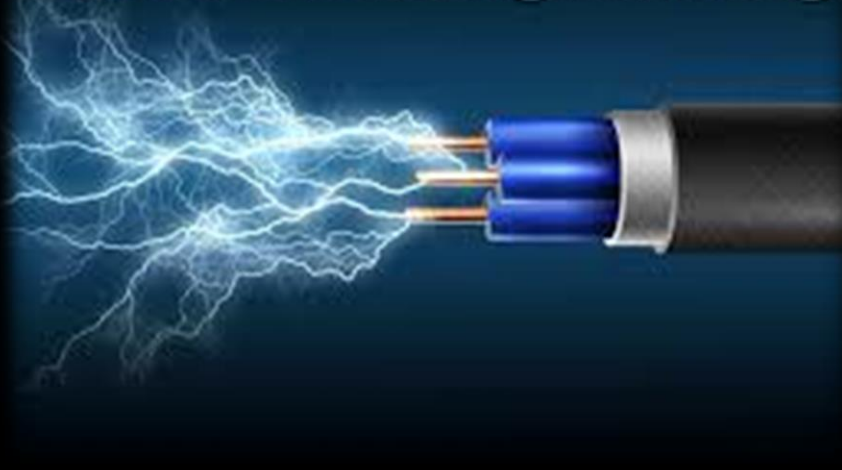


# Electrical / Electronics Engineering

The Basic Elements of the Technopark Concept...



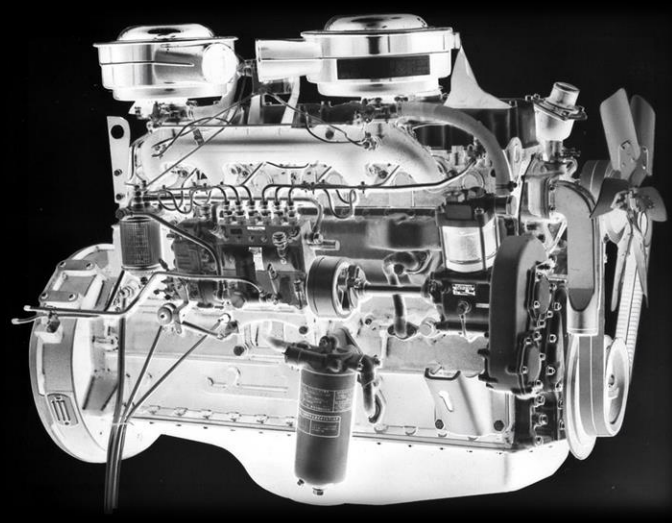
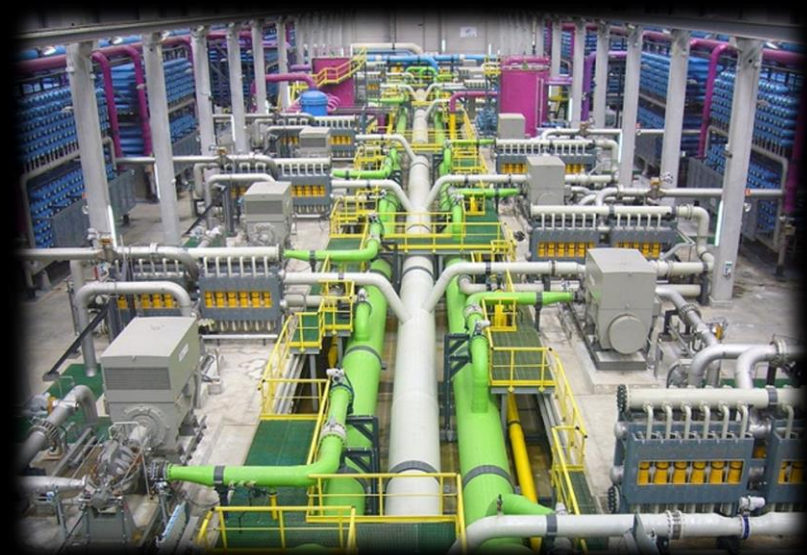
Electrical Engineering





# Mechanical Engineering

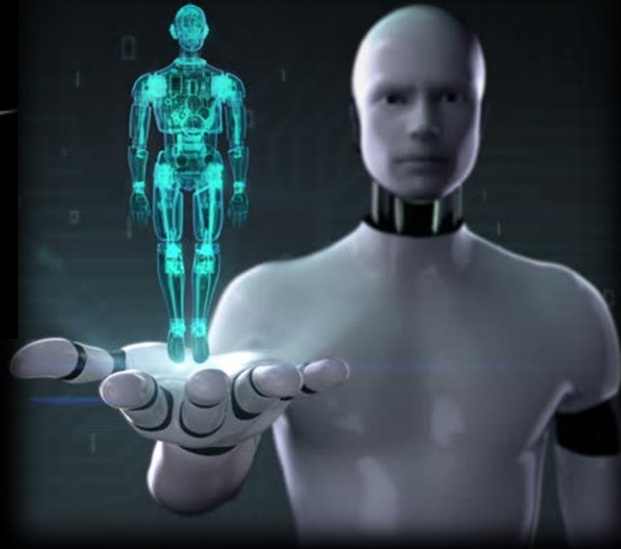
## Industry's Driving Forces...





# Mechatronic Engineering

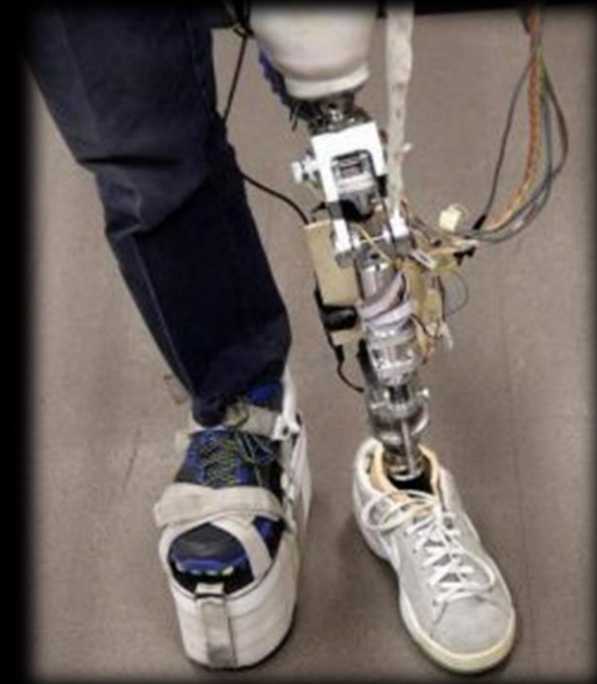
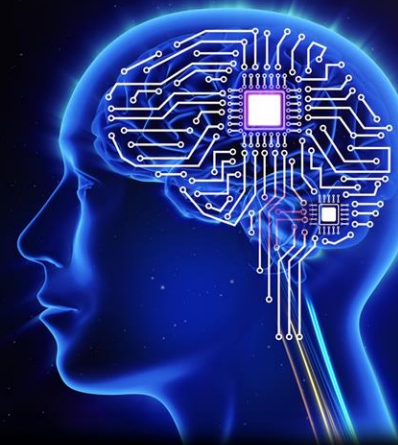
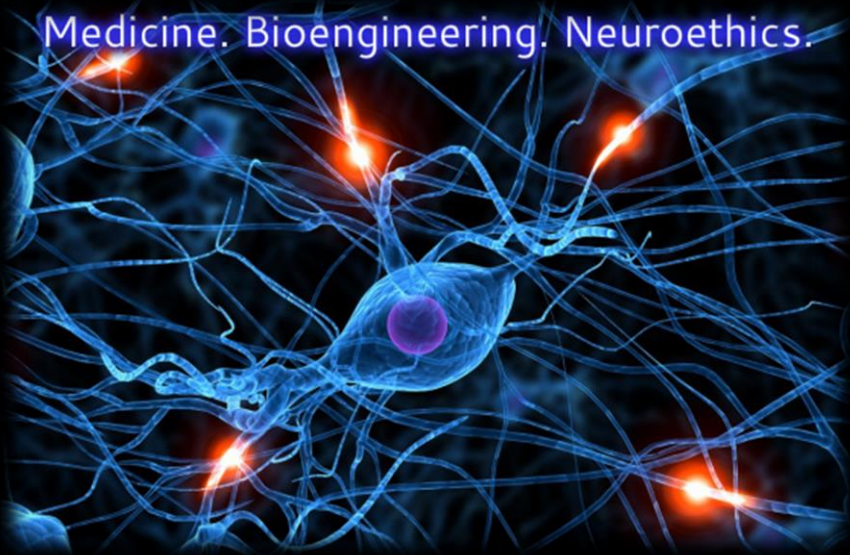
**Mechanical + Electrical + Computer Engineering**



# Biomedical Engineering

**nano-medicine, nano-bots, smart bacteria, smart organs, genetic engineering, neurolink, wireless sensors / sensors**

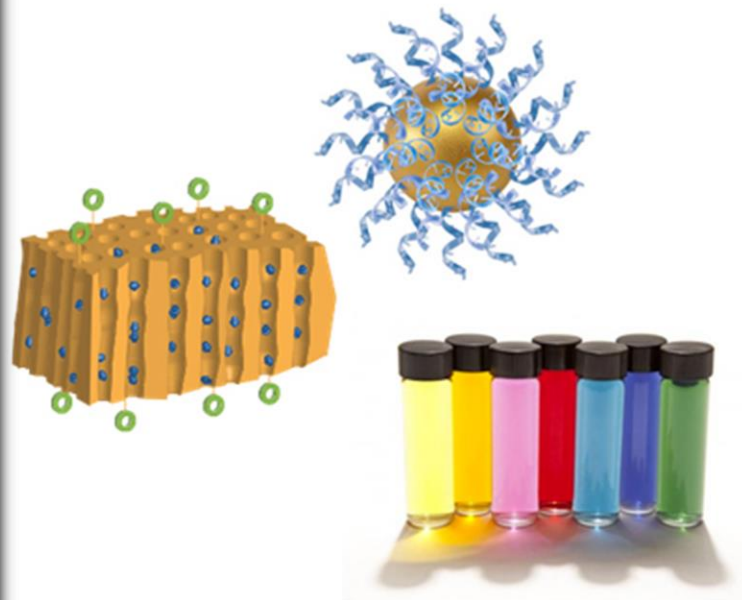
Medicine. Bioengineering. Neuroethics.



# Biomedical Materials and Translational Nano-Medicine

**Translational Medicine: an interdisciplinary field of biomedicine research**

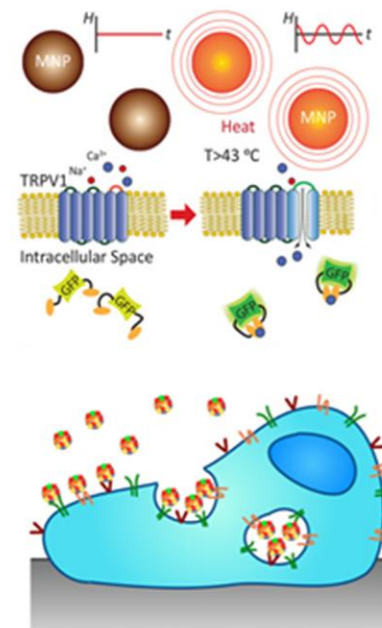
Nano-Biomaterials



Luminescent / Magnetic / Biodegradable

Luminous, Magnetic,  
Biodegradable

Biological Studies



Cellular response / Signaling

Cellular Response,  
Signaling

Translational Medicine



Bench to bedside (Diagnostics / Therapeutics)

From the lab to the bed-end  
diagnosis and therapies

<http://www.joogroup.com/>

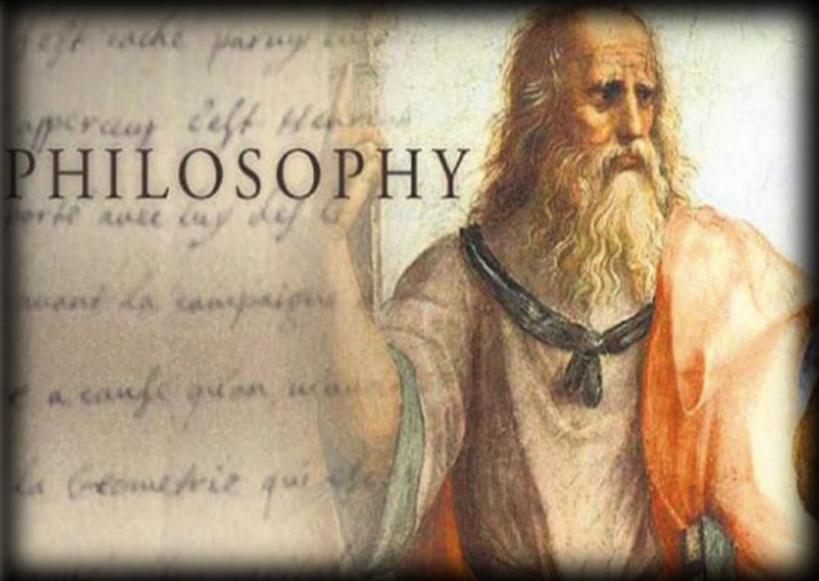
# Genetic Engineering

**GMO, cloning, new generation living things, treatment of genetic diseases, genetically engineered perfect human – GATTACA Film**



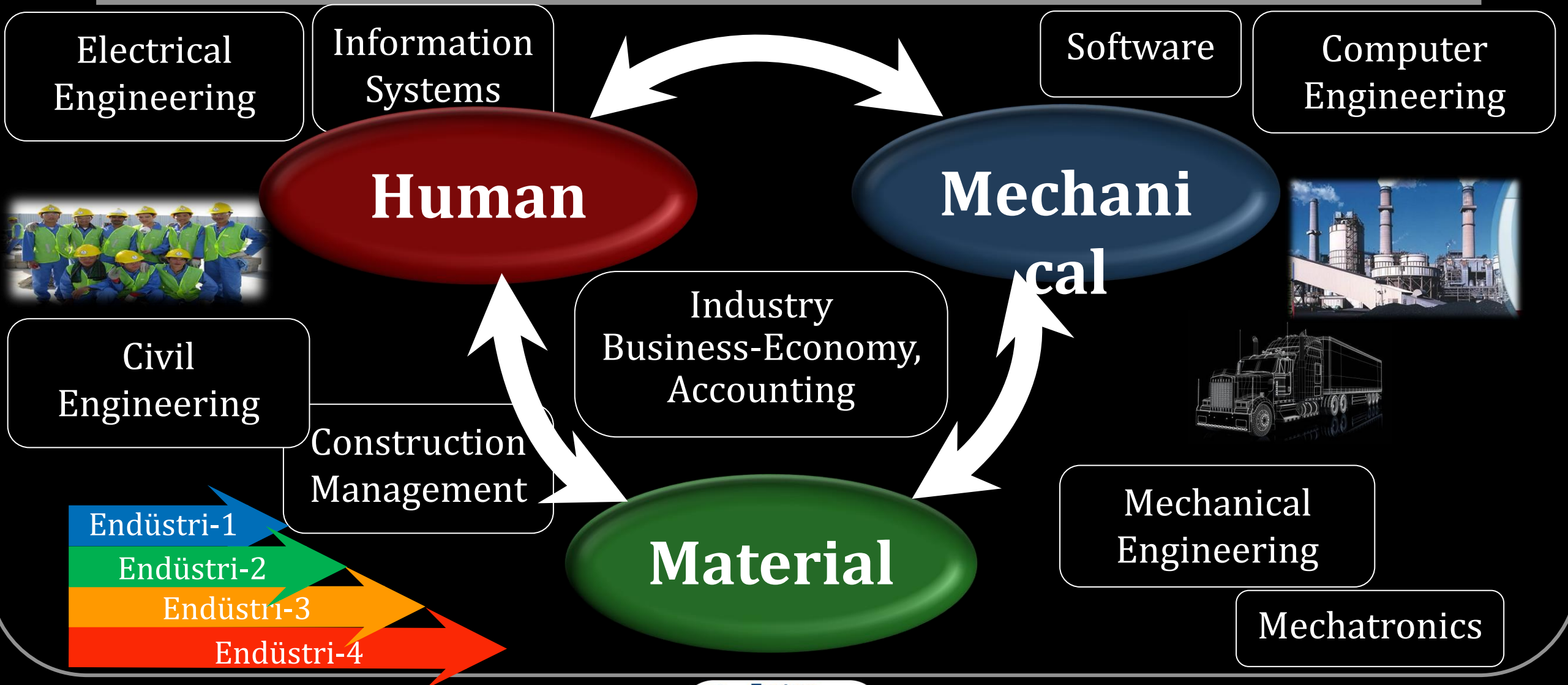
# Sociology and Ethics Education in the Future

Ethical values, honesty, social equality, innocence, justice, principles, respect, standards, philosophy, belief, pride, responsibility



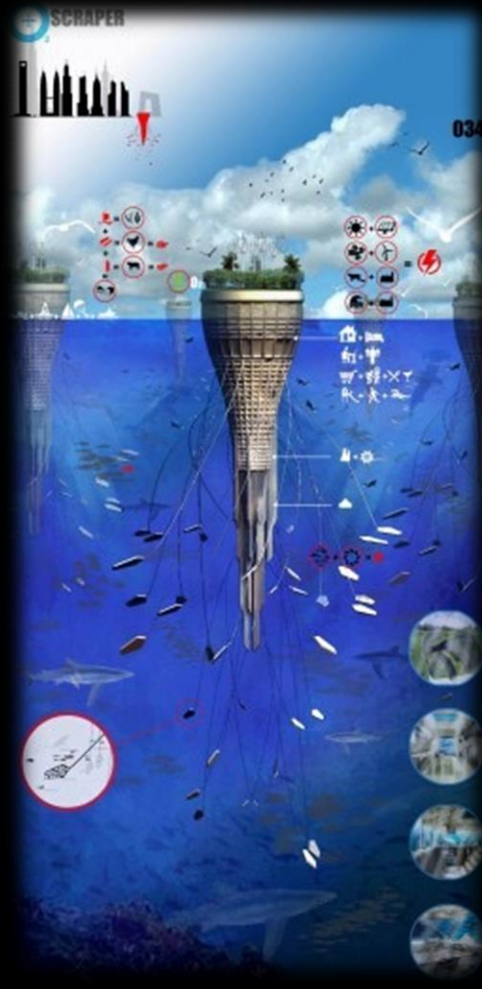
# Industrial Engineering

related to the development and application of methods and techniques for the effective use of people, machines and materials in order to increase the efficiency of organizations.



# Architect / Civil / Construction Engineering

## Future buildings, cities, colonies, roads, dams...





# Business Areas in 2020 and After

- Most of the changes you see today will cause new business to happen quickly
- This section will examine new positions that will likely emerge over the next 10 years.





# Augmented Reality Architects

Nosedive: Black Mirror S4, E4 and Anon Movies

People's Reliability  
Scores, out of 10

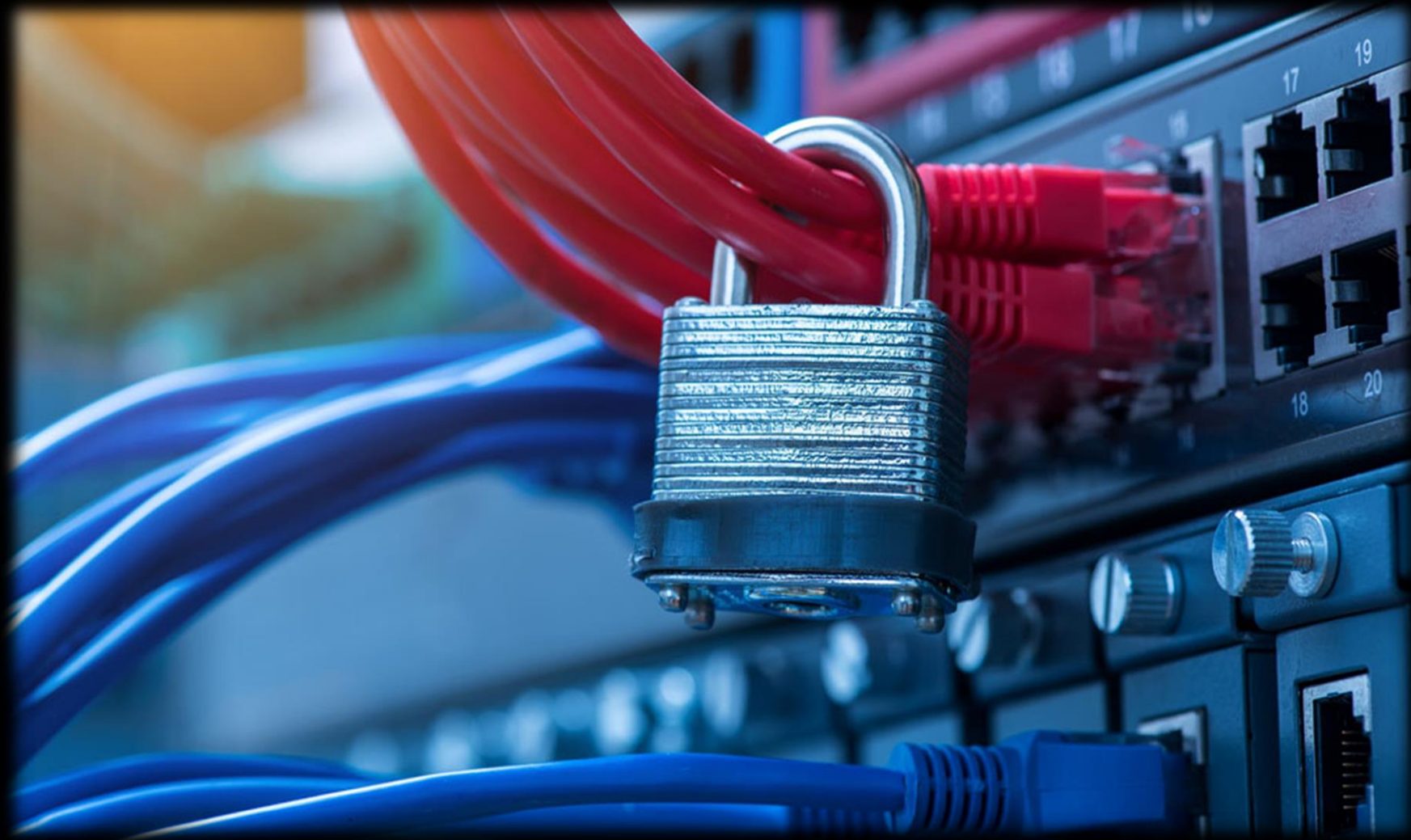
Enterprises'  
products

Facebook Oculus  
Rift VR headset



# Computer Network Administrator / Security Specialist

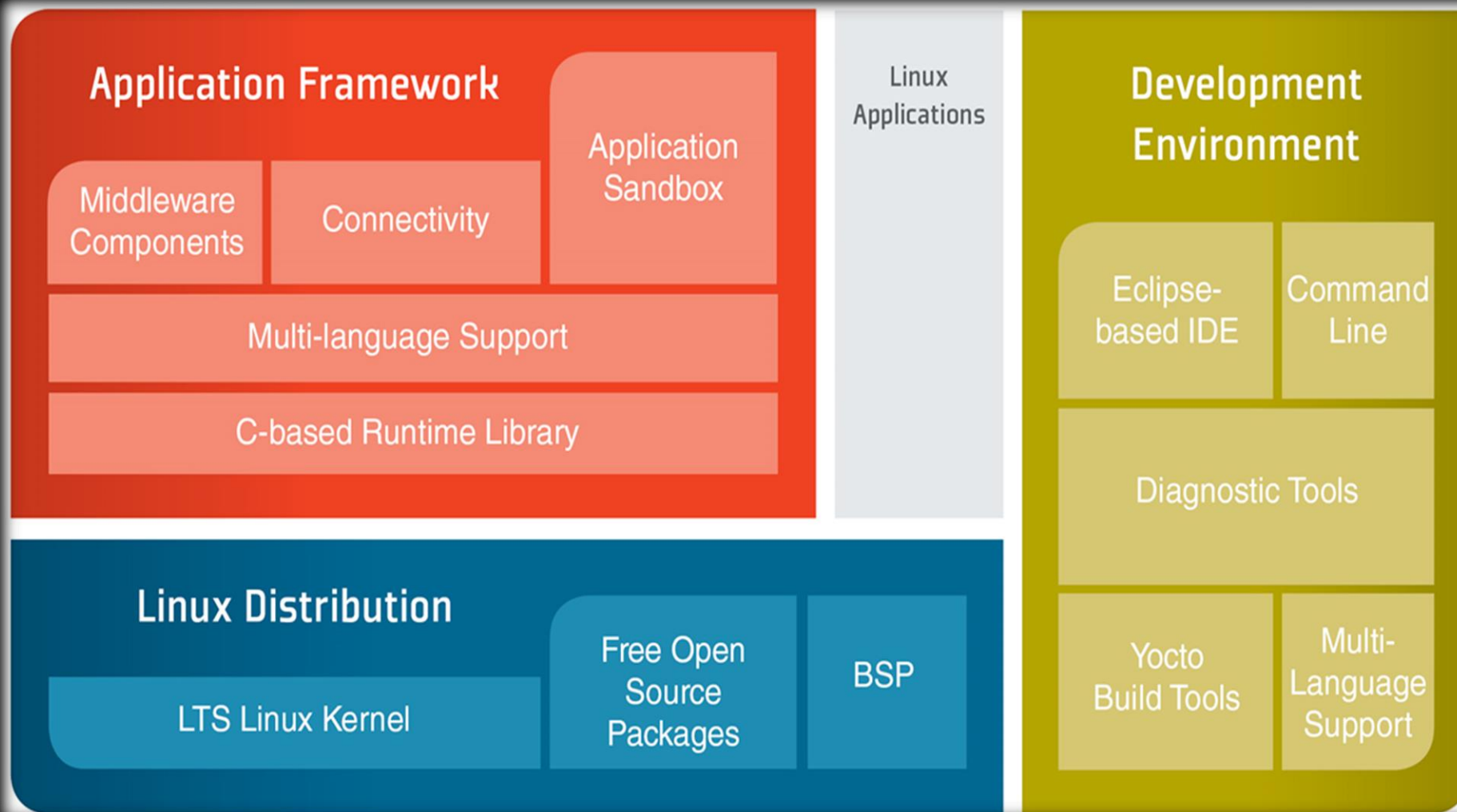
Hackers are also trained in the same classes as you...





# Computer Software Developer

Self-developed software fed from existing software



# Waste Data Management

In particular, avoiding unnecessary data copies



36 hosting towers

= 360 000 servers



# Big Data / Database Manager

In the cloud, our data is in safe hands (?) 😊 ☹️



# Data Hostage Specialist

Data hostage negotiations, data recovery and damage control analyst

Transcendence  
movie - PINN  
takes all  
databases  
hostage

PINN: Physically  
Independent Neural  
Network





# Alternative Energy consultant

sun, wind, wave, nuclear, fusion, fission, green, energy cell





# Wind Turbine Repair Technologies

Technical mechanics who are not afraid of heights of hundreds of meters

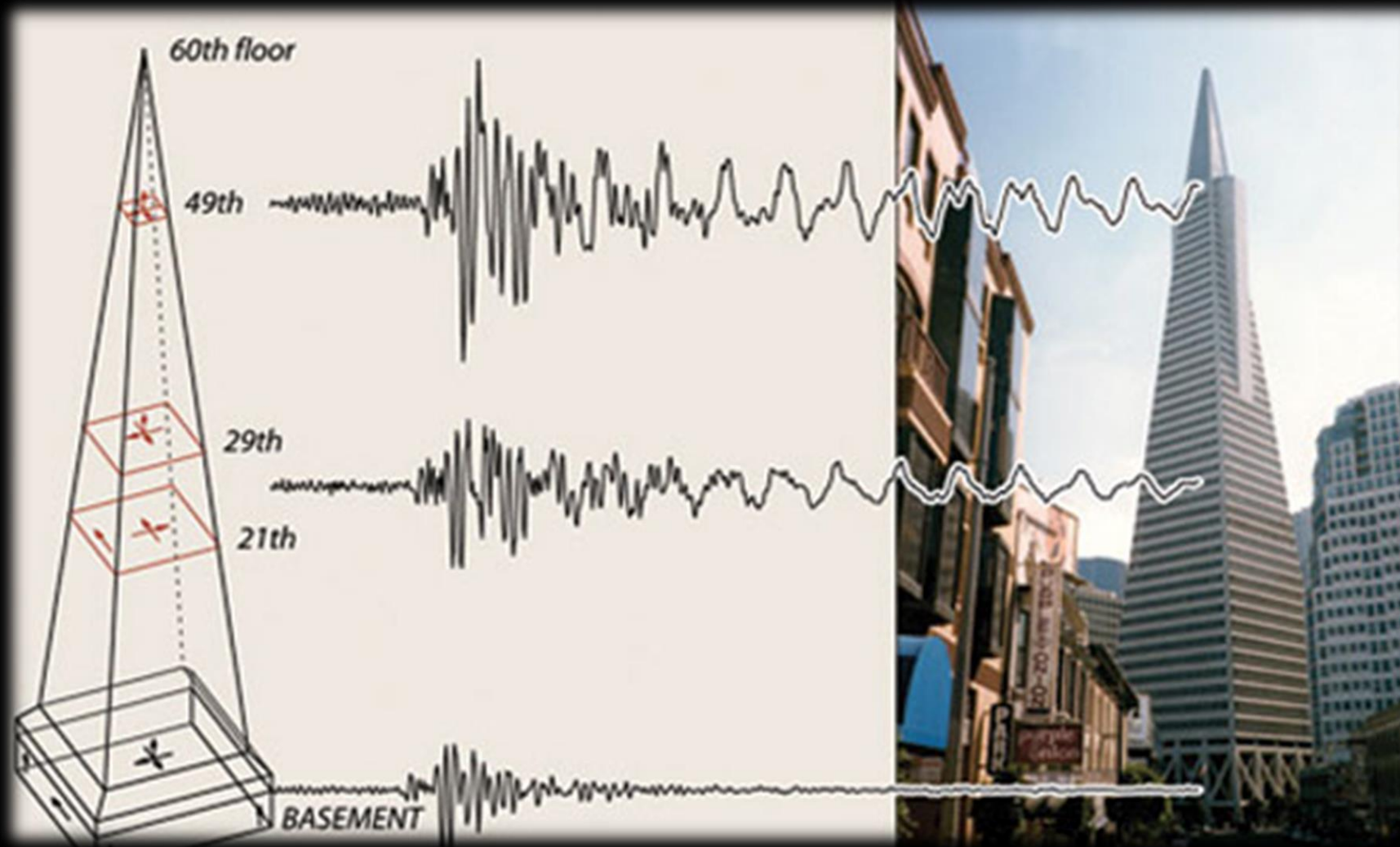






# Earthquake Prediction Specialist

Prediction of earthquake time, location and magnitude in the near future...





# Removers

**Skilled workforce to eliminate aging facilities, infrastructure**



# Waste Engineering

## The future of waste: five things to look for by 2025

1. Circular rethinking of garbage,
2. Turning waste into energy,
3. improve recyclability,
4. to persuade consumers,
5. Retailer responsibility



<https://www.theguardian.com/sustainable-business/2015/feb/23/future-of-waste-five-things-look-2025>

# Global Systems Architects

political, economic, social



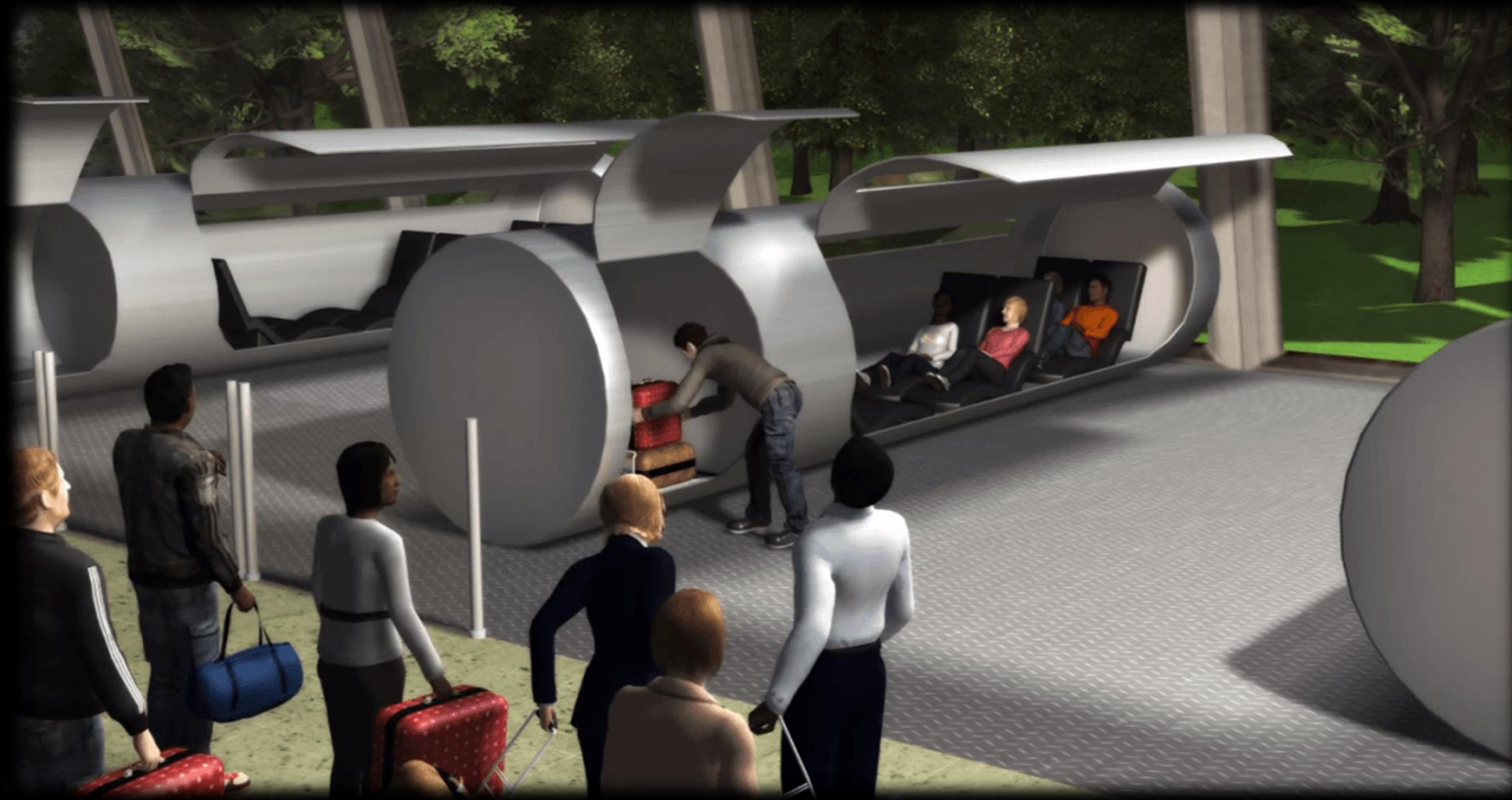
# Urban Designer

Production under the grocery store, the market...



# Vacuum Tube Handling Engineers

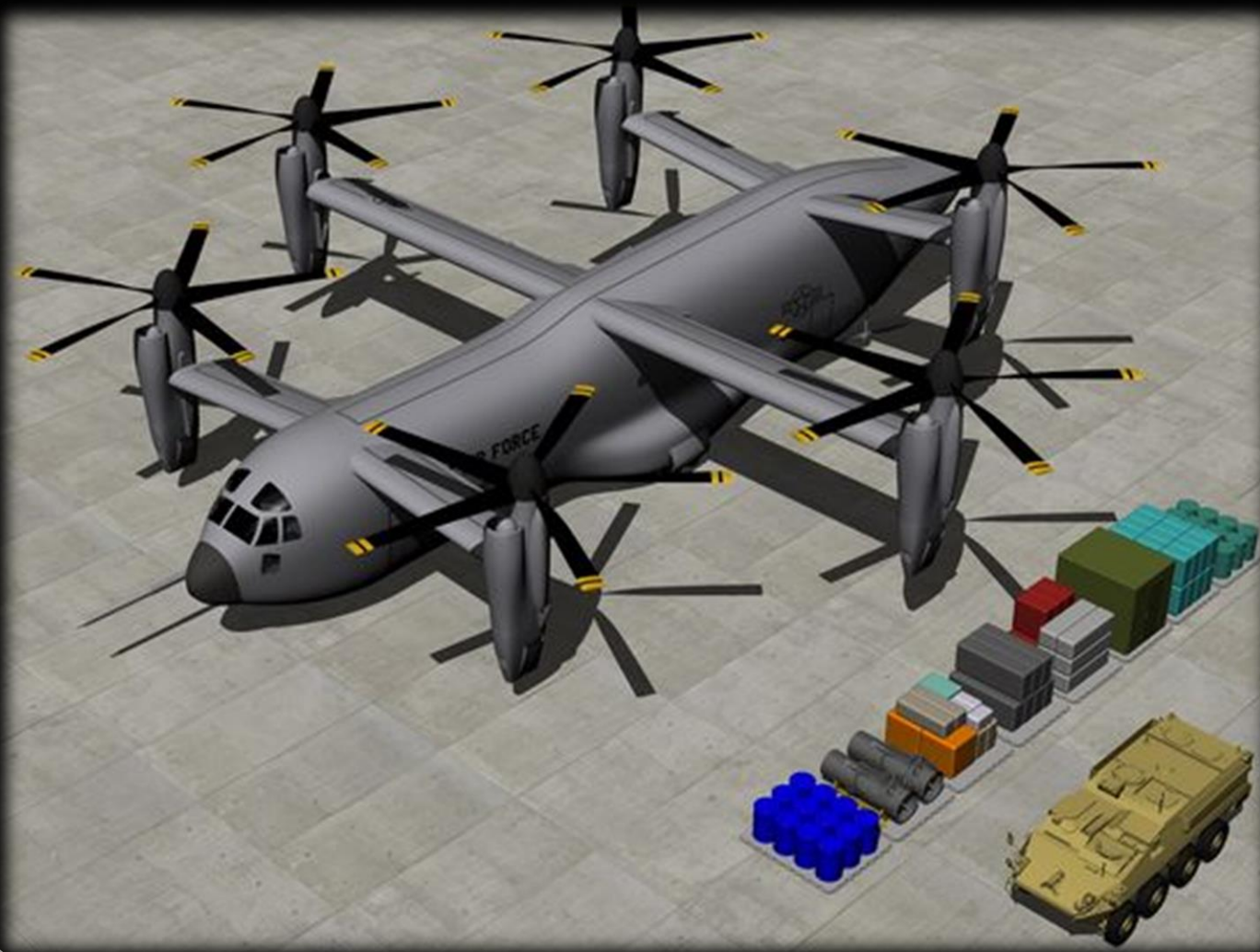
## Vacuum tube human/cargo transport system



www.digitaltrends.com

# Unmanned Aerial Vehicle Transportation

## Vehicle designer and driver



# Remote Management

Command, control, measurement, detection...





# Alternative Currency Banking

**Cryptocurrency: Bitcoin, Litecoin, Namecoin, Peercoin, Dogecoin, Ripple**

- Nerve movie for blockchain bad practice,
- He can't be stopped if something goes wrong because he doesn't own it.



[https://en.wikipedia.org/wiki/List\\_of\\_cryptocurrencies](https://en.wikipedia.org/wiki/List_of_cryptocurrencies)

# Accounting Auditor

Efficient work, official document verification, tax discipline





# Financial / Market Analyst

Product selection, pricing, profitability, investments

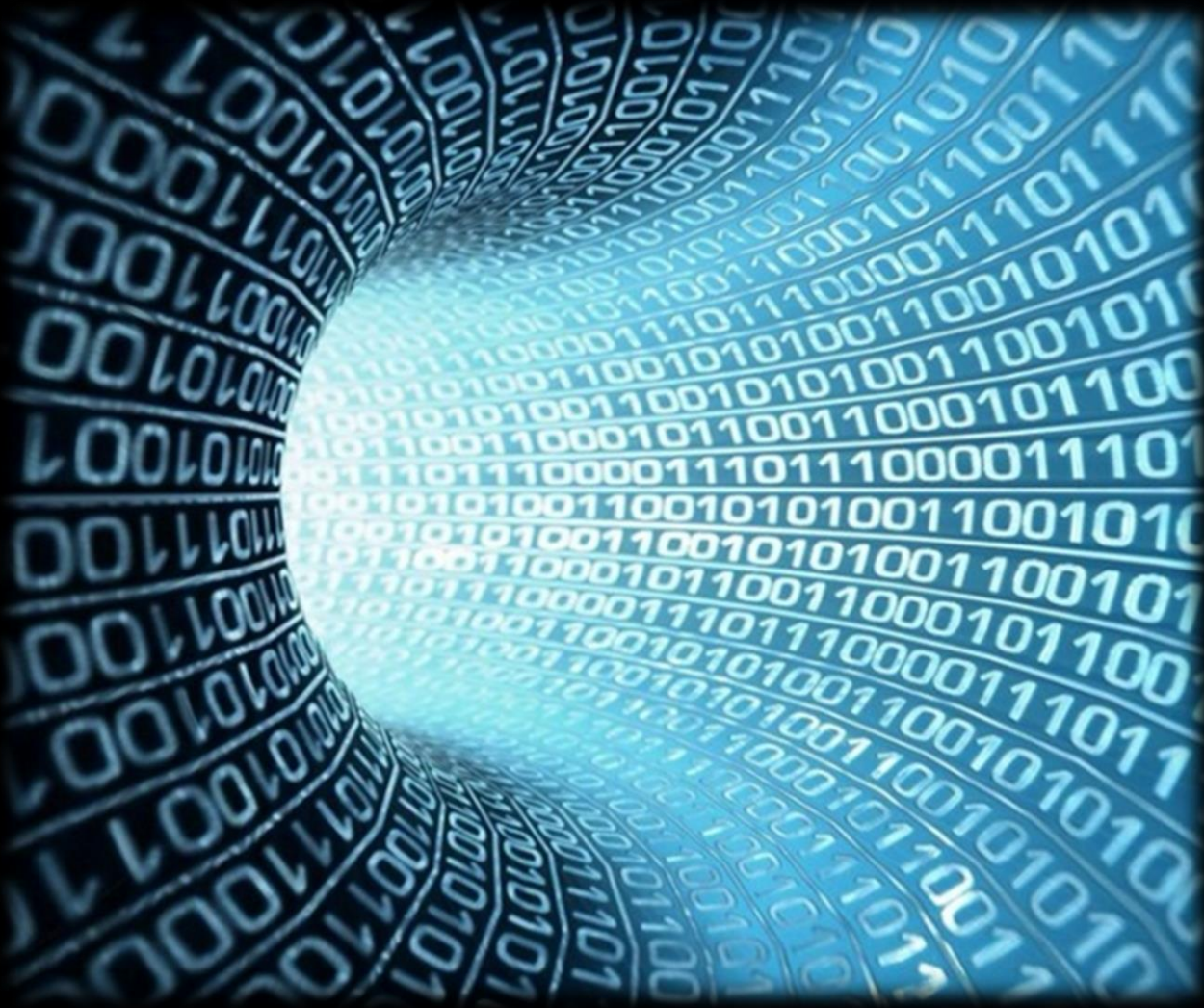




# Chief Productivity Specialist

**Data-friendly, productivity-enhancing adviser**

wallup.net

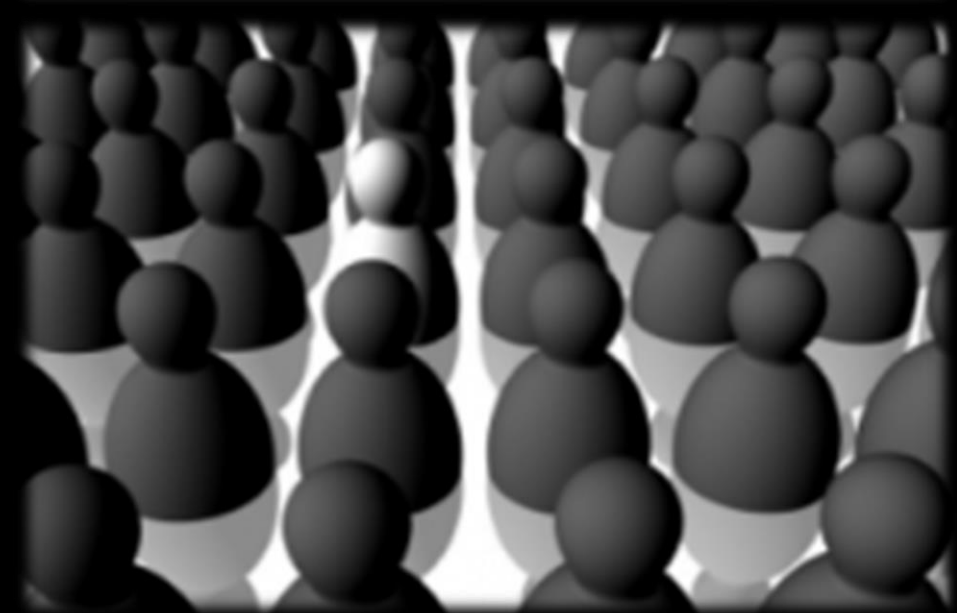


<https://www.oktrade.ca/>



# Excessive Capacity Broker

Converting empty space, machinery, assets into money



[theshaker.com.au](http://theshaker.com.au)

# Human Resources and Development Specialist

## Personal productivity expert...



# Public Relations specialist

## Event planner...

### Conference Planning

- › Define the conference parameters
- › Select the site
- › Establish the preliminary budget
- › Set general conference schedule
- › Identify keynote speaker(s)
- › Create a marketing plan
- › Solicit and select session presentations
- › Determine & plan required & optional elements
- › Implement the conference
- › Follow-up



# New Generation Teaching

**AI + human = hybrid teachers**



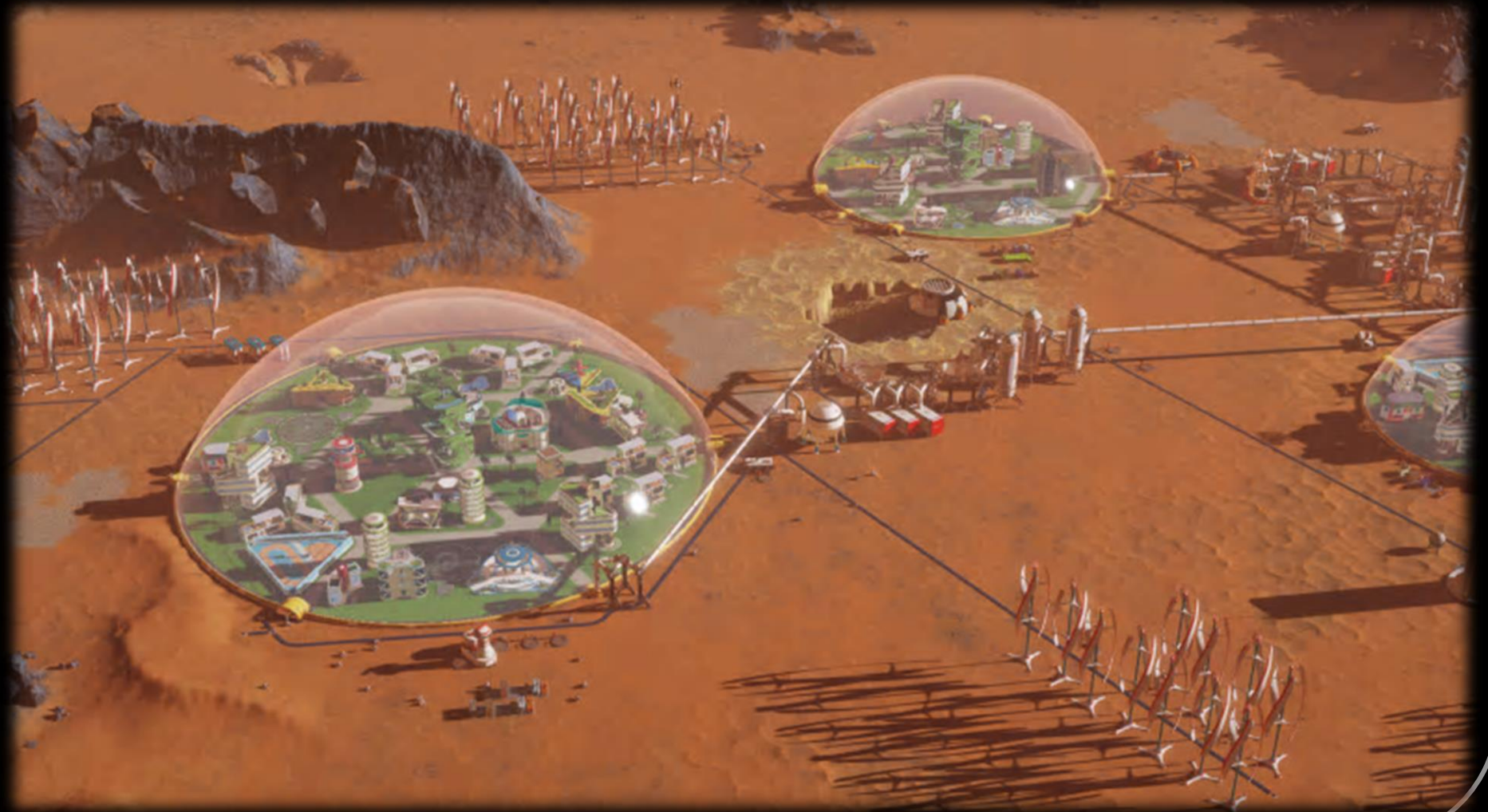


# Business Colony Managers

IO / Last on Earth Film



- In 2030, an average of 30 people will have worked on 200-300 projects,
- local real and foreign virtual workers will be discussed



# Social Education Specialists

To create a circle of friends





# Lifestyle Transformation Designers

shaping a lifestyle, creating an image, shaping a world view, designing

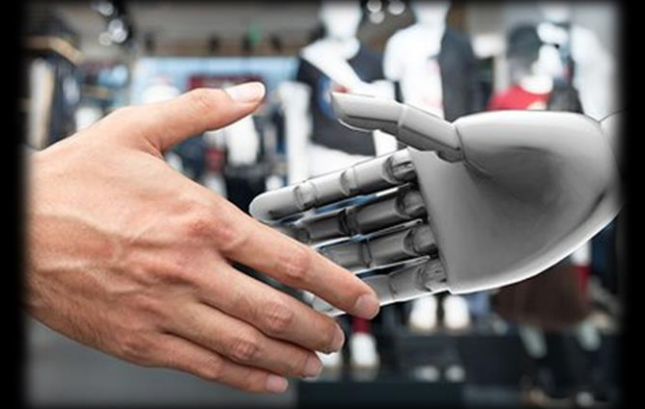
Lifestyle Transformation Designer

Society 5.0

Industry 4.0

# Human-Technology Integration Specialist

Organizes devices and platforms to take advantage of technology



<http://www.mekatronikmuhendisligi.com/evinizi-akilli-haline-getirecek-5-muhtesem-cihaz.html>



<https://twitter.com/agraylin/status/918703111975215104>

<http://www.mekatronikmuhendisligi.com/evinizi-akilli-haline-getirecek-5-muhtesem-cihaz.html>

# Human Personality / Character Designers

Providing new personality to criminals, troubled people by leveraging technology

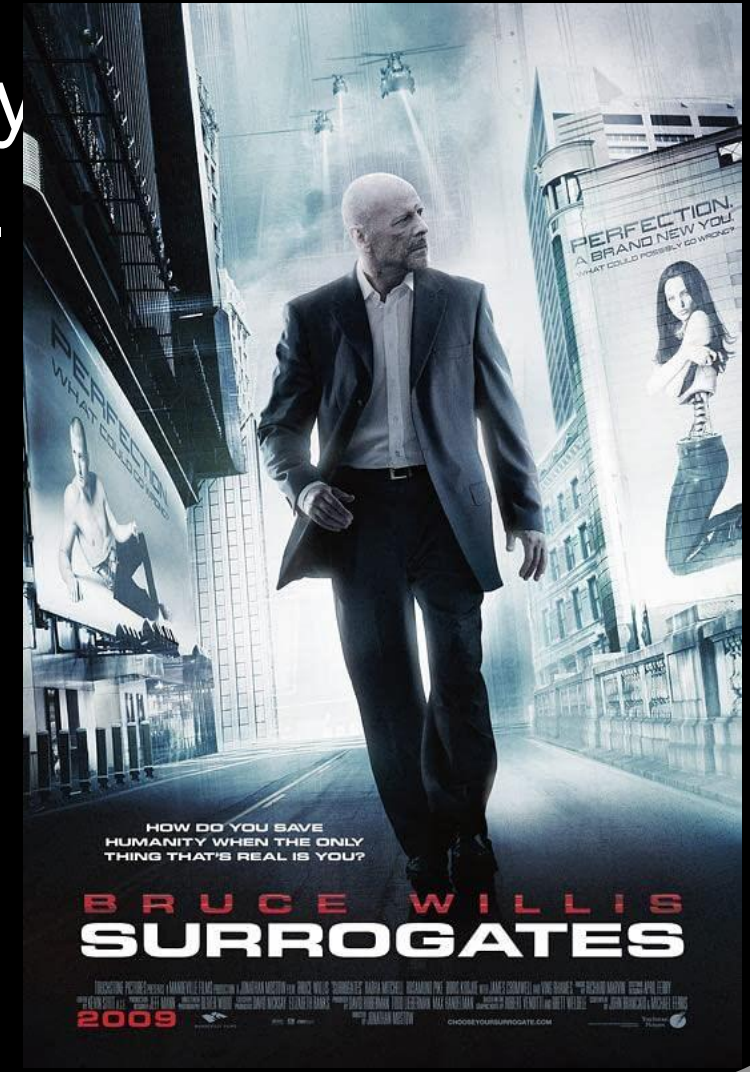
- Changing people's feelings and thoughts through brainwashing
- Reintegrating criminals or troubled people into society
- People's feelings and thoughts are designed like in the movie Cypher (The Decoder)
- DUST movie “A week with Rebecca” tells how you can fall in love with a robot with the perfect female character...  
<https://www.youtube.com/watch?v=ViPefqVtHEA>



# Use of Robot Images instead of Humans

## Proxies who displace people in risky environments

- People live their lives away from the safety of their homes through robotic surrogates.
  - physically perfect mechanical representations of themselves
  - Including Mechanical, Electrical, Computer, Biomedical, Mechatronics Engineering



# Personal Internet of Things / IoT Specialist

## security repair specialist



Vehicle, asset, person & pet monitoring & controlling



Agriculture automation



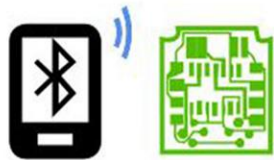
Energy consumption



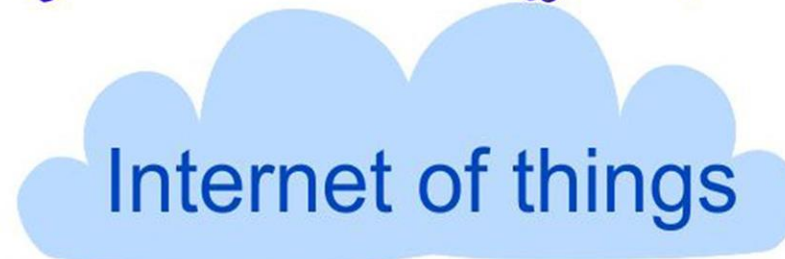
Security & surveillance



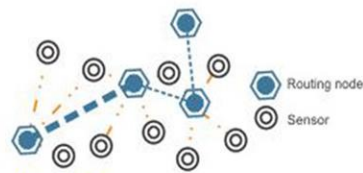
Building management



Embedded Mobile



Everyday things get connected  for smarter tomorrow



M2M & wireless sensor network



Everyday things



Smart homes & cities



Telemedicine & healthcare

# 3D Printing Engineers

Printed products to design the next tech-wave



<https://www.mifotos.com/im%C3%A1genes/victorian-house-54.html>





# Real + Virtual Physiotherapists

**Texture experts supported by IoT + wireless sensors...**





# Nutrition / Dietetics / Dietitian

Personalized nutrition with IoT suitable for the body and lifestyle



<http://allhealthcare.monster.com>



<https://foodandnutrition.org>



# Society 5.0 Health Services Management

Data-driven living experts... Real + virtual Doctors hand in hand...



# Octogenarian

## Service providers for the very elderly

(mushrooming group  
100+ year old  
mushroom group,  
demand for products  
and services not  
currently covered in  
today's Market will be  
provided)



# Radiographer / Radiator

## Empowered medical imaging technologists

- Radiology and diagnostic specialists
- Enhanced computed tomography, MRI, X-Ray vs. medical imaging





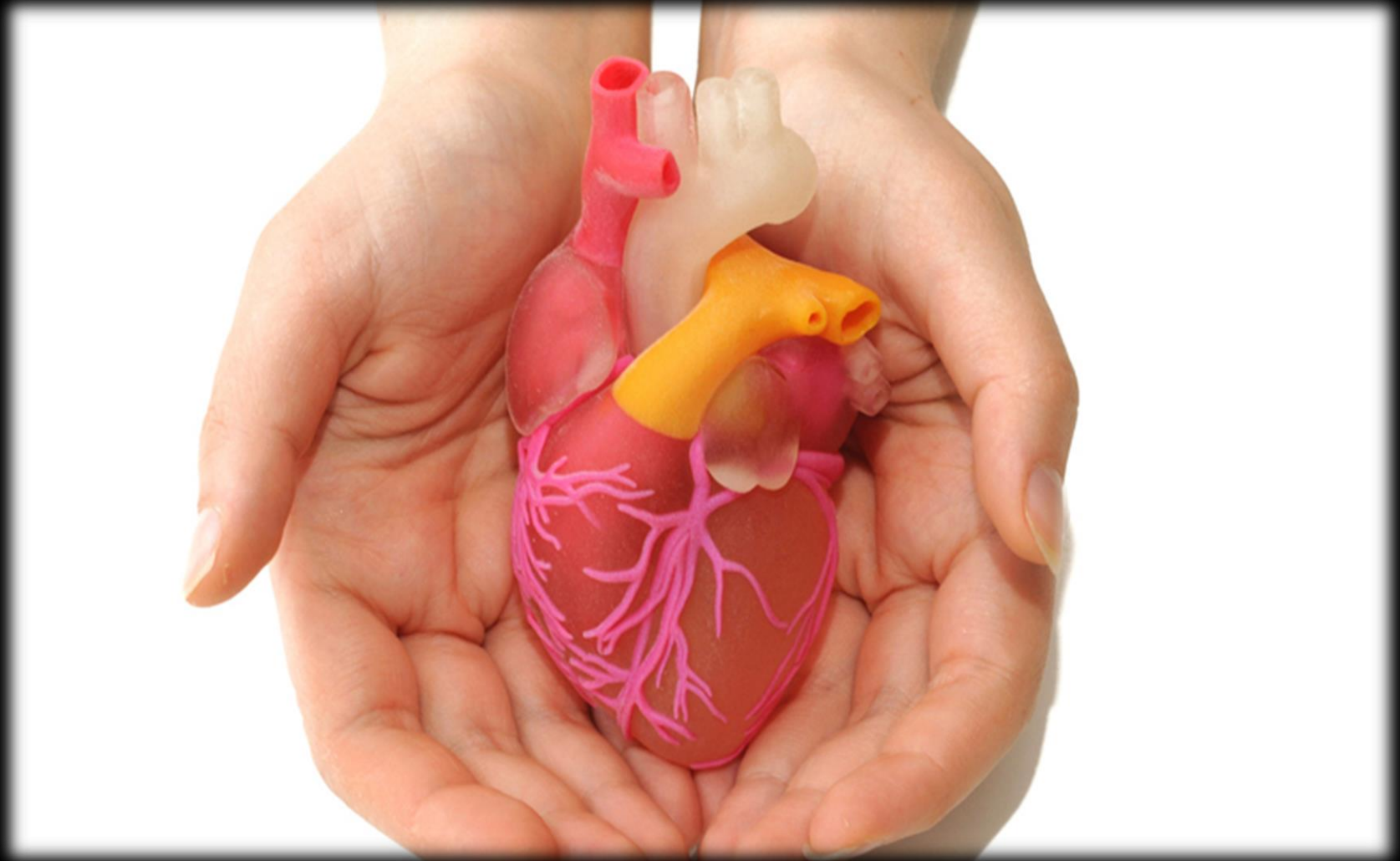
# Online Medical Mentoring

Experienced medical professionals provide guidance, support and encouragement to physicians



# Organ / Body Part Manufacturer

Enhanced quality of life



# Organ Agents

Follow-up and supply of healthy organs







# Nano medics

To design a method for diagnosis, remedies, and tracking solutions





# Speech Language Pathologist

## Parametric speech analysis, diagnosis and treatment



# 3D Food Printing Engineer

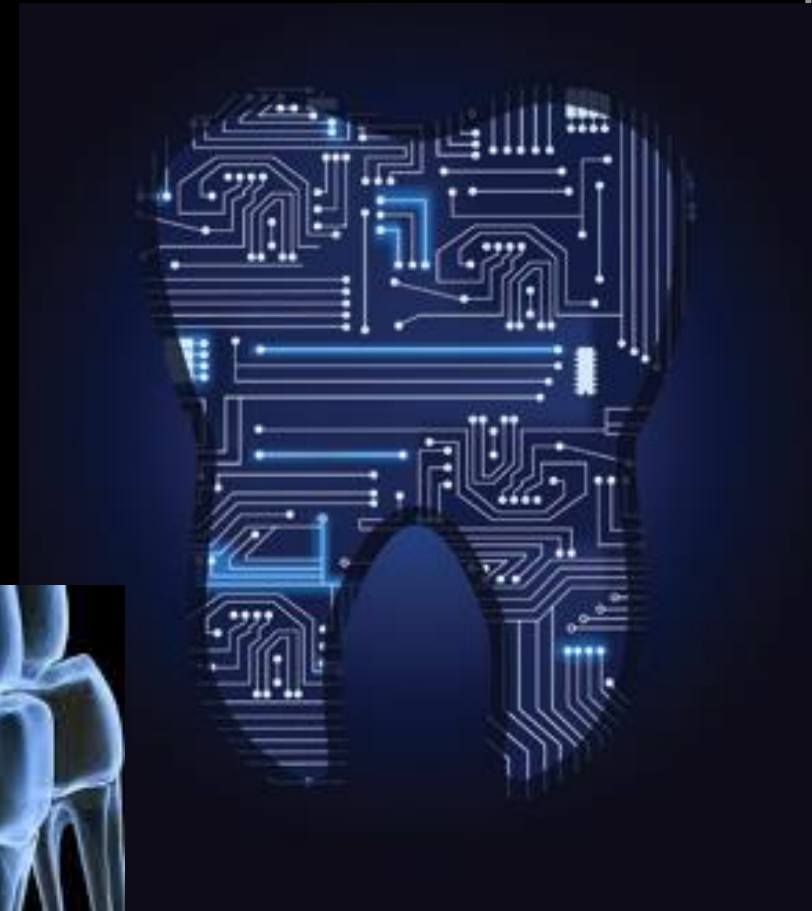
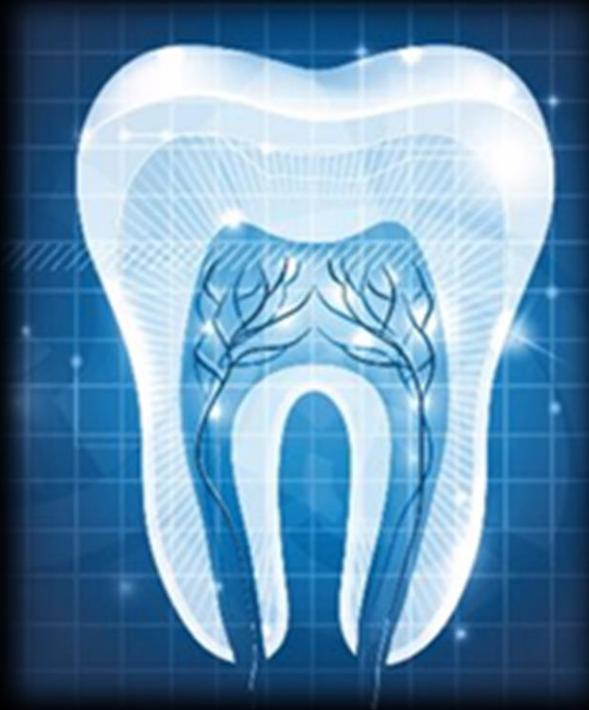
Personalized, Instant Service...





# Dental Health Specialist

Smart teeth, smart smiles...



# Avatar Designers

**Avatars will walk among us like visual beings**



# Relationship Managers Between Avatars

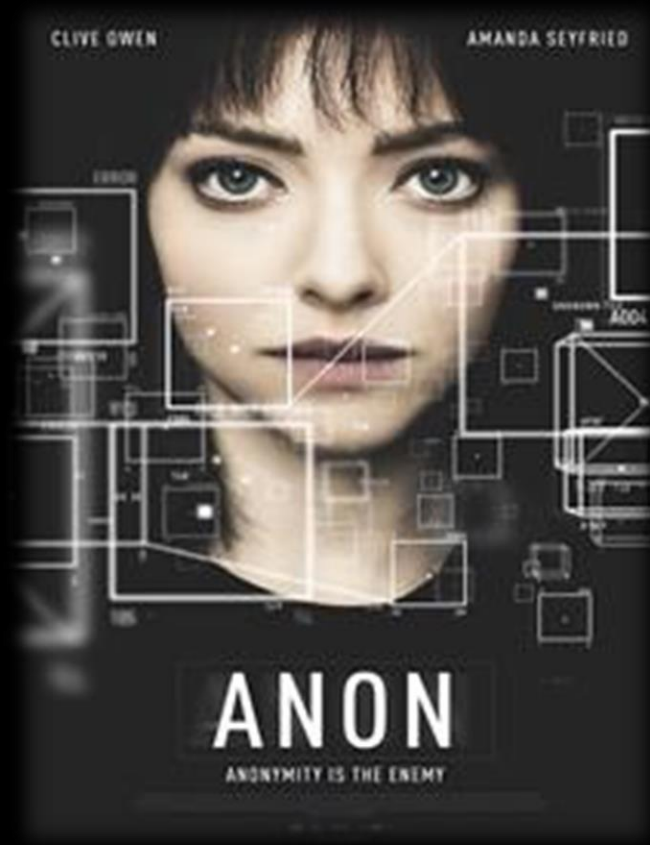
## Gossip Avatars...



# Private life Managers

If you think you've lost your privacy, it's just the surface scratched

- Advisors to successful online privacy awareness
- digital trace
  - drivers
  - cleaners
- Mind-eye hackers
- ID spoofers



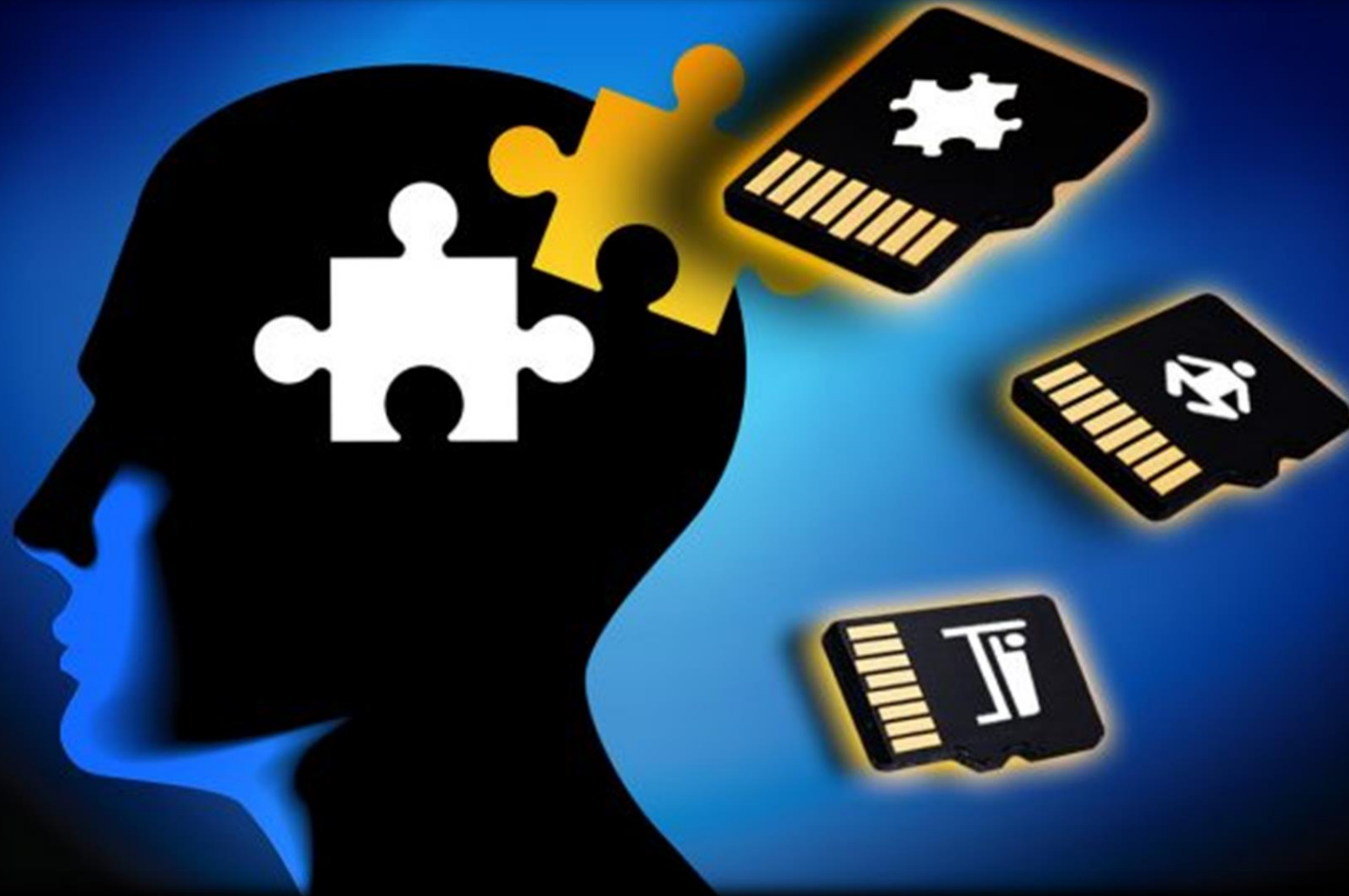
Anon & V for Vendetta filmleri



# Memory Surgeon

Altered Carbon, Mindlock, Other Life filmleri

Other Life filmi  
Biological  
Software to  
Create  
Experience



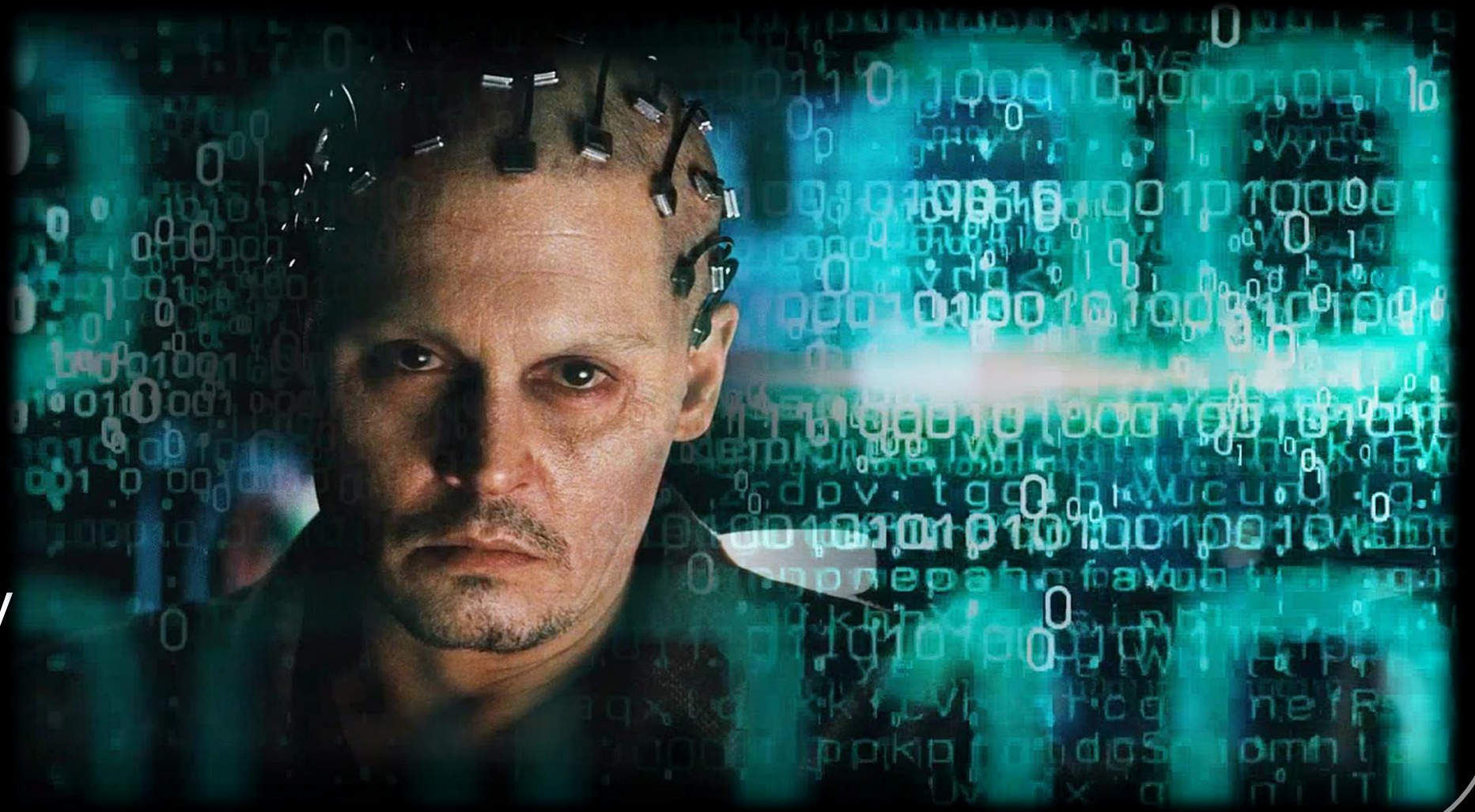


# Life in the Cyber World

## Transcendence & The Jurassic Games movies

... His mind is a pattern of electrical signals that you can upload to the PINN ...

(PINN: Physically Independent Neural Network)





# Endless (!) Life in the Cyber World

(Black Mirror, San Junipero, S3,E4) and Archive

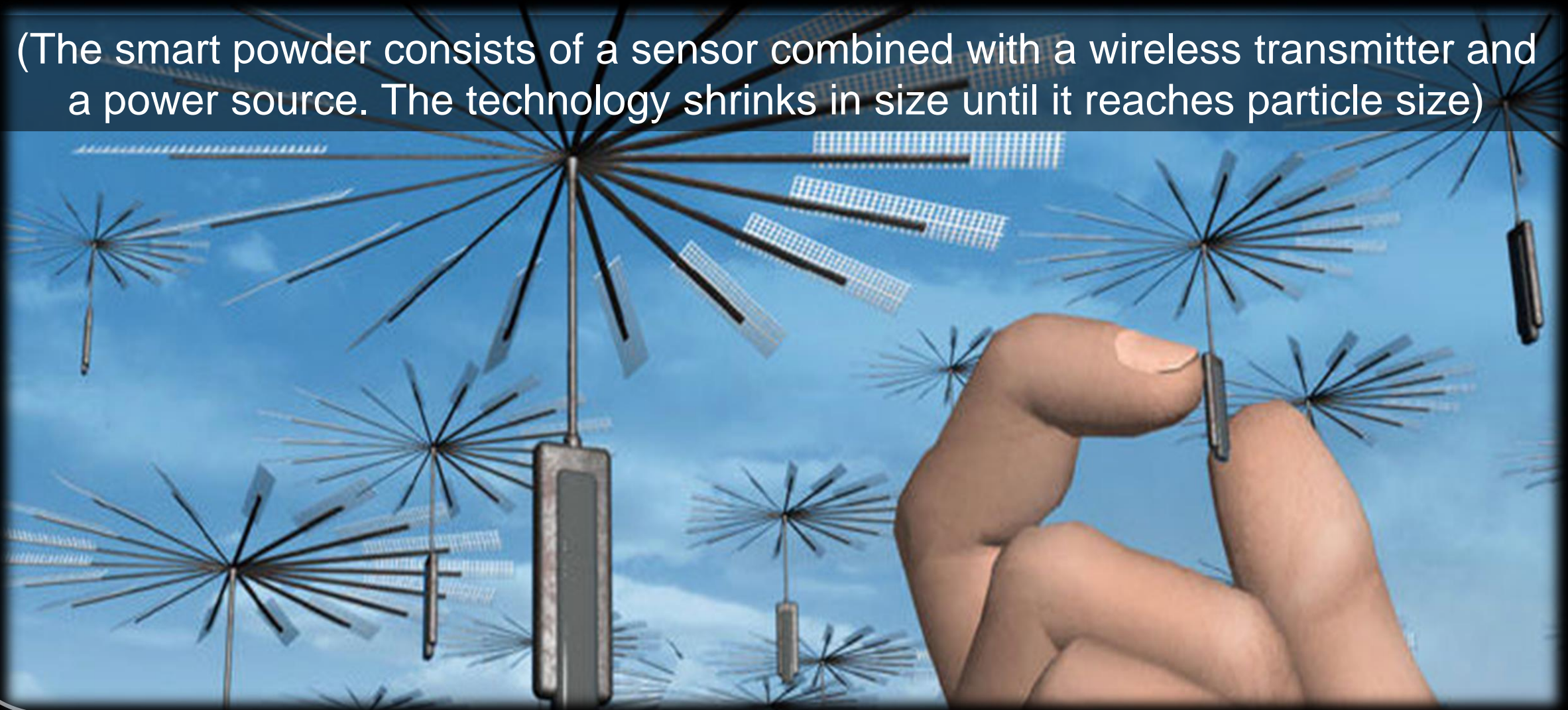


Controlled transition between cyber and physical lives

# Smart Powder Programmers

Robot bee swarm, **Black Mirror**, **Playtest**, S4, E3

(The smart powder consists of a sensor combined with a wireless transmitter and a power source. The technology shrinks in size until it reaches particle size)



# Virtual Personality Services

Self-aware machines **Ex-Machina** and **Transcendence** movies

Special to  
give your  
avatar a new  
personality  
Download  
"personality  
pack"





# New Philosopher-Ethics of Science

Every new technology creates its own negative consequences.

The impossible battle to win!



HI



AI



# Intelligent Communication Developers

“Smart” contact lenses with information about the wearer's field of view

Anon  
movie



# Mind Reading

## The 5th Passenger (5th Passenger) Movie

- Thanks to the thought reading device put on your head
  - You can control objects with your thoughts.



# Artificial Intelligence / Robot

- **Kill Command movie**

New Generation Robots That  
Can Program Itself  
(Study→Analyse→Re-Program)





# Artificial Intelligence / Robot Psychologists

## Penalties / Rewards for Robots



TAU movie

Sources: <https://www.monster.com/career-advice/article/cool-future-jobs>



# Artificial Intelligence / Robot Relationship Counselors / Professionals

- DUST movie “A week with Rebecca” tells how you can fall in love with a robot with the perfect female character [www.youtube.com/watch?v=ViPefqVtHEA](http://www.youtube.com/watch?v=ViPefqVtHEA)





# Professions that will Disappear in the Near Future

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Eastern Mediterranean University  
Department of Electrical and Electronics Engineering  
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March 2022

# Çiftçi / Rençber / Balıkçı



# Postacı / Parsel Servis



# Terzi / Biçkici



14.03.2022

ALL SLIDES 34, CURRENT ONE

94

# Tekstil İşçileri

## Tekstil Malzemesi Baskıcısı



# Fast-Food Aşçıları





# Kelime-İşlem Yazıcıları

## (Word-Processor-Typists)



# Elektrik - Elektronik Devre Kurucuları



# Doküman / Dosya Arşivcileri



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ALL SLIDES 34, CURRENT ONE

99

# Çiçekçi / Florist



14.03.2022

ALL SLIDES 34, CURRENT ONE

100

# Seyahat Acenteleri





# Kütüphaneci



Alamy



# Kasiyer – Banka Memuru

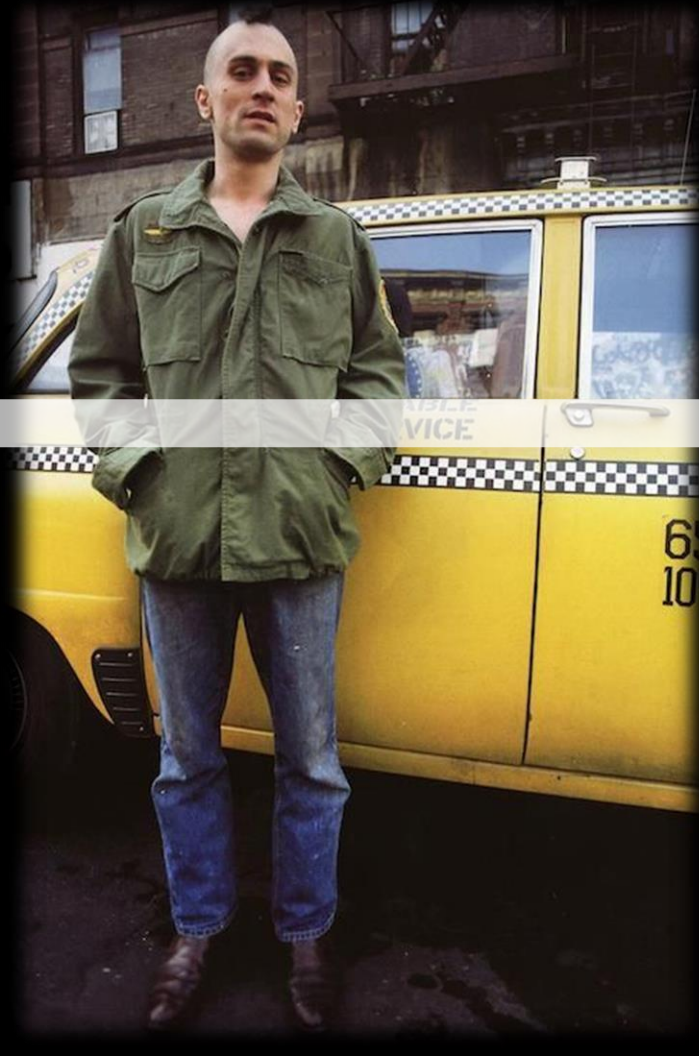


# Spor Hakemleri





# Pilotlar / Taksi / Uber Sürücüleri



14.03.2022

ALL SLIDES 34, CURRENT ONE

105

# Geleceğin Yetenekleri

1. Zihinsel elastikiyet ve karmaşık sorun çözme
2. Kritik Düşünme
3. Yaratıcılık
4. İnsan Becerileri
5. STEM (Bilim-Teknoloji-Mühendislik-Yöneticilik)
6. SMAC: (Social, Mobile, Analytic, Cloud)
7. Disiplinler-arası Bilgi

<https://www.crimsoneducation.org/us/blog/jobs-of-the-future>

# Son Düşünceler

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*Bu çalışma,  
hayal gücünüzü genişletmeye  
ve  
geleceğinizi hayal etmeye başlamanıza  
yardımcı olmayı amaçlamaktadır*

# Uzak Geleceğin Meslek / İş Alanları

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