

The Silicon Valley logo, featuring a white line-art map of the region and the text "SILICON VALLEY" in white capital letters below it.The logo for the In-Memory Computing Summit 2017, featuring a red square icon with a white "in" inside, followed by the text "In-Memory Computing" in black and "SUMMIT 2017" in red.

NEW ERA OF BANKING PLATFORMS

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SBERBANK

NEW ERA OF BANKING PLATFORMS



ANY ECOSYSTEM BASED ON TECHNOLOGICAL PLATFORM

Hundreds millions
clients



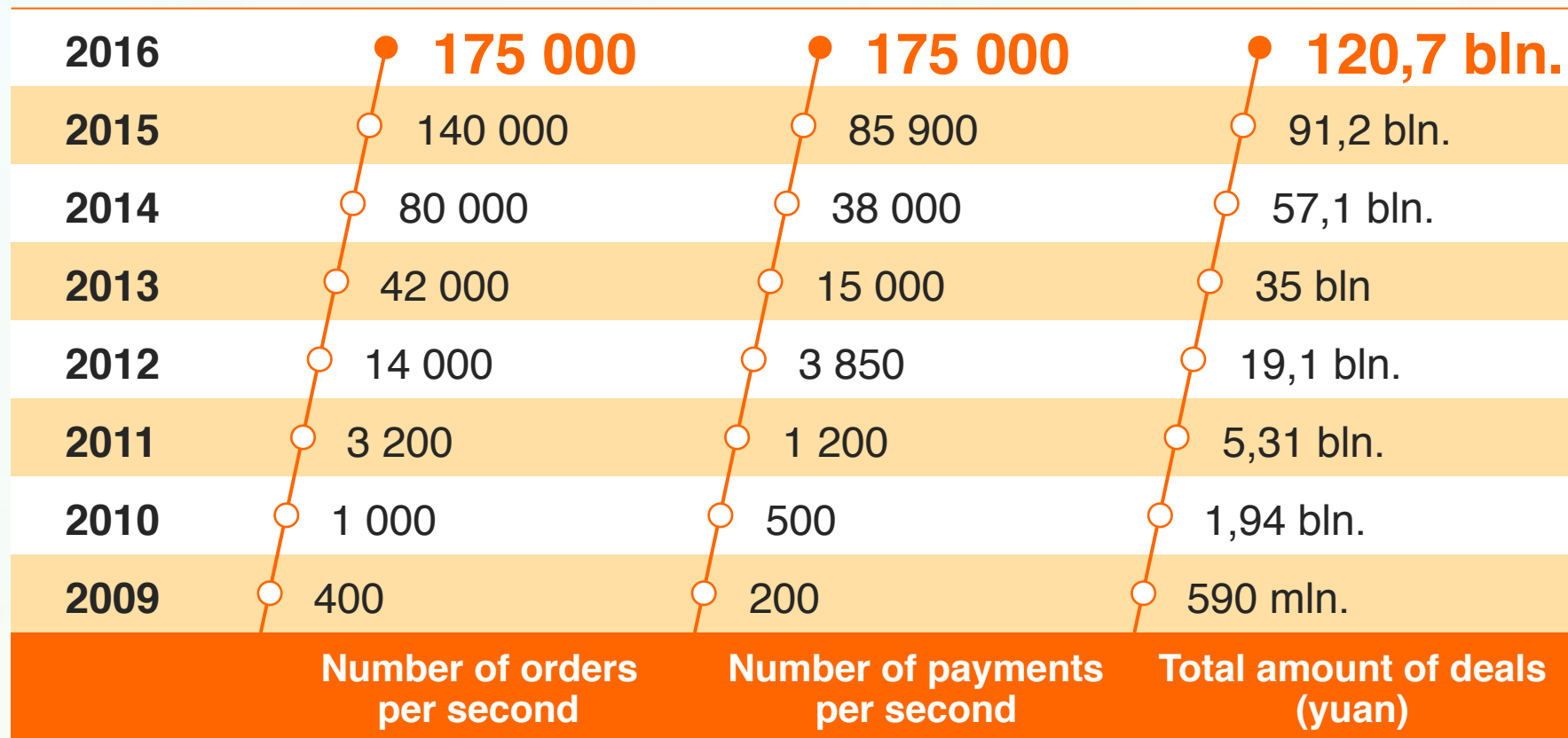
Petabytes
of data



Hundreds of thousands
transactions per second

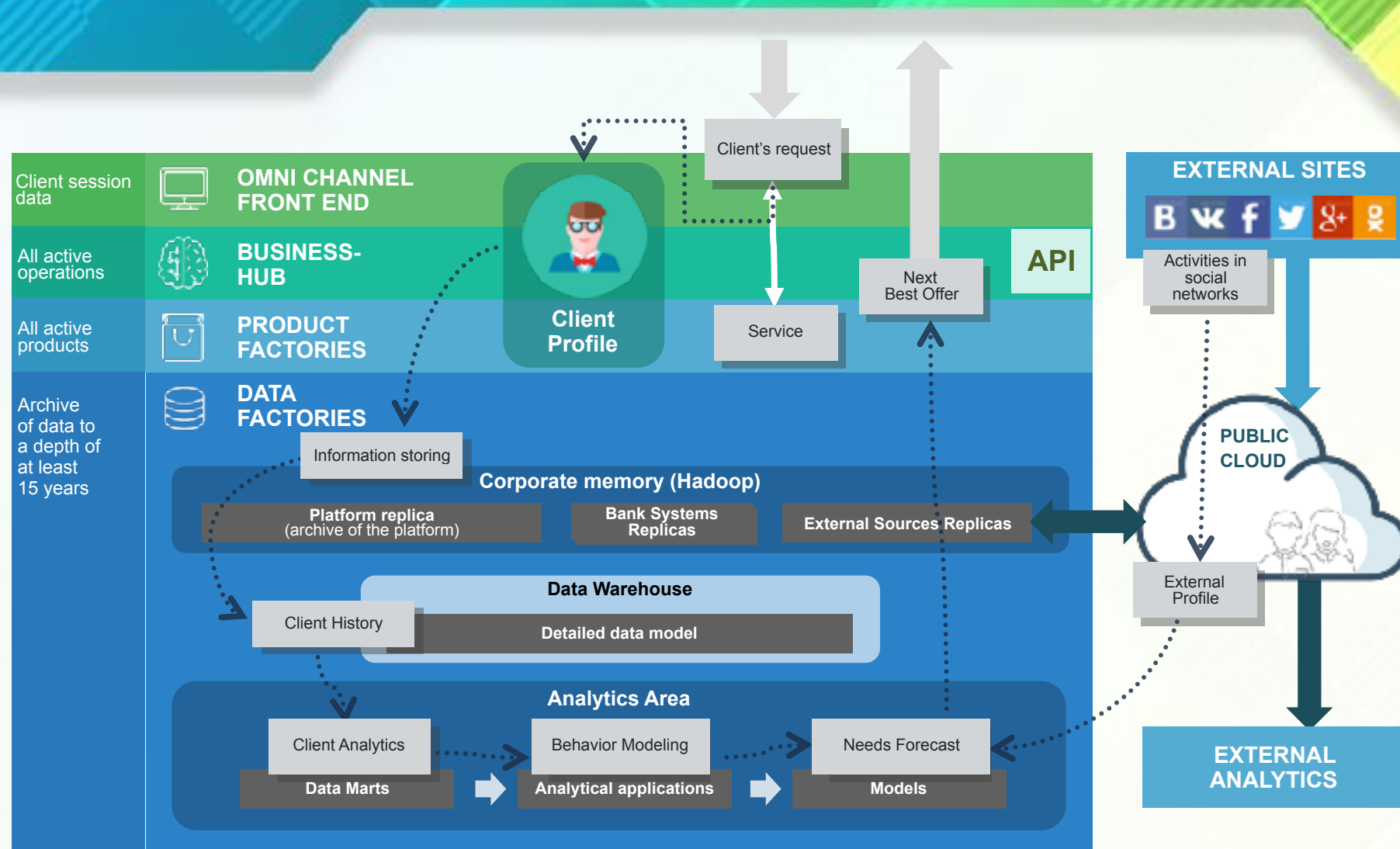


INNOVATIONS AS DRIVER FOR UNIQUE PHENOMENON IN GLOBAL ECONOMY









17.17

NEW GENERATION OF BANKING PLATFORM



COMPARISON OF THE TARGET SBERBANK PLATFORM CLUSTER WITH THE LARGEST SUPERCOMPUTERS OF THE WORLD*



	 СБЕРБАНК Россия	 amazon web services	 NCAR NATIONAL CENTER FOR ATMOSPHERIC RESEARCH	 Alibaba.com	 MIT Massachusetts Institute of Technology	
	Sberbank (Russia)	Amazon Web Services (USA)	National Center for Atmospheric Research (NCAR) (USA)	Alibaba (China)	MIT, Lincoln Laboratory (USA)	Moscow State University - Research Computing Center (Russia)
System	Sberbank's Platform Cluster	Amazon EC2 C3 Instance cluster	Cheyenne – SGI ICE XA	Lenovo ThinkServer RD650	TX-Green - S7200AP Cluster	Lomonosov 2 – T-Platform A-Class Cluster
Cores	56,000	26,496	144,900	84,000	41,472	42,688
Nodes	2,000	880	4,032	3,377	1,500	1,472
Theoretical Peak (Rpeak), TFlop/s	2,150	593.5	5,332.3	3,360	1,725.23	2,102
Memory, TB	1,536	103.5	198	218.75	121.5	92

* Data from worldwide TOP500 Supercomputer List (June 2017)

ARTIFICIAL INTELLIGENCE...

— it's been a long time since it ceased to be a science fiction and has become something we carry in our own pockets daily

Apple's Siri, Android's Google Now, Yandex Alice, Personal Financial Assistants and other apps facilitate a brand new level of rendering information and financial services. Weekly the data-technology market brings new features enabling to propel AI even further across the industry.

AI proved to be extremely sought after all the way from successful local business solutions to becoming a global financial trend as well as future banking cluster. Business models, processes, risks and experience are geared towards the general transformation wave.

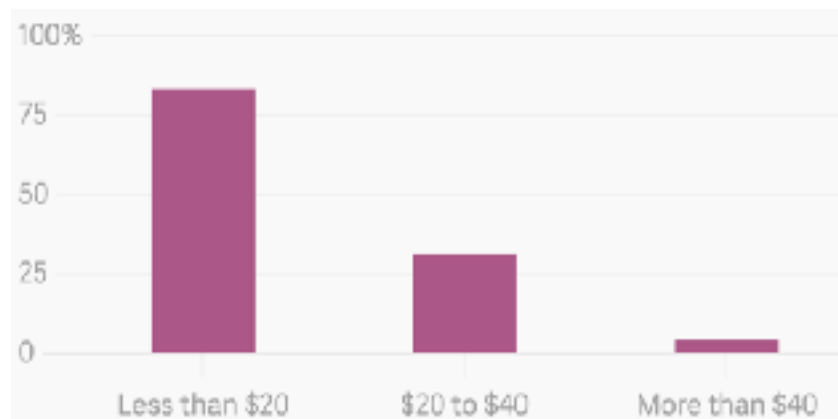


BY 2020, THE MAJORITY OF NON-ROUTINE CAREER PATHS WILL BE AFFECTED BY SMART MACHINES

“83% of professions paid less than \$20 per hour will be taken by robots”.

— *Council of Economic Advisors, USA*

Probability of automation by a profession's median hourly wage



ATLAS | Data: US Council of Economic Advisors

 = 5 percentage points

Disrupted

17%



Enhanced With Personal Smart Machines

12%



Enhanced With Enterprise Smart Machines

22%



Unaffected Through 2020

49%



gartner.com/SmarterWithGartner

Source: Gartner, July 2014
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Gartner.

KEY TRENDS IN AI ENGAGING FOR BANKING

- Chat bots
- Robo-advising
- Personalized offers
- Internet of Things
- Anti-fraud
- Operational efficiency



CHAT BOTS AND ROBO-ADVISING

AI in banks. Key trends (1/6)

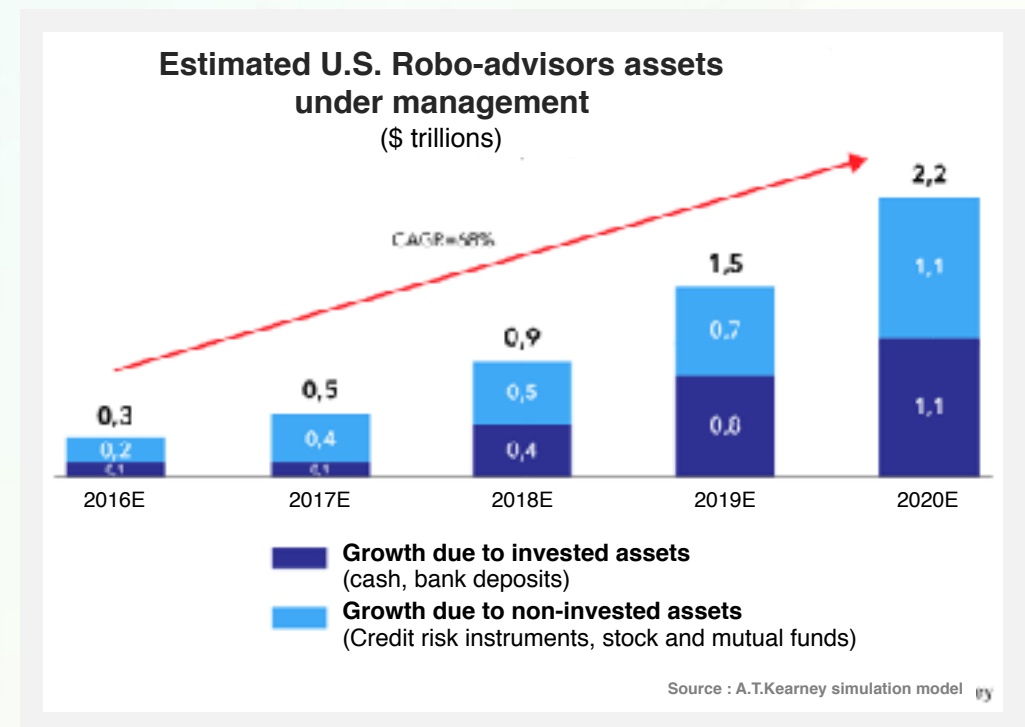
- Rendering information on products & services
- Provision of contact details
- Payment transaction posting
- Financial advising for clients



ROBO-ADVISORS AS A PROMISING AI APPLICATION CASE STUDY

AI in banks. Key trends (2/6)

- Robo-advising has become an alternative financial consulting service provider on banking issues as well as specific purchases and other monetary on-line transactions.
- Robo-advisors offer substantial advantages in on-line trading. First and foremost, this is due to single-click applications, account creation in a real time mode, monitoring, latest news and ability to process multiple deals at once. The brokers disseminated across social media improve data accessibility and comprehensiveness, and make communication with clients to be more targeted and easy job.
- Automation enables to provide information in 24/7 mode in a less costly manner. Robo-advisors can be made accessible either via your desktop or as a mobile app acting as portfolio managers that are capable to identify risks and devise streamlined investment strategy.



PERSONALIZED OFFERS AND IMPROVED LOYALTY

AI in banks. Key trends (3/6)

- Recommending banking products and purchases (loyalty programs by different retailers) inter alia – relying upon client's info from social media
- Identifying the existing client's B2B network and providing recommendations on engaging with new counterparties
- Simulating financial risks for small businesses (default, cash deficiency etc.) in a real time mode; recommending new target strategies and products



IOT (INTERNET OF THINGS)

AI in banks. Key trends (4/6)

- Management and tracking of the leased assets
- Smart insurance services for retail clients (health coverage, auto-loans etc.)
- Smart Home + Daily Shopping: means ordering, public utility bills payment, TV content subscription
- Banking of Things: transfer the payments function from people to devices (e.g., cars pay for gas, parking and using of toll roads)

It is expected that the number of IoT-connections will grow by 23% annually within 2015 to 2021. IoT devices will encompass more than 16 billion out of 28 billion connected objects by the end of the projected period.



ANTI-FRAUD. INSIDE AND OUTSIDE THREATS

AI in banks. Key trends (5/6)

- Attributes hinting that a credit card is used by an authorized person
- Attributes of so called “droppers” identified based on specificity of credits and transactions via online-bank and ATMS
- Identifying fraudulent salary projects (loans, cash-pull)
- Identifying unauthorized debit transactions from client’s accounts and cards
- Errors in parameterization of the Bonus programs on credit cards resulting in unjustified mark-ups and loss & damage
- Cash-pull schemes, including via online-bank and credit cards
- Abuse in conversion transactions for both retail and corporate entities
- Unauthorized connections of online-bank to client’s accounts and credit cards issuing without the knowledge of the client
- Unauthorized limit increase for credit cards



OPERATIONAL EFFICIENCY

AI in banks. Key trends (6/6)

- Identifying deviations in transaction execution and automatic correction hereof
- Natural Language Processing – algorithms for analysis and generation of legal claims
- Monitoring and prediction of infrastructure failure (ATMs, IT-resources)
- Streamlining of cash flow cycle in cash departments and ATMs. Streamlining of collection services
- Optimization of recruitment and hiring processes (CV review and initial screening)
- Speech analytics in a real time mode for call centres and branches (consultation quality management)



MACHINE LEARNING MECHANISMS



- Identification of bottlenecks in transaction processing
- Identification of root causes behind exceptions that occur upon documents execution and categorization thereof
- Identification of major user's mistakes in the system
- Analysis of the system users & clients activities. Predicting the load on the platform
- Analysis of client's product preferences and anticipating future actions
- Best personal offer