

# New Reality Equals New Possibilities

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I would like to talk to you about cloud computing. Along with our partners and other market participants, we have discussed time and time again how cloud technologies make businesses grow, creating new possibilities and allowing companies to cut costs and increase efficiency. Today I'd like to take a broader approach and discuss how the development of cloud technologies would affect our lives in general. Why do I believe it is important to share all of this with The Moscow Times readers, whose professional fields are most likely not related to the IT market? Because the impact of the cloud technologies' development on our environment will radically change our lives.

Today, the cloud services' user has at his disposal the most complex and resource-intensive applications without having to worry about infrastructure, maintenance, updates, etc. The main features of the cloud, scalability and elasticity, allow for the creation of almost unlimited volumes of computing capabilities, which, in turn, will open up new possibilities in virtually any science, industry or business field.

Let's visualize what it would give us in practice.

Today, virtually any complex production requires huge volumes of data to be processed, which translates into time and financial expenses. Thanks to cloud technologies, these processes can be made substantially cheaper and faster. For instance, when developing new drugs, a lengthy research period is needed. The researchers have to analyze various forms of a given illness, test the compatibility of a new drug with other medications and study the possible side effects and their combinatorial interaction. Today, there are new capabilities to speed up this process. This will make the research results more precise and create momentum for the development of science, for instance, personified medicine: Individualized medical prescriptions based on the human genome can become a reality. Production will enjoy new prospects too, as machinery, drilling rigs, cars and home appliances will step up to a new quality level. To give an example, one year ago, Toyota and Microsoft started their collaboration in the field of developing new energy-efficient automobiles.

Cloud potential gives today's researchers the possibility to apply ideas or projects that were not feasible earlier due to their scale and computation capabilities' requirements. One such project is a municipal engineering and management system, Urban OS. Urban OS is not just a collection of applications, but a system that consolidates engineering services management, safety and security, transportation, logistics, energy, and communication networks. Interaction with residents is managed through 911 and 311 type interfaces, social networks and direct ratings' systems. All these are cloud-based, and can be accommodated in such cloud platforms as Microsoft Windows Azure, and respective devices.

Another good example would be the use of a cloud in creating conceptually new original solutions in the areas of interface and artificial intelligence. The former shall allow for a substantial simplification of the interaction between a human and a computer, the latter — the creation of new services and possibilities for the end user. A vivid example of artificial intelligence is a virtual receptionist of the chief research and strategy officer of Microsoft,

Craig Mundie. The receptionist's name is Laura, and she can communicate with several people at a time, understand exactly what they want, analyze the schedule, call a cab, etc. When Laura was being developed, her authors had to employ eight of the most powerful microprocessors available at that time. Today, technological progress allows them to "squeeze" her capabilities into one single processor. Currently, at Microsoft we envision the development of useful practical systems based on an updated version of Laura, for instance, physician assistants, which also would be cloud-based.

Simplifying computer-human interaction and developing artificial intelligence will result in over 5 million people becoming new IT users (I am not going to forecast the exact date, but I am sure we won't have to wait for too long). This will truly create a different reality. Employees will initiate the use of new technologies in their companies. Clients will appreciate the individualized approach, as well as the possibility to order and purchase services at any time of day or night. New, optimized products and services will come to the market along with new production practices. Thus, the cloud will change our lives. Potentially, a solid understanding of these upcoming changes could help you create long-term business strategies today.

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