

Moonshot: Concept and Intentions

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Modalities of Research and Development

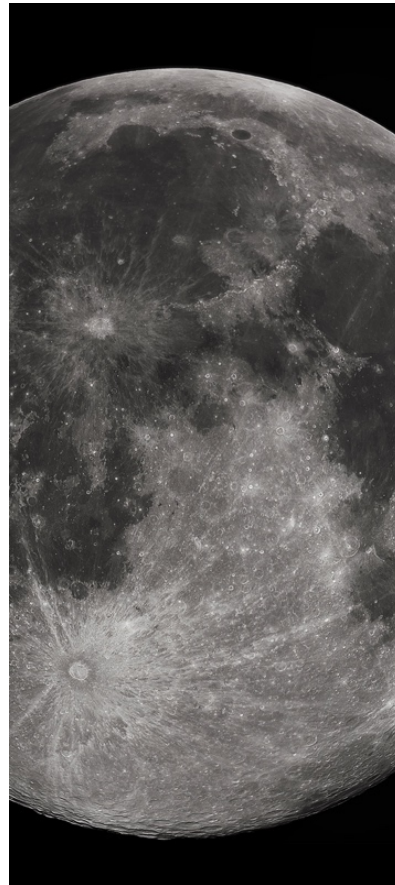
Moonshot

“We chose to go to the Moon”



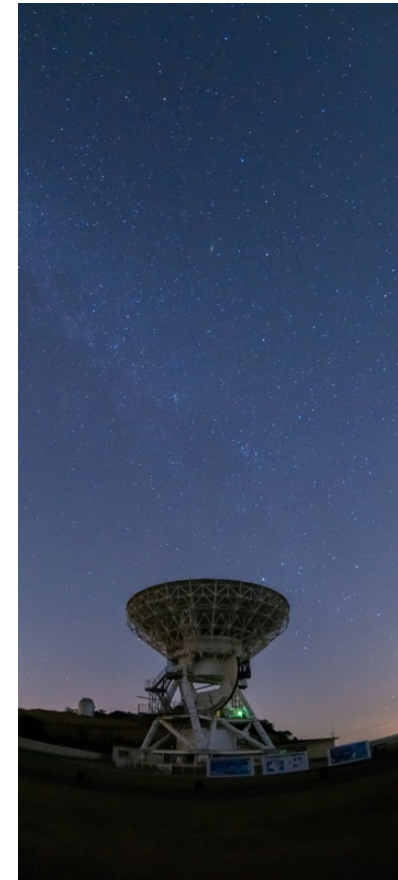
Focused Area

Comprehensive understanding



Exploratory Research

Curiosity-driven basic research

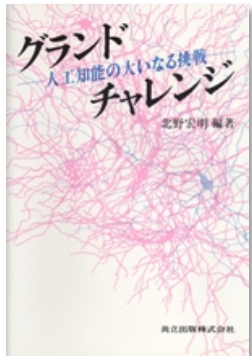


Images from NASA

Case Study: RoboCup

By 2050, develop a fully autonomous humanoid team to win FIFA World Cup champion in Soccer

Inception
1992



Announcement
1995



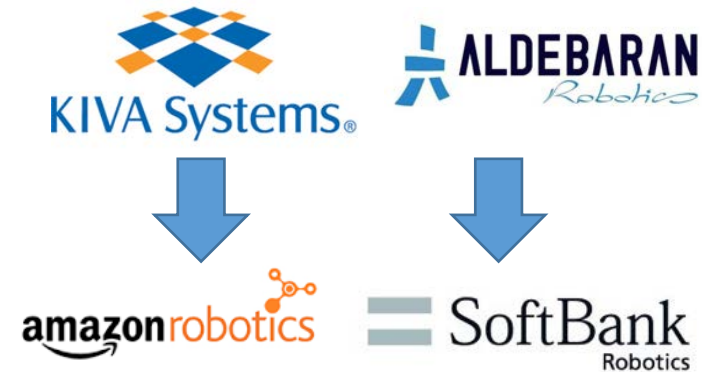
Project Started
1997



High quality scientific research
(many award winning papers)

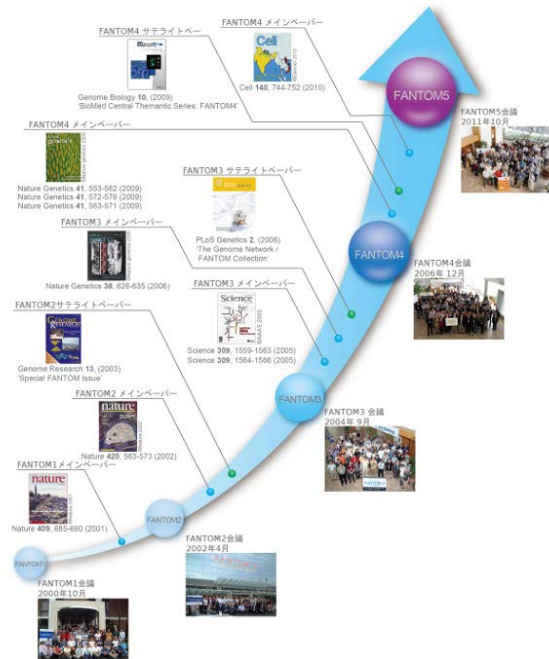
The challenge was announced at
International Joint Conference on
Artificial Intelligence (IJCAI) in 1995

2050



High impact start ups

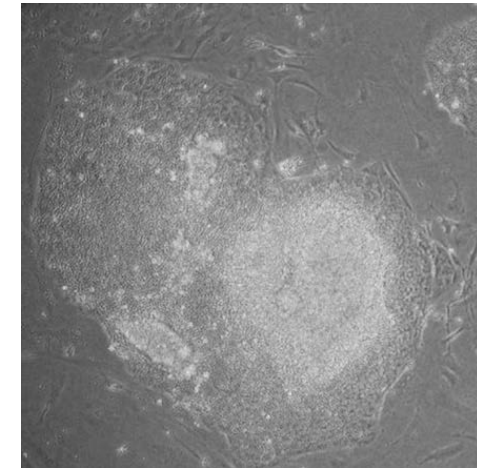
Case Study – FANTOM and iPS: A large-scale project and enabled BlueSky research



A comprehensive annotation of
mammalian genome

Ecat1
Dppa5(Esg1)
Fbox15
Nanog
Eras
Dnmt31
Ecat8
Gdf3
Sox15
Dppa4
Dppa2
Fthl17
Sal14
Oct3/4
Sox2
Rex1
Utf1
Tcl1
Dppa3
Klf4
Myb
Kit
Gdf3
Esrrb

Oct3/4
Sox2
Klf4
c-Myc



Discovery of iPS Cell

Japanese Moonshot Mission Areas

1. Leveraging the Aging Society

Solving issues Japan is facing, and leverage them to transform Japan

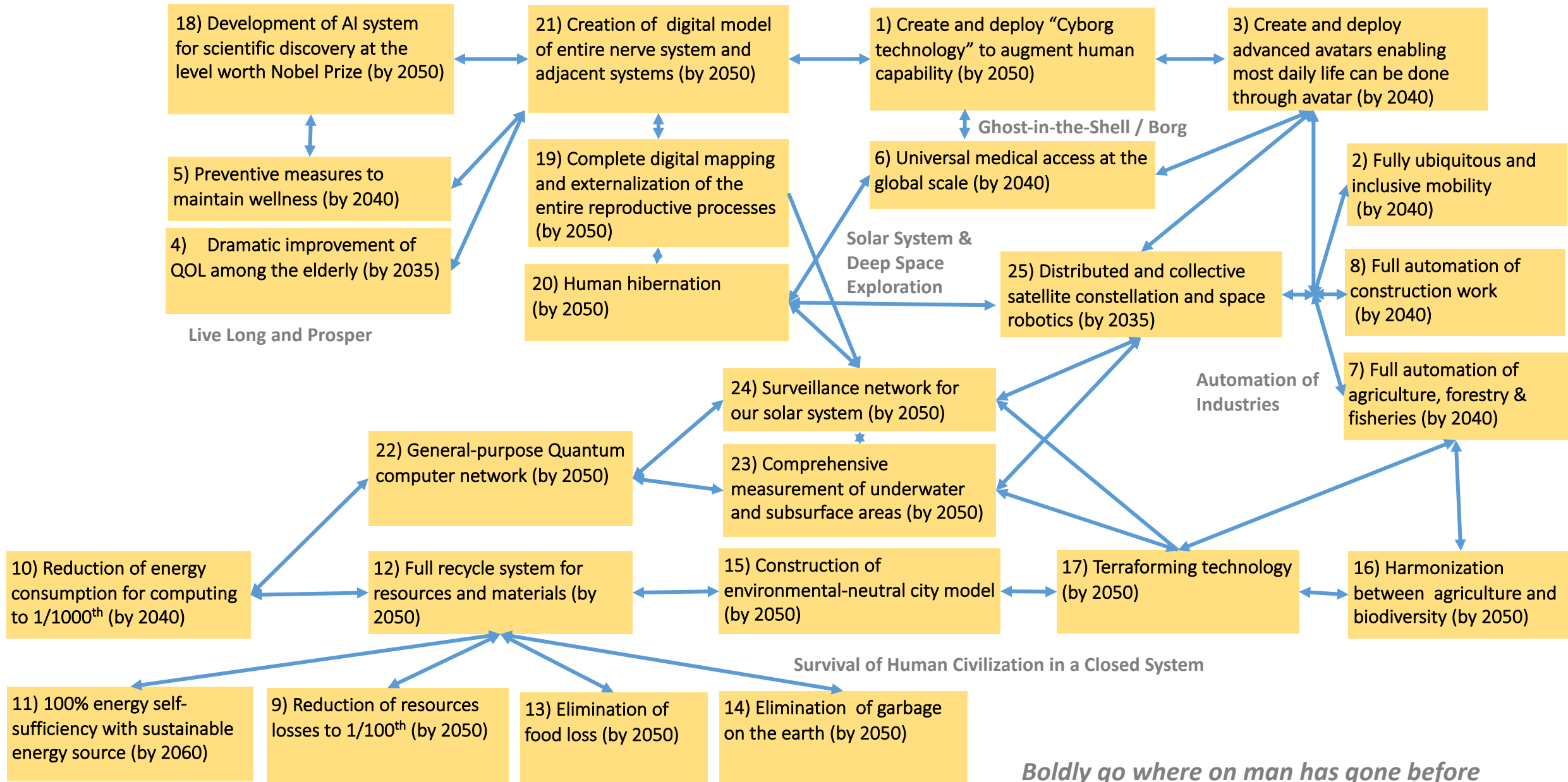
2. Save the Earth and our Civilization

Solving global agenda issues affecting the future of civilization

3. Exploring frontiers with science and technology

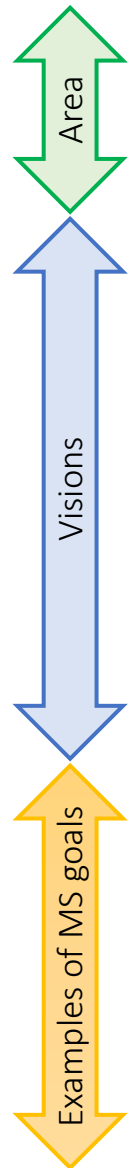
Making wildest imaginations in to Reality

An Interactive Network of 25 Moonshot Goals



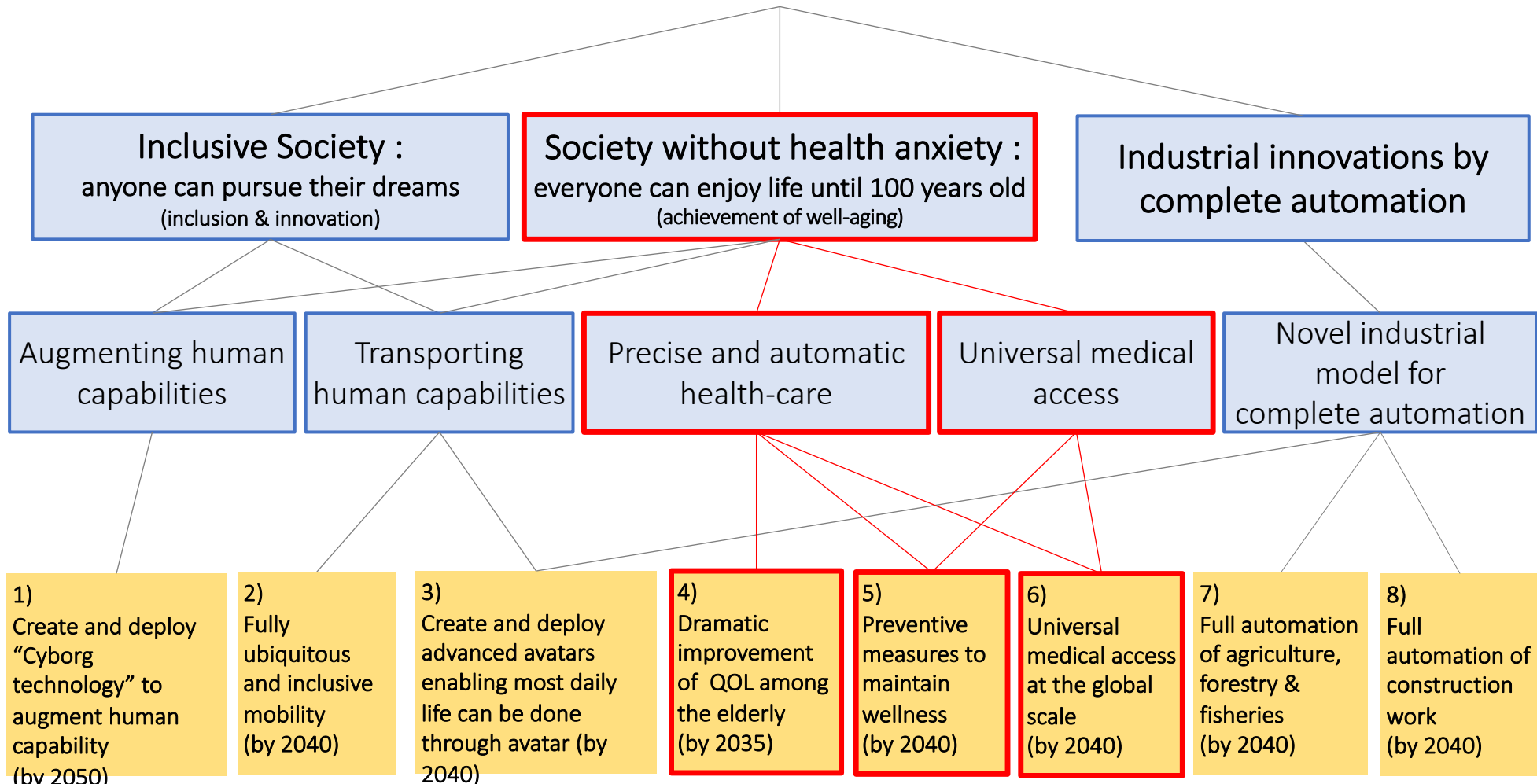
Boldly go where on man has gone before

Area1



1.Leveraging the Aging Society

-Turning the aging society into the innovative and sustainable society by harnessing diversity through techno-social transformation -



**Prevention and
Preemption**

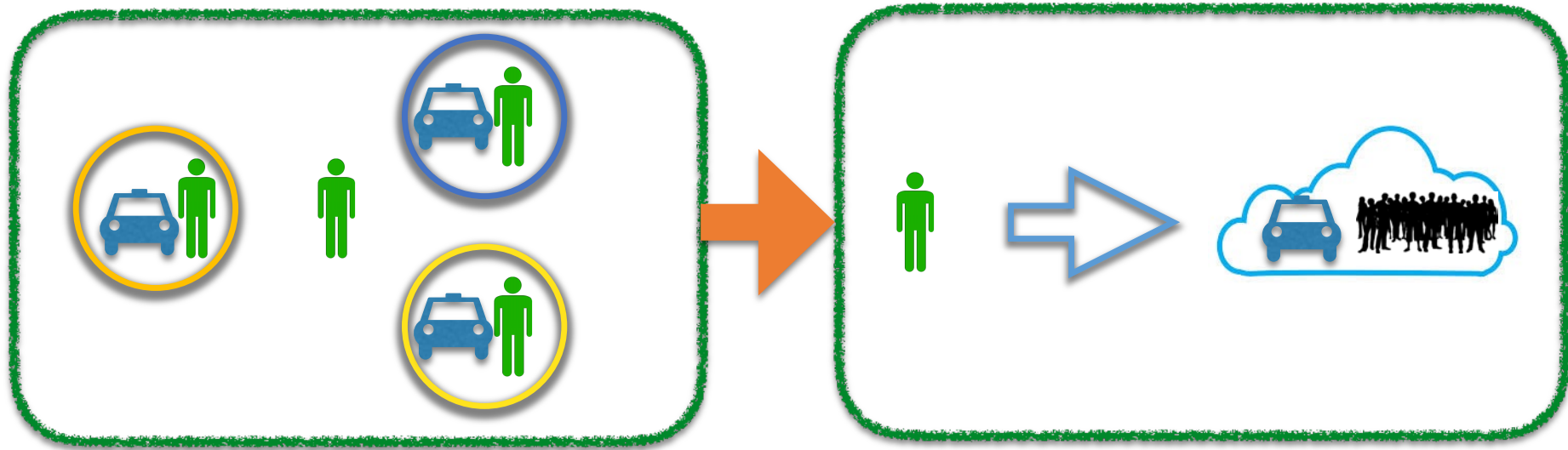
**Universal
Medical Access**

**General QOL
Improvement**

Universal Medical Access Challenge

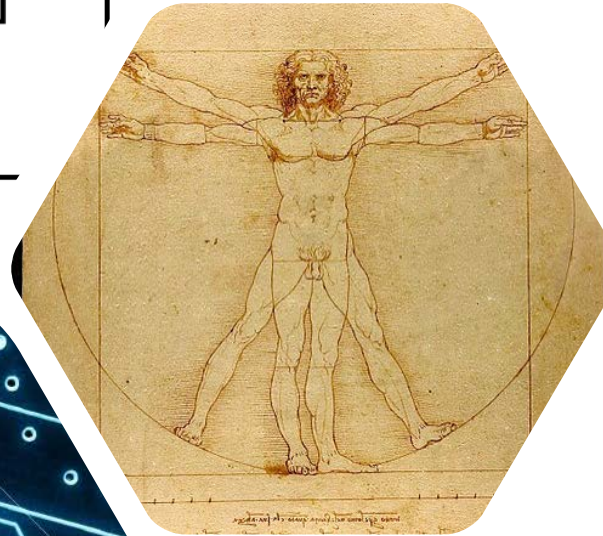
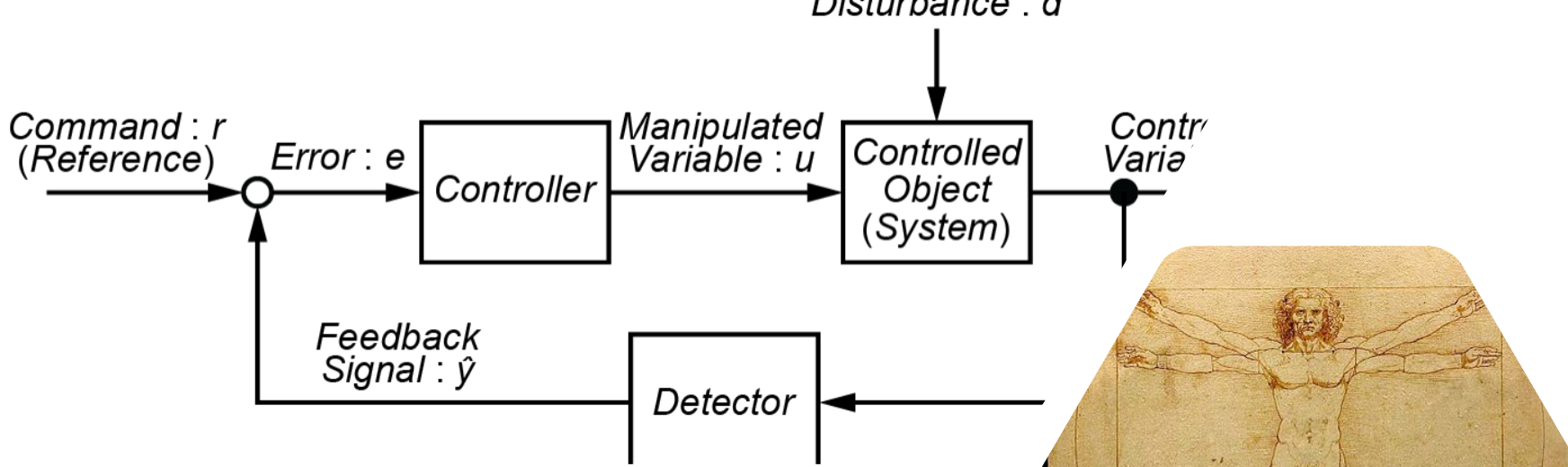
- Access to quality medical practice at anywhere and anytime
 - Anywhere in Japan, and anywhere in the world
 - Anytime 24/7, and even in cases of major disaster
 - Preemptive, Preventive, Personalized medicine
- Politico-social aspect: Policy agenda, social structure, legal framework, etc.
- Technological solution: Tele-medicine, devices (next AED or da Vinci, monitoring, AI assistance, early warning systems, etc.
- Goal: Technologies to provide Universal Medical Access for all

Commoditized Ability



General QoL Challenge

- Improved QoL for everybody
 - Preventive and Preemptive Medicine & Wellness
 - QoL for sick person
 - QoL for elderly, handicapped, and person with other issues
 - Some non-life-threatening issues also undermine QoL (back pain, ringing ears, etc)
- Possible solutions
 - Longevity research (Controlling life span: inflammation control, Sirtuins, etc)
 - Medical and Technical innovations (neural interventions, etc.)
- Goal: Technologies to control our body to improve QoL



Technology
to control
our body

Science and Technology Challenge to Reshape the Future