

RUSSIA

STRATEGIC  
SOCIAL MOVEMENT

2045

Plan for  
radical life extension  
with cybernetic technology

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According to psychological surveys (Kubler-Ross's Model of Coping with Dying),  
**barely 2% of dying people conclude,**  
'I had an exciting and full life. I had enough time. I can die now.'

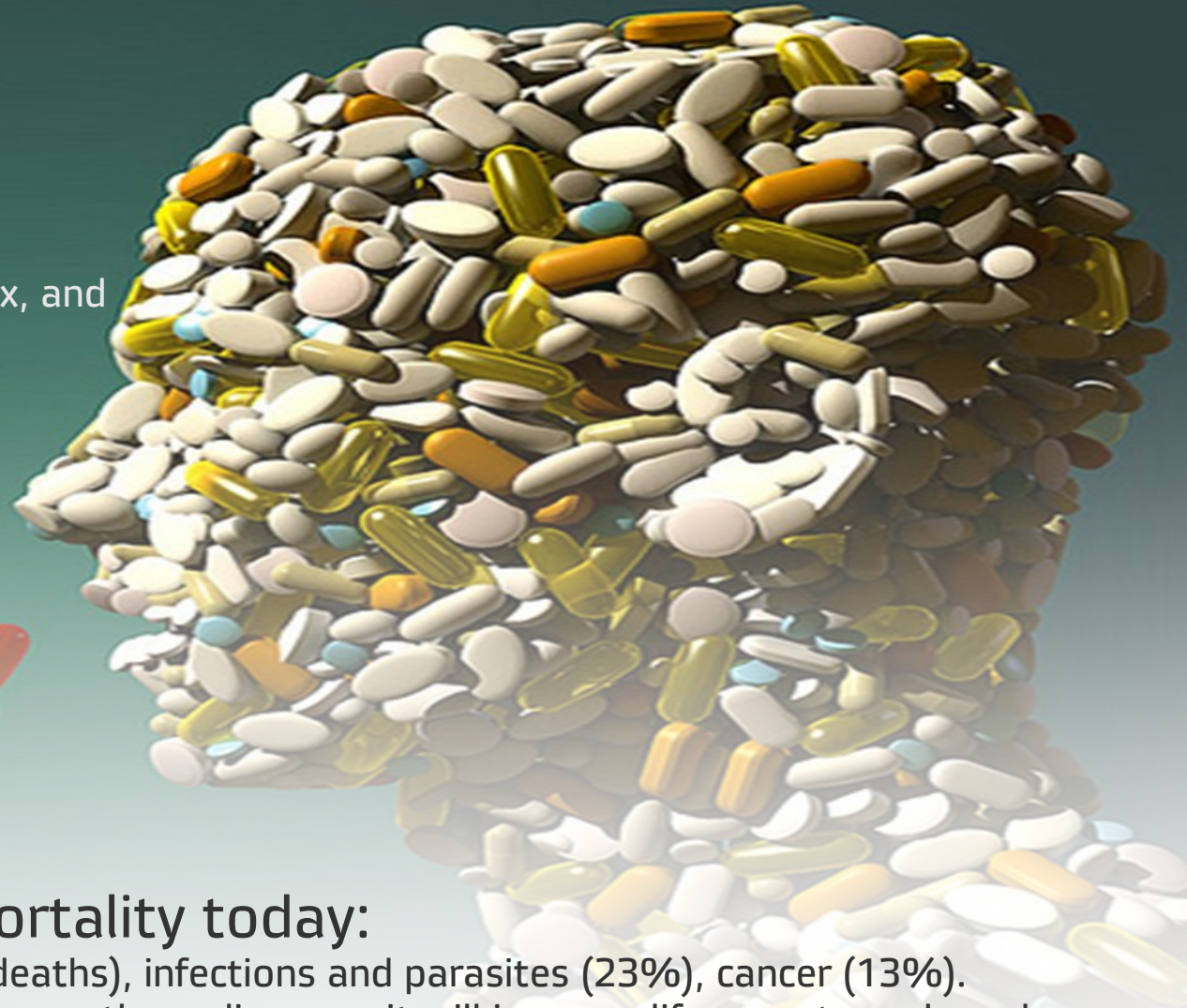
- \* Average life expectancy in the Roman Empire was 23 years.
- \* In the 18th century, 35 years.
- \* In developed countries after World War II it was 70 years.
- \* Today, average life expectancy is only about 80 years, despite all the so-called breakthroughs in medicine.





## Reasons for the life expectancy increase

in the 20th century:  
water purification,  
improved hygiene,  
vaccines against typhus, smallpox, and  
diphtheria,  
and the invention of antibiotics.



## The main causes of mortality today:

cardiovascular disease (42% of deaths), infections and parasites (23%), cancer (13%).  
If we manage to completely overcome these diseases, it will increase life expectancy by only seven years. The human body is capable of living no longer than 120 years.



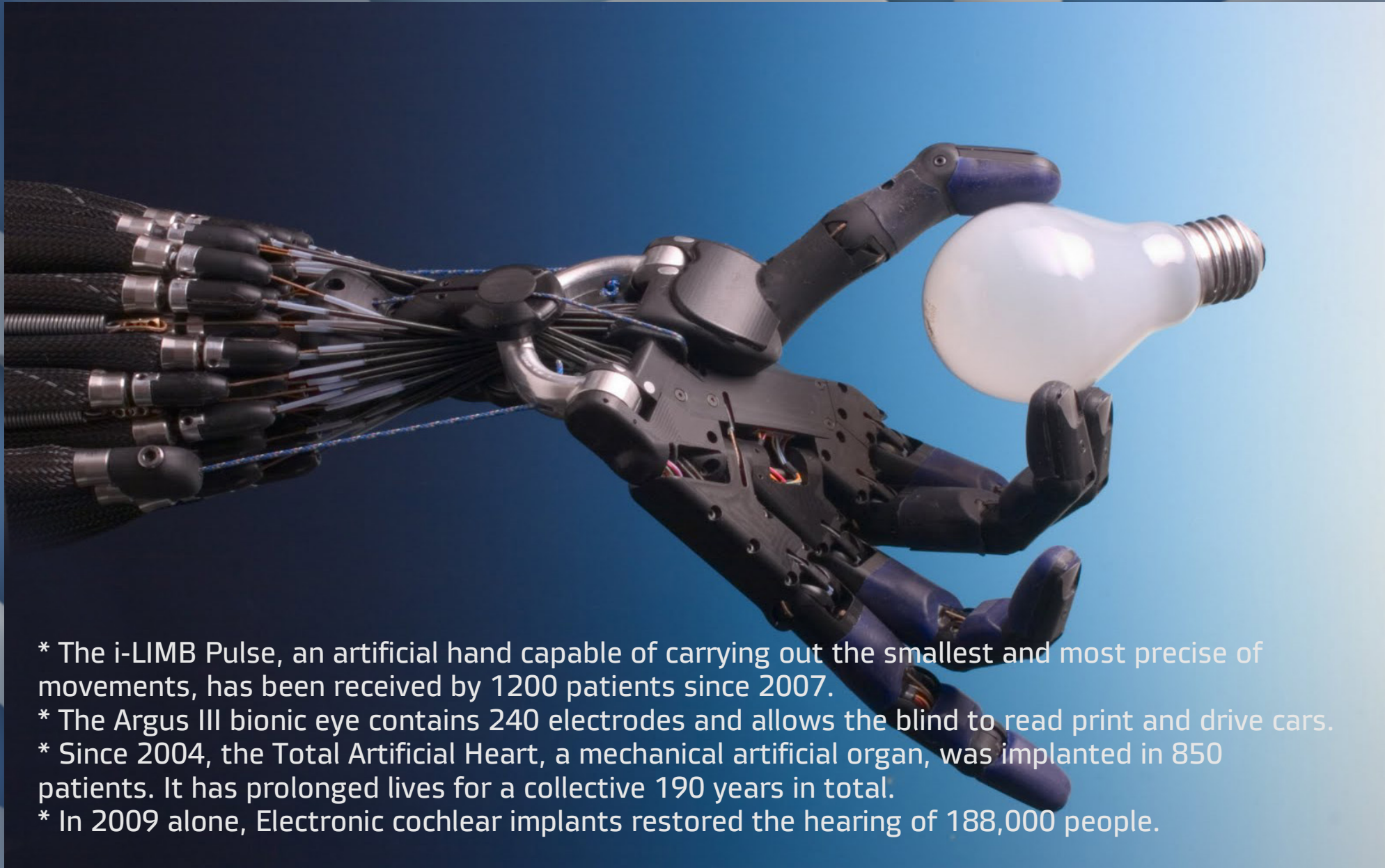


## Even the most advanced biotechnology has unsolvable drawbacks:

- \* stem cells have a tendency to become cancerous;
- \* gene therapy is useless against diabetes and heart disease;
- \* vaccines cause viruses to develop and evolve;
- \* performing one surgery after another to replace failed organs is harmful;
- \* it is not possible to grow a complete brain from stem cells.

Over billions of years of evolution, our body has accumulated millions of mistakes, and biotechnology has yet to solve this endless puzzle.

**Cybernetic technologies** might be the solution to the problem of radical life extension.



- \* The i-LIMB Pulse, an artificial hand capable of carrying out the smallest and most precise of movements, has been received by 1200 patients since 2007.
- \* The Argus III bionic eye contains 240 electrodes and allows the blind to read print and drive cars.
- \* Since 2004, the Total Artificial Heart, a mechanical artificial organ, was implanted in 850 patients. It has prolonged lives for a collective 190 years in total.
- \* In 2009 alone, Electronic cochlear implants restored the hearing of 188,000 people.





Late 2010: The Russian media holding company New Media Stars had interviewed **two dozen leading Russian scientists.**

The major themes discussed were

**ways of radically prolonging human life.**

The experts were asked if this goal can be archived by means of:

- artificial organs
- artificial bodies
- simulation of a brain and mental processes
- transferring one's mind to an artificial carrier





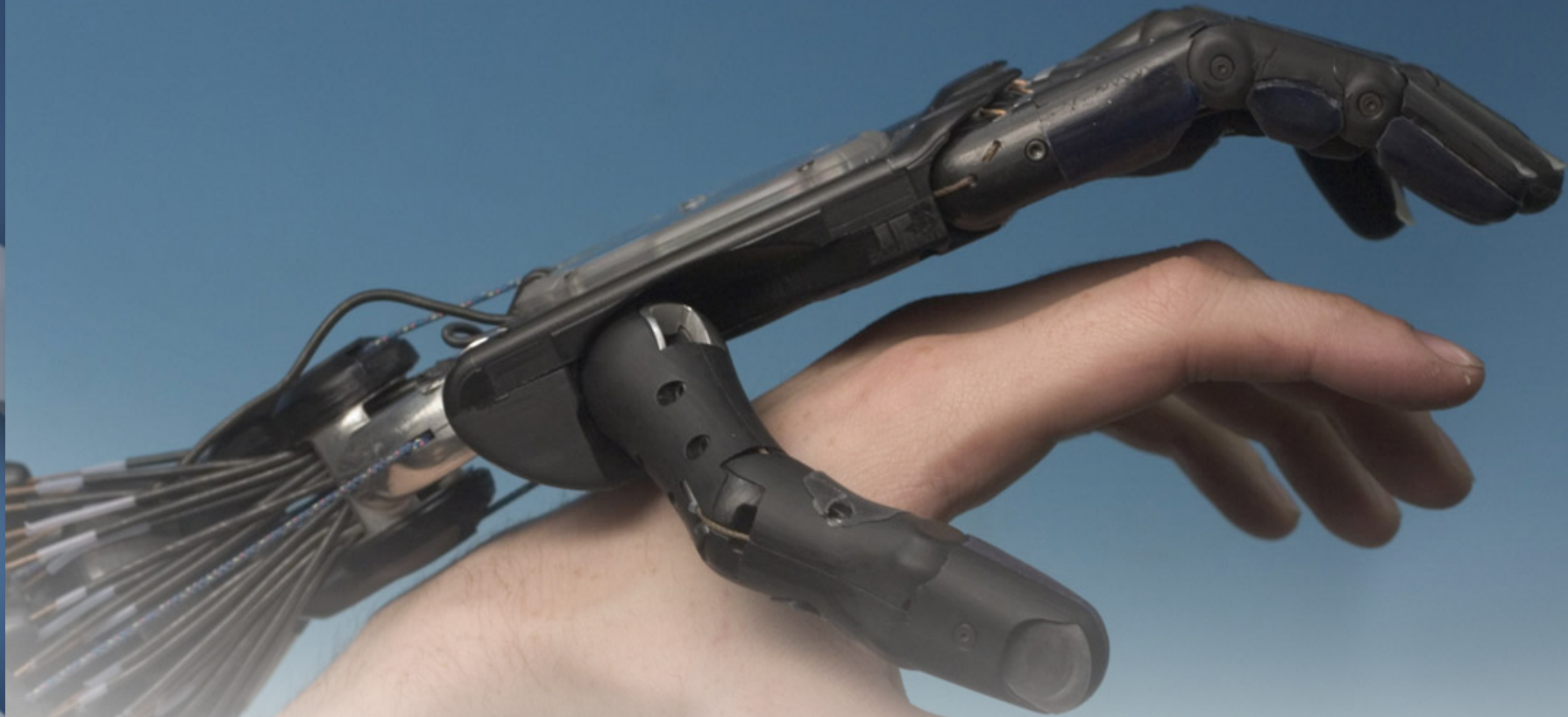
The interviewees were also asked,

- Which are the most probable scenarios of civilization's development?

- How will the growing number of technological, political, economic and ethical crises change mankind?

- Does technology need to be balanced with ethics?





The interviews lead to an understanding that the goal of **radical life extension in non-biological ways is achievable.**

This wide-scale technology project will require appropriate development of ethics, culture and thinking to allow sustainable technological evolution during the development process and after the immortality technology is created.

February 2011: New Media Stars' President Dmitry Itskov with participation of leading Russian scientists had established the **Russia 2045 Social Movement and Immortality Corporation.**

Its goal is:

- Development of cybernetic technologies for radical extension of human life and abilities
- Formation of a new humanitarian paradigm.

# RUSSIA 2045



## Immortality Corporation's Projects:

### Avatar

A humanoid robot, controlled via 'brain-computer' interface.

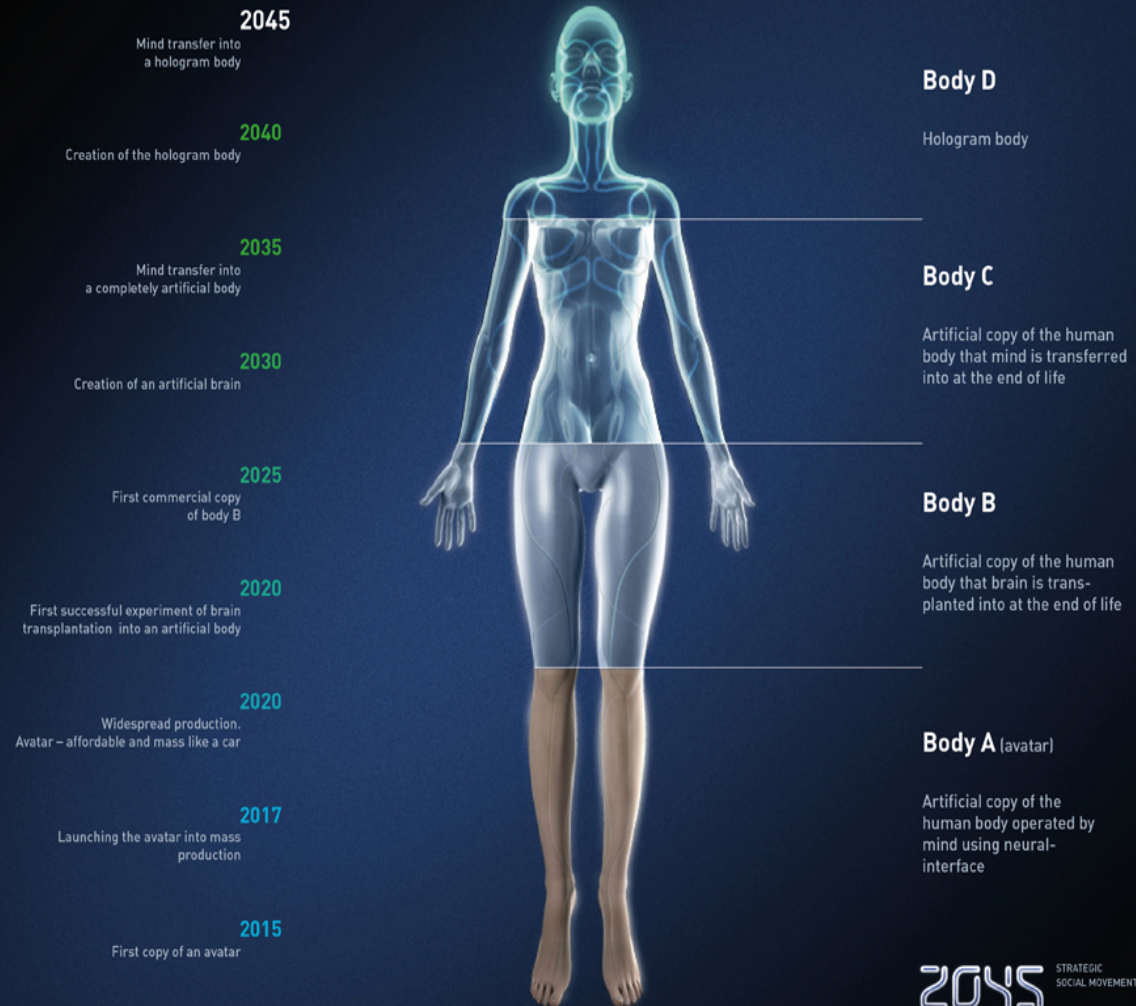
### Body B

A life support system for the human brain, intended to prolong life for 100-200 years.

### Body C

A reverse engineered computer model of a human brain. It will serve as a tool in developing methods to transfer one's personality into an artificial carrier.

## WORK SCHEDULE OF IMMORTALITY CORPORATION





## Avatar Project. Research and production tasks:

### 1. The body of an Avatar

Create:

- Sensory organs
- Torso
- Anthropomorphism (face, skin, voice)

Provide:

- Power supply
- Motion by means of artificial muscles
- Autonomous processes  
(maintenance of posture, coordination of movement)

### 2. Control of an Avatar

Provide:

- Data recording  
(including EEG, MEG, blood microsensors)
- Data processing (mathematics,  
command languages, pattern recognition)
- Sensory systems for the Avatar (obtaining  
information from cameras and microphone ears  
and eyes; assessment of the position of the body,  
its systems and resources)
- Telepresence
- Learning to control the Avatar  
(sensitive periods and means to accelerate learning)





## Implementation of the Avatar project

will enable us to develop and bring to market a wide range of products with high social, scientific and commercial value, long before the project itself is completed:

- \* artificial limbs and prosthetic sensory organs
- \* multi-function exoskeletons
- \* new human-computer languages
- \* autonomous robots of different sizes, forms and functions
- \* control system for robots, airplanes and other technologies
- \* wearable human health monitors
- \* new hardware and software to record and process biological signals
- \* systems for personality identification
- \* new interfaces for people with disabilities
- \* interfaces for animals (ie: "talking" dog)



## Body B Project. Research and production tasks:

### 1. Brain life support

Create:

- brain metabolism simulation
- brain life support system

Develop:

- brain transplantation
- brain homeostasis maintenance: nutrition, purification, oxygenation
- brain life extension

### 2. The brain and an outside world interaction.

Develop:

- simulation of biochemical processes in the brain
- simulation of neural stimulation
- two-way neural interface

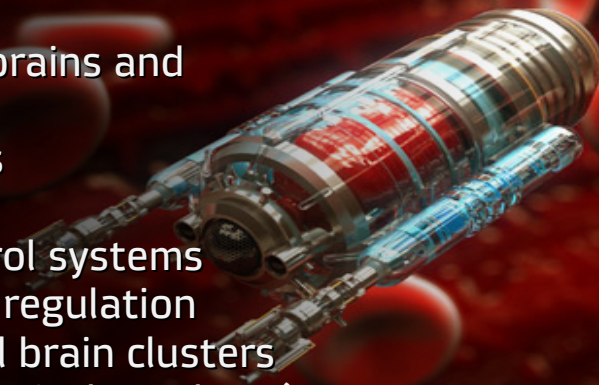




## Implementation of the Body B project

will enable us to develop and bring to market a wide range of products with high social, scientific and commercial value, long before the project itself is completed:

- \* neuro-prosthetics with direct neural control
- \* symbiotic bio-computers based on nervous tissue along with electronic devices
- \* bio-computers based on animal brains and nervous systems
- \* symbiotic artificial human organs
- \* human hibernation systems
- \* bioprocessors - automated control systems based on natural systems of body regulation
- \* supercomputers based on animal brain clusters
- \* brain life support system (biochemical regulator)
- \* new methods of cryopreservation and recovery
- \* pharmacological models that allow development of medications
- \* psychopharmacological models that allow to the development of psychiatric treatments



## Body C Project. Research and production tasks:

### 1. Brain and personality model.

Create:

- Catalogue of codes and theories of biological brain processes
- Working model of the brain's informational processes
- Artificial intelligence based on the working model
- Model of human mental processes
- Personality and consciousness model
- Active personality model of a certain person

### 2. Software and hardware.

Develop:

- Hardware to perform information processing
- Hardware to perform mental processes
- Personality recording and transfer methods
- Artificial environment to support a functioning human personality





## Implementation of the Body C project

will enable us to develop and bring to market a wide range of products with high social, scientific and commercial value, long before the project itself is completed:

- \* decision making systems based on biological algorithms
- \* AI systems based on new principles
- \* artificial implants to replace or repair brain regions (cerebellum, hippocampus, brain stem)
- \* cloud computing algorithms utilizing biological principles
- \* data storage and search systems utilizing biological principles
- \* high-capacity data storage hardware systems utilizing biological principles
- \* 'smart' tools, vehicles and transportation, allowing control of complex systems
- \* software individualized agents - personality replicas able to perform certain types of work instead of the user
- \* tools to assist in psychotherapy and psychiatry
- \* sensory data processing systems (image, sound, smell etc) based on biological algorithms



## Quick investment projects:

- thought-controlled toys
- simple robot assistants for everyday life
- devices to 'translate' the neural impulses of animals into human language
- new interfaces for thought-controlled video games
- affordable intellectual prostheses
- new personality identification systems





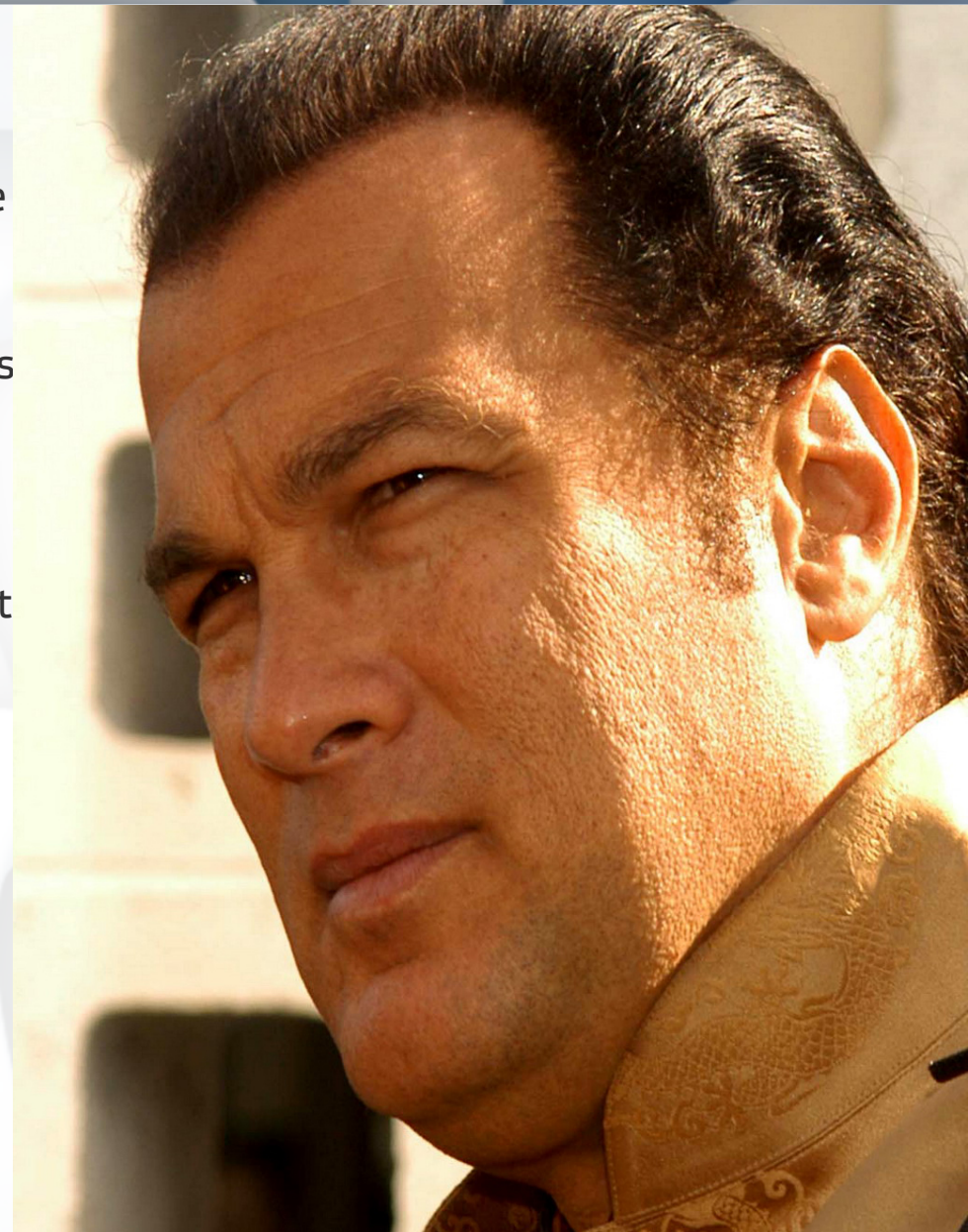
The projects are led by two dozen specialized professionals with worldwide reputations. They are assisted by members of the Movement: managers and employees of the leading research institutes and business organizations, highly qualified professionals, students, philosophers, artists and journalists. Over five months the Movement gained 4,000 participants.



When the well known actor and martial artist, **Steven Seagal**, joined the Movement it initiated the creation of the **2045 VIP Club**.

Scientists, politicians, actors, writers and other supporters who are sympathetic to the ideas, goals and values of Russia 2045 are joining.

“This is for me a moment of great pride,” Steven says. “This is a movement that is, in fact, not only easing the suffering of those who are suffering, but actually is able to give new life in instances where someone would perish imminently and sometimes immediately.”





According to the founders of the Movement, research and development in the field of radical life extension with cybernetic technology should be performed by

**specialized R&D centers**  
in Russia, the USA, and Europe.

The centers will start by creating artificial organs and computer models of living systems.

The key task for the next 30 years is  
**the creation of an artificial "brain"** -  
a non-biological environment that will host a transferred human personality.





## The members of the Movement

- form regional branches
- search for experts and research teams
- write scientific articles
- take part in writing contests on the topic of humanity's future
- join the work of the Expert Board





The Russia 2045 movement is actively collaborating with the **Eurasian Center of Big History and Systems Forecasting** at the Institute of Oriental Studies of the Russian Academy of Sciences.

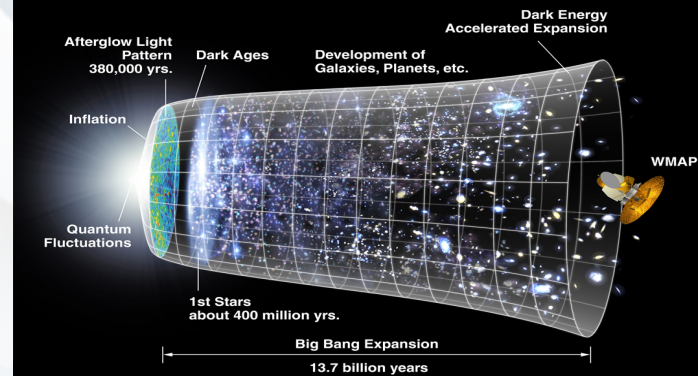
“Big History literally tells the story of the universe, from the very beginning to the complex societies we have today.”

Bill Gates,  
co-founder of the educational Big History Project.

“Together with Russia 2045 we will make global forecasts and projects based on studying universal mechanisms of crises’ evolution, intensification and overcome.”

Akop Nazaretyan,  
head of Euroasian Center of Big History and Systems Forecasting.

Eurasian Center of Big History publishes *Social evolution & History*, *Journal of Globalization Studies*, *Historical Psychology* and *Sociology of History* magazines and *Evolution* almanac.





The main instrument of the Movement is the web portal at 2045.ru. Its vivid unifying idea will form the basis for the Popular Science related Social Network.

With the help of foreign partners we plan to implement a similar project on a global scale, using the 2045.com domain.

The Network will help the members of the Movement to

- stay current with scientific news;
- communicate in blogs and forums;
- find solutions to certain technical and social tasks;
- coordinate the work of regional branches;
- plan events.

The screenshot shows a web browser window with the address bar displaying 'www.2045.com'. The page content includes:

- A header section titled '/ Immortality Corporation "Work Plan"'. Below it is a blue-tinted image of a human torso with glowing blue lines representing internal structures, labeled 'Body D' and 'Hologram b'. To the right of the image, text reads: 'The schedule is based on the analysis of the already existing research programs of Russia 2045 Initiative Group Members, as well as other scientific communities from Russia and abroad. Artificial Body Research and Development will be divided into several tracks, to be pursued simultaneously.'
- A second section titled '/ The Need In Avatars Became Strong Enough'. The text below reads: 'Do you remember The Surrogates movie? It perfectly demonstrates the abilities of a mind-controlled artificial human body, or an avatar. It is what our project is all about. The Surrogates' screenwriters were not consistent enough (probably due to the lack of imagination) in the evolution of their ideas. There is no doubt that the mankind needs an avatar.'
- A third section titled '/ Letter To the Members of "Russia 2045"'. The text below reads: 'Dear friends and colleagues!'

On the right side of the browser window, there is a sidebar with several profile pictures and names, including 'Pro VAS', 'Pro RYA', and 'Pro DU'. Each profile is accompanied by a short bio or title, such as 'Ph.D. in Che State Unive of the Institi', 'Ph.D. in Bio', and 'Ph.D. in Ph Laboratory the Neuroi Technologi Academy o'. There are also some partial text snippets like 'The problem given individ', 'An electroni subject of st equipment a', 'The whole t imagine that impulses? So', and 'If the job is years or so. A may well be'.



# RUSSIA 2045

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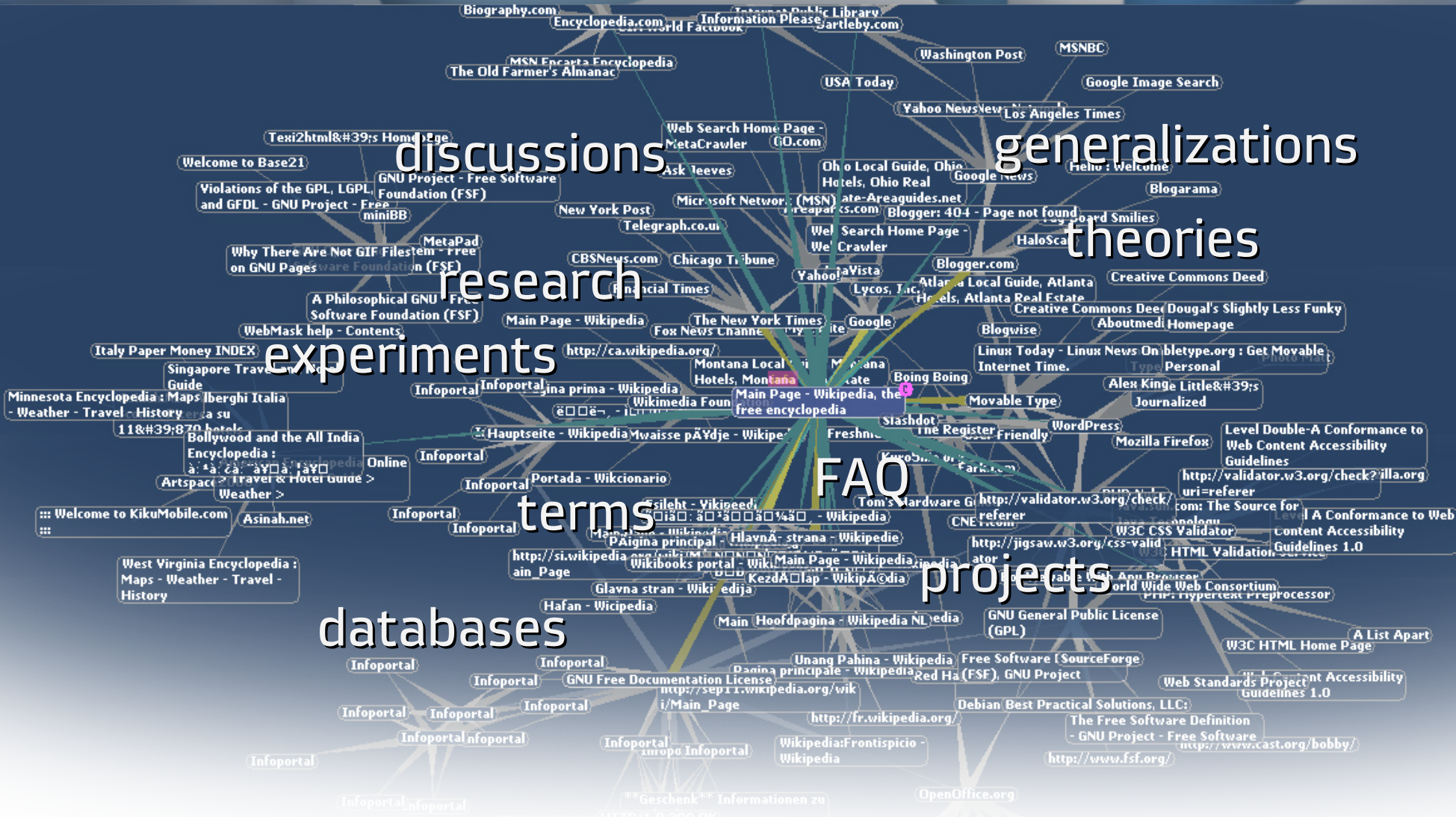


The Russia 2045 Strategic Social Movement is a **community of enthusiasts** absorbed in building Post-Information Age culture.

The project's social network gives them opportunities to:

- predict possible crises our civilization may encounter when we develop the technology of radical life extension, and find ways to correct them;
- create new ethics, values, and norms to counterbalance the unprecedented power of these new technologies.





**Wiki database** - an encyclopedia of knowledge related to the Movement and Corporation's projects, closely linked to the Web Portal.



**The 2045 Virtual Gaming Space,** where everyone can take part in a simulation of the reality of the year 2045, will become an important project of the Movement. This multiplayer role-playing game will allow participants to check different social and economic scenarios for errors and viability and to make forecasts.

**New technical developments** of the 2045 Project will be immediately added to the 2045 Virtual Gaming Space for testing.

On the basis of personal photographs, audio records, EEG, and other information, a user of Virtual Gaming Space will be able to personalize his avatar to such an extent that this avatar will transmit the slightest nuances of individual personality traits and emotional state.

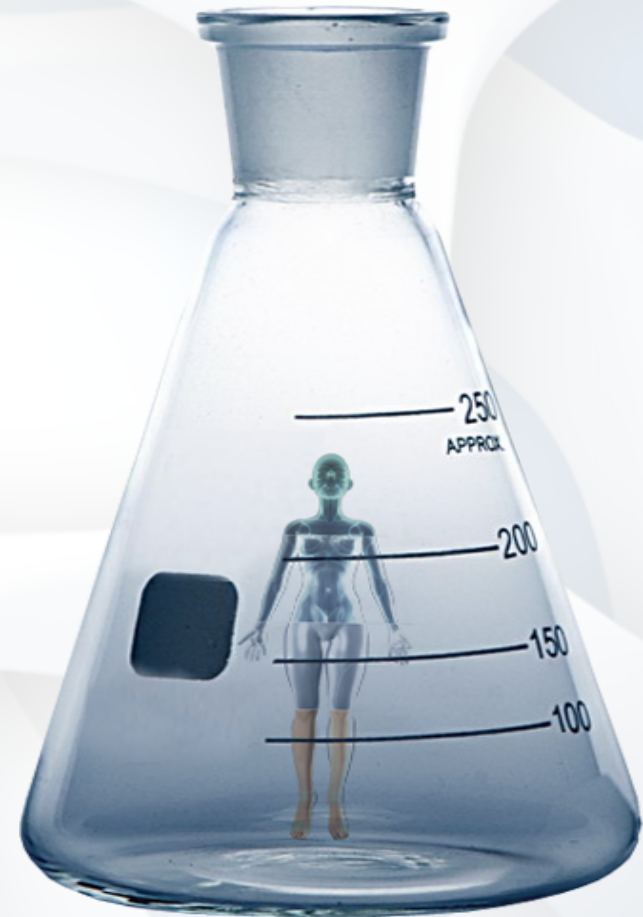




## The Virtual Lab

is an essential part of The Social Network.  
It allows any member of the Movement to:

- remotely take part in experiments using his medical or gaming devices;
- access tests;
- play diagnostic games with other members;
- take part in the processing of experiments databases and test results analysis;
- propose his or her own software or method of analysis;
- remotely control a robotic avatar in a research lab online;
- take advantage of market services, products and ideas associated with the project through the Tech Exchange.





## Online Tech Exchange

is a project of Russia 2045 Social Network consisting of:

- contests for scientific and industrial projects of all scales;
- a platform for trade and exchange of technological developments;
- protection of developers' intellectual property rights.





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DARPA

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30 Sept - 2 Oct 2011  
Orlando, FL  
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> ACTION REQUEST  
DARPA Issues a Call for Abstracts  
[\[SUBMIT\]](#)

Two U.S. agencies - NASA and DARPA - are working on the first interstellar spacecraft in history. The spaceship's launch is scheduled for the year of 2111.

According to the director of DARPA Tactical Technology David Neyland, during this project scientists will need to "research to go out and tackle problems that will have you asking questions you didn't even know to ask at the beginning."

The 2045 Project is more necessary to mankind, and will be implemented in half of the time.





The Russia 2045 Movement will transform into an international movement named Neohumanity 2045, with centers in Russia, the USA and Europe.  
Work on the immortal carrier of the mind has already started!