LANDSCAPE AS HEALTHCARE INFRASTRUCTURE
“STRELKA” TODAY:
A GROUP OF COMPANIES WORKING IN THE INTERESTS OF SOCIETY

STRELKA

KB Strelka is a leading strategic consultant that brings city administrations, the business world and local residents together to come up with effective solutions for urban development.
STRELKA KB MISSION
QUALITATIVE CHANGE IN RUSSIAN CITIES

STRELKA KB

STRELKA KB

Strategic consultant for the development of urban solutions

Mission:
The qualitative improvement of Russian cities and shaping within them a contemporary and comfortable environment.

2013
year established

>200
employees

$4 BLN
investment in Streika KB’s projects

THE STRELKA INSTITUTE

An international educational project, among the top 100 architectural schools

2009
year established

223
graduates of the Institute

3 MLN
visitors of its public programme

KB Streika operates according to the principles of a Public-Benefit Company

For-profit activity

Public-benefit company

Non-profit activity

80% of Streika KB’s profits go towards funding the activities of Streika Institute for Media, Architecture and Design, Top 100 Best Architecture Schools

The Institute of Media, Architecture and Design was the founder of Streika KB

390 cities where Streika KB operates

260 completed projects in Russia and beyond

45 countries covered by KB’s expert network

To change the cultural landscape and physical appearance of Russian cities.
RAMIFICATIONS OF CLIMATE CHANGE

HEAT ISLAND EFFECT

AIR POLLUTION

RUNOFF POLLUTION
RAMIFICATIONS OF CLIMATE CHANGE

HEAT ISLAND EFFECT

AIR POLLUTION

RUNOFF POLLUTION

*According to Transsolar 2015 (Germany)
URBAN "HEAT ISLAND" EFFECT IN MOSCOW

CITIES ARE MUCH HOTTER
10–15 °C
Difference in temperature in Moscow and its suburbs can reach 10-15°C

LIVING ROOFS CAN HELP REFLECT HEAT
5 °C
The temperature in buildings with living roofs can be 5°C lower, which also lowers energy consumption

LIVING ROOFS CAN HELP LOWER AIR TEMPERATURE
by 2 °C
During heatwaves living roofs can lower temperature by 2 degrees
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WHY DOES MOSCOW NEED GREEN ROOFS?

ЗАЧЕМ МОСКВЕ ЗЕЛЕНЫЕ Кровли

WHY DOES MOSCOW NEED GREEN ROOFS?

OUTDOOR ROOFS CAN HELP SOLVE PROBLEMS RISING IN THE CITY, WHICH ARE CRITICAL FOR ITS DYNAMICS AND FOR THE FUNCTION OF ITS AREAS.

The Moscow Green Roof Program is a key component of the city's effort to solve various problems, including those arising from the urban environment's impact on the climate. The program, implemented in 2016, has been successful in enhancing the city's ecological balance and improving the quality of life for its residents.

1. **Reduction of Heat Island Effect**
   - Green roofs help reduce the urban heat island effect by providing shade and insulation, thus lowering the temperature in the surrounding area.

2. **Improved Air Quality**
   - Plants on green roofs absorb pollutants and carbon dioxide, improving air quality.

3. **Increased Stormwater Management**
   - Green roofs contribute to stormwater management by absorbing rainwater and reducing runoff.

4. **Enhanced Wildlife Habitat**
   - Green roofs provide habitats for birds and insects, contributing to biodiversity.

5. **Energy Efficiency**
   - The insulating properties of green roofs help reduce energy consumption for heating and cooling.

6. **Aesthetics and Urban Design**
   - Green roofs transform urban spaces, enhancing the visual appeal and creating green corridors.

In conclusion, green roofs are an essential component of Moscow's urban sustainability strategy, offering a holistic approach to addressing environmental challenges and improving the quality of life for its inhabitants.
MORE FREQUENT HEAVY RAINS

HEAVY RAINS ARE MORE FREQUENT
1–2%
with every decade amount of heavy rains is increasing by 1–2%

BILLIONS ON FIXING THE INFRASTRUCTURE
1,3bln rubles
between 2017–2019 Moscow spent 1,3 bln rubles (16,8 mln USD) to restore the infrastructure in the city

«GREY INFRASTRUCTURE» CAN NO LONGER HANDLE THE PRESSURE
25–70 мм
storm water infrastructure is designed to hold 19,2 мм per м³/hour, today we get rains 25–30 мм., 40–70 мм.
SURFACE RUNOFF — MAIN SOURCE OF POLLUTION OF MOSCOW-RIVER

- **Total runoff:** 633 mln m³
- **Runoff entering Moscow-River:** 227 mln m³
- **Runoff treated effectively:** 45 mln m³
  - 93% of all runoff is not treated or treated ineffectively
  - 7% of all runoff is treated

- **Runoff treated effectively:**
  - **Runoff entering Moscow-River:**
  - **Runoff treated effectively:**
  - **Runoff not treated or treated ineffectively:**

*Data GUP «Mosvodostok»*
GUIDLINES FOR PUBLIC SPACE DESIGN

A document that coordinates the public spaces’ redesign programme in Moscow and deals with parks, squares, waterfronts, courtyards etc.

A consolidated document prepared as a guideline for the biggest street design initiative in Russian history — “My Street” project.

A document that initiates the urban futures in Russian cities acknowledging the needs of residents, entrepreneurs & city administrations.
GUIDLINES FOR GREEN INFRASTRUCTURE

Floodable Public Spaces

Permeable Surface

Bioretention Cells

Bioswale

Bioswale

Water Plazas
GUIDLINES FOR GREEN INFRASTRUCTURE
FLOOD RESILIENCE
CASE OF TULUN

ДВА ПОДХОДА К ПРЕДУПРЕЖДЕНИЮ НАВОДНЕНИЙ

ЗАГРОЖЕНИЕ "ЗЕЛЕНЫМ" РЕЧЬЮ

ВОССТАНОВЛЕНИЕ ЛЕСА В НЕТРОПОЛЗОВАННЫХ ОБЛАСТЯХ

Создание вторичных ручей и дополнительных потоков позволит реке
LANDSCAPE AS INFRASTRUCTURE

HEALTHCARE
- Encouraging active lifestyle
- Improving air quality
- Cooling cities
- Improving mental health
- Reducing the prevalence of infectious diseases

LANDSCAPE REGENERATION
- Patching fragmented landscape
- Groundwater recharge
- Reducing river pollution
- Increasing biodiversity

ECONOMY
- Lowering cost of infrastructure
- Lowering energy consumption
- Multifunctionality of infrastructure
- Flood alleviation and management
THANK YOU!

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