

## ДАВИД РАФАЛОВСКИЙ

СТО Сбербанк Груп, исполнительный вицепрезидент, руководитель блока «Технологии»

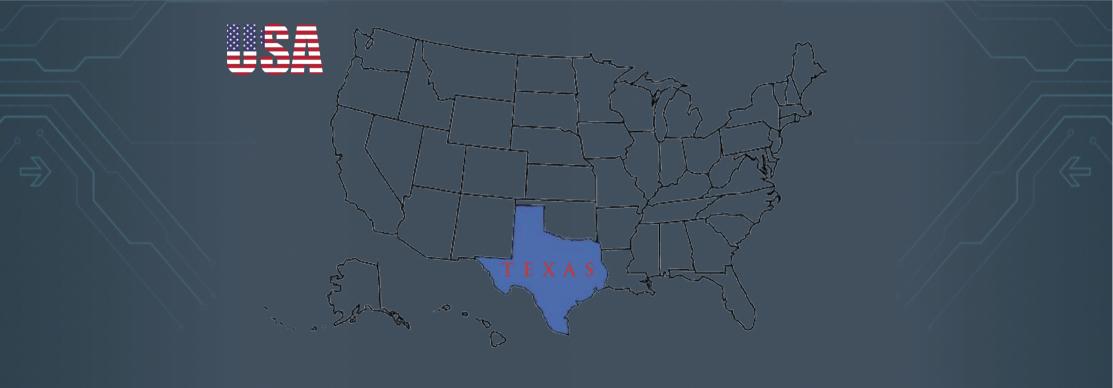


Technological transformation of Sberbank

### BARBECUE









## All ingredients are very simple



Brisket

Salt and pepper



# Wood

Barbecue pit



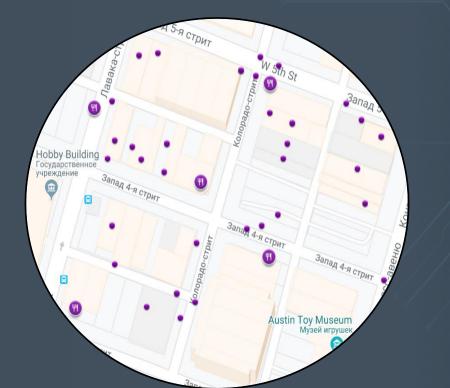


#### In Austin there are around

## 800

**BBQ** restaurants

10 restaurants at one crossroad







**Aaron Franklin** 



## Majority of companies invests in same areas



#### Companies grow expertise in AI:

number of Al start-ups, acquired within 5 years





All leading ecosystems in the world have their own cloud









Top-notch design became a prerequisite of a technological product

#### **BBVA**

1000 ambassadors spread within organization best practices in design



#### **\$1,7** trillion

investments in digital transformation and internal reengineering globally by the end of 2019

#### 60%

companies will implement digital platform by 2020

#### Business strategy: dilemma №1

Companies make 3 types of platform decisions:

#### 1. To be a platform

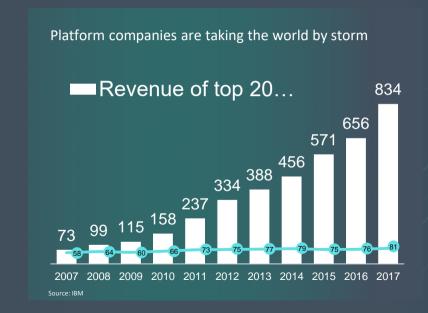
Create shared technological components, that unify companies-participants of ecosystem

#### 2. To use a platform

Connect to existing platform and focus on value, distributed in the chain of participants

#### 3. To re-platform

Migrate applications and infrastructure from legacy to new solutions



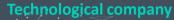
# There is always a line for the best product

#### Next step for Sberbank













Traditional financial services



Traditional channels



Company of choice for clients and employees



AI in all processes



Data-driven decision making



Ecosystem of financial and non-financial services

#### Scale of our technological transformation

We transformed into a product-centered engineering team

and implement

40

large-scale technological programs in order to shift to a new business model, including... Cloud platform

SberCloud

S

Analytics and Al platform

SberData

Application development process

SberWorks

Technological platform **SberPlatform** 

#### Cloud Platform



We create world-class cloud platform, the largest in Russia



#### Guarantee

- ✓ Business agility
- ✓ Deployment speed
- ✓ Reliability
- ✓ Cost reduction



Our partners – leading technological companies















Cloud-centric strategy: cloud for us – key enabler of technological transformation

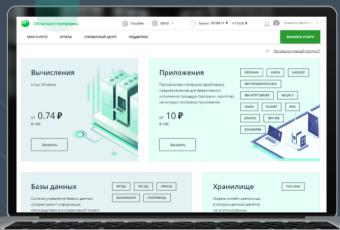
We offer to the market the same cloud solutions that we use in the bank



#### Cloud Platform for Bank



We have a private cloud and provide infrastructure dynamically through the portal



- Significant reduction in time to provide infrastructure
- Increase of server infrastructure utilization
- 3 Self-service provisioning of infrastructure
- 4 Usage-based pricing transparency and pay-per-minute billing

>80% of infrastructure provisioned automatically

5 min delivery time of infrastructure products 1 min

The balance between speed of provisioning and cost optimization

The speed of provisioning

Optimal use of infrastructure applying application architecture and coding practices

#### From Cloud-Ready to Cloud-Native Applications

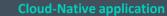
#### **Cloud-Ready**

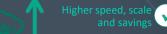
application, adapted to migrate in cloud environment with limitations to app-specific configurations

#### **Cloud-Native**

application that is based on microservices and built by design to take full advantages of cloud architecture

#### Value of Cloud-Native Applications





#### Traditional application



- Dedicated non-standard infrastructure
- Huge components
- Infrastructure based recovery
- Limited vertical scaling

#### **Cloud-Ready application**

- Standard dynamic infrastructure with scale out architecture
- Middle-sized components on
- API first
- Application specific horizontal

- Standard dynamic infrastructure with scale out architecture
- Microservices running inside containers
- API first
- Auto-scaling
- Auto-recovery
- Portability across clouds
- Fully automated dependency management, canary deployments
- IaC Infrastructure as Code













**NEW APPLICATIONS** 







#### Analytics and AI Platform

We have technologically advanced analytics platform that allows



process big volumes of data



any non-technical employee to use tools for analysis and reporting

Platform enables us to be pioneers in AI and implement 2000+ models



Sberbank data volume





**4650**Library of Congres

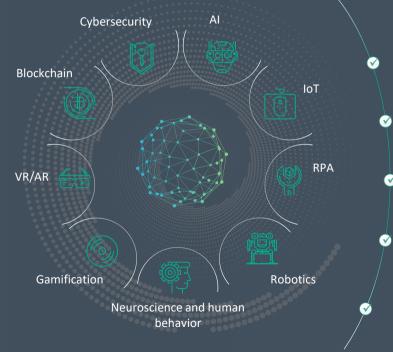




**620** bln photos in Facebook

#### Innovation is a part of our DNA

One of the instruments is innovation laboratories, where we create breakthrough research initiatives to integrate in business



#### Examples of completed projects

Identification of different stroke types by neural network

Cash delivery by drone

Cashless payment in public transport

Automatization of cash management in encashment center by robot

Tracking of shipments and payments in blockchain platform



Create as Alibaba.com

Be more effective than amazon

