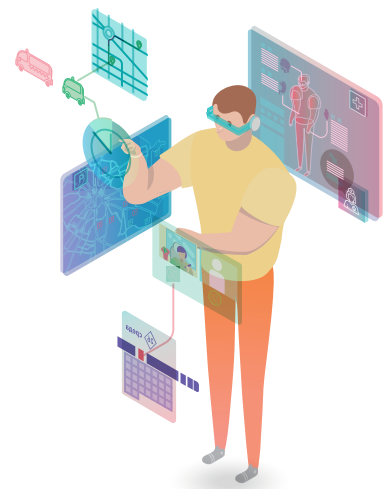
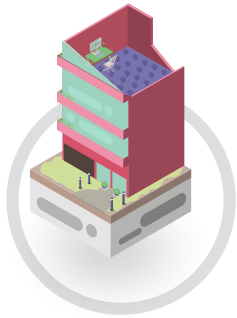


Global megatrends



Experts identify eight trends in world development ^{[3]–[5]}



Accelerated urbanization

Growing urban population and increasing role of cities and urban culture in the development of society

Innovations and technological breakthroughs

Increased use of robotic technologies in all areas, emergence of new technological solutions and innovative developments on the market that boost quality standards and performance



Changing consumer preferences

Changing preferences of customers and end consumers of products and services as a result of transformations in all areas of life

Increased environmental-friendliness of production

Enhanced requirements for manufacturing processes that aim to prevent a negative impact on the climate and maintain biosphere sustainability and environmental protection



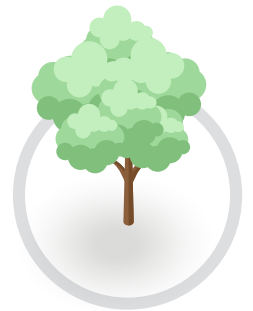


Globalized business

Increasing size of global trade and mass distribution of value adding in production

Limited natural resources

Reduced amount of natural resources due to growing consumption and non-uniform distribution and, as a consequence, stronger competition between manufacturers

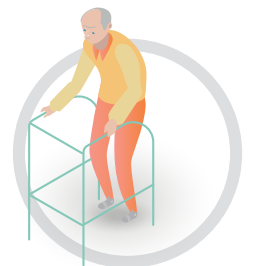


Population growth in developing countries

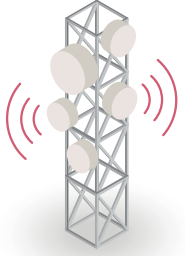
Rapid growth of population size and density in developing countries

Ageing population in developed countries

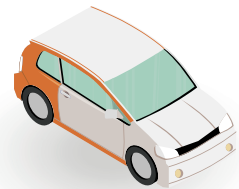
Increasing average age and longevity of population due to the development and emergence of new health care technologies







What the futuurologists say



What will the city of the future look like? This issue has been discussed in the works and reports of ^{[6]–[13]}.



Ray Kurzweil,
Google



Nicola Millard,
British Telecom



Dave Evans,
CISCO



Ian Pearson,
British Telecom



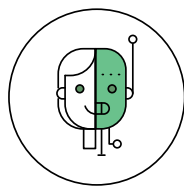
Brian David
Johnson, Intel



Dave Coplin,
Microsoft

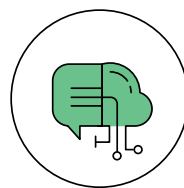
In the Strategy below, the forecasts are adapted to the specific features of a megalopolis such as Moscow.

RESIDENTS



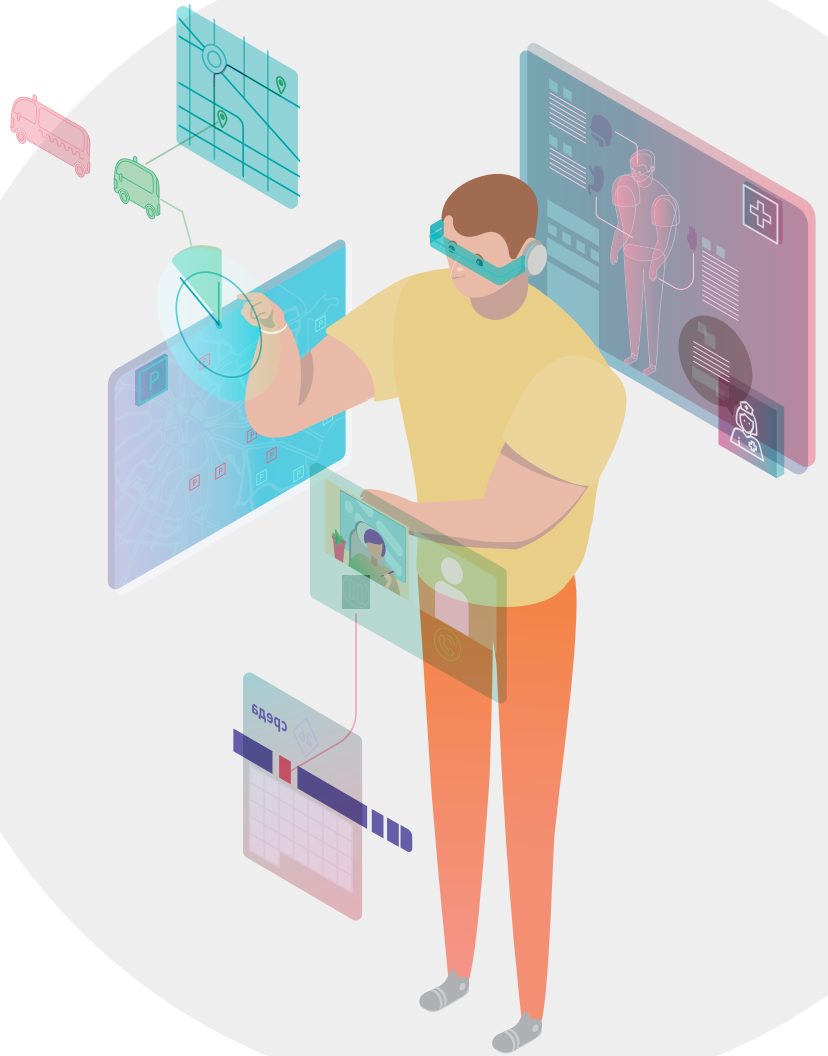
Combining human capacities and technologies

- Qualitative changes in day-to-day life owing to the use of neurointerfaces and digital assistants – ranging from using smart meters to smart device control
- Changes in the quality and content of education: a ‘digital teacher’ on the basis of artificial intelligence (AI) and educational VR/AR/MR-technology-based online platforms



Dialog on par between humans and artificial intelligence

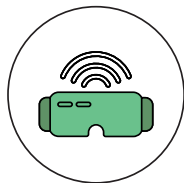
- Personal digital AI-based assistant in each smart device
- Language barrier removed due to advanced real-time translation technologies



VR (Virtual reality) – is an environment generated using technical means that is transmitted to humans via their senses (vision, hearing, smell, touch, etc.)

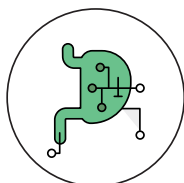
AR (Augmented reality) – is an extension of the perception field with any sensory data to enhance the perception of the environment and information received from it

MR (Mixed reality) – is a combination of the real and virtual worlds that creates new environments and visualizations wherein physical and digital objects coexist and interact in real time



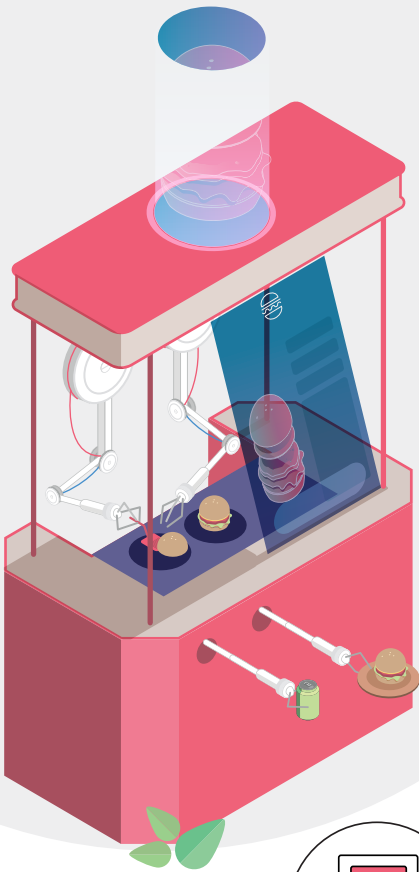
Unlimited motion capacity

- Equivalence of virtual and physical presence
- Individual car no longer used and replaced with self-driving taxis and car sharing services
- Logistics services used instead of physical travel



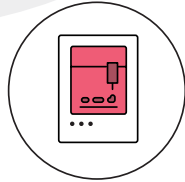
Technologies incorporated into the human body

- Early AI-based diagnostics of diseases and administration of medical treatment, monitoring of the patient's condition
- Transplantation of artificial organs
- Implantation of medical devices into the human body
- Implementation of transhumanism concepts: application of research and technology for enhancing human intellectual and physical capacities and eliminating undesirable features of human life such as suffering, illnesses, and ageing

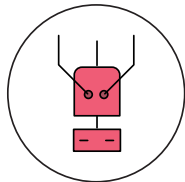


BUSINESS

Reducing production costs

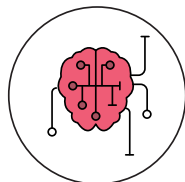


- Time, resources, and space saved due to the application of 3D technology in manufacturing
- Personalized products and services
- Reduction in production costs due to the application of nanotechnologies



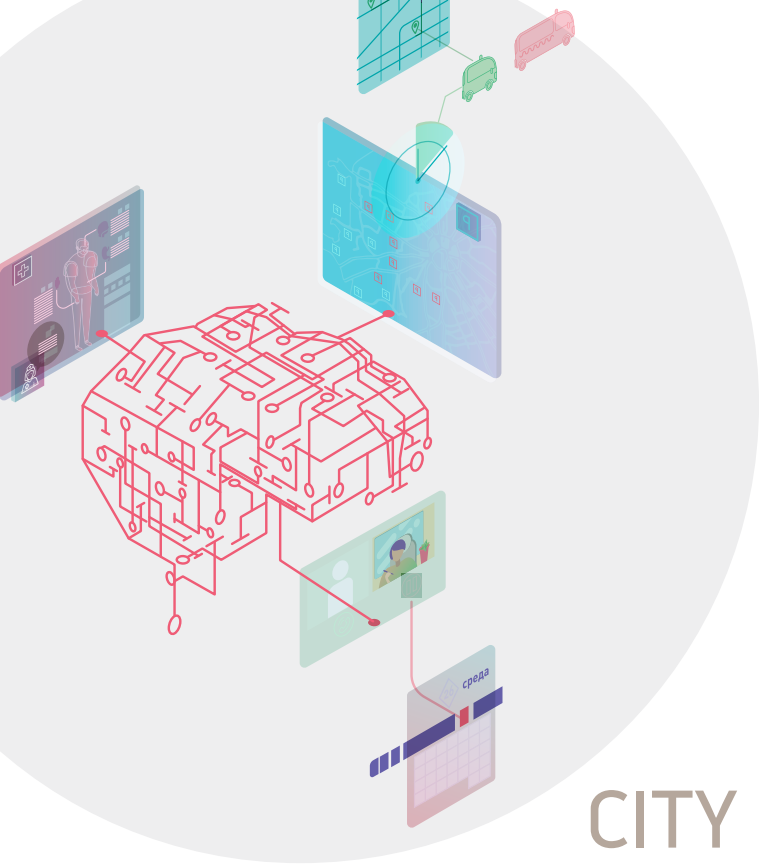
Complete automation of production; our mission is to create and control

- Universal application of robots and drones
- Buildings designed and constructed using VR/AR/MR technologies



Certain business tasks solved by AI

- Services priced and targeted without involving humans
- Business processes optimized through accurate forecasting and planning by processing and analyzing big data, universal usage of the Internet of Things



CITY GOVERNANCE



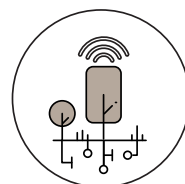
City residents + AI = city governance

- Unified city platform of data about city residents, city infrastructure, governance systems, and the business environment
- Unlimited usage of city big data
- Security systems controlled using AI-processed data in real time
- City residents' participation in decision-making via electronic polling systems based on blockchain technology
- Electronic voting in city elections



Autonomous self-driving transport

- Intelligent control of the transport system: control of traffic light operations and optimization of routes
- Self-driving transport: the driver controls but does not drive the vehicle
- Traffic situation improved due to reduced number of individual cars and development of car sharing services



High quality of urban environment

- Carbon dioxide level in atmosphere reduced owing to development of electric vehicles
- Separate waste collection and recycling
- Noise and air pollution sensors universally used to reduce negative environmental effects
- Smart sensors employed in utility infrastructure to save resources and control the quality of services and operability of devices