



НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ  
УНИВЕРСИТЕТ

# ***New products and services in water sector. Strategies***

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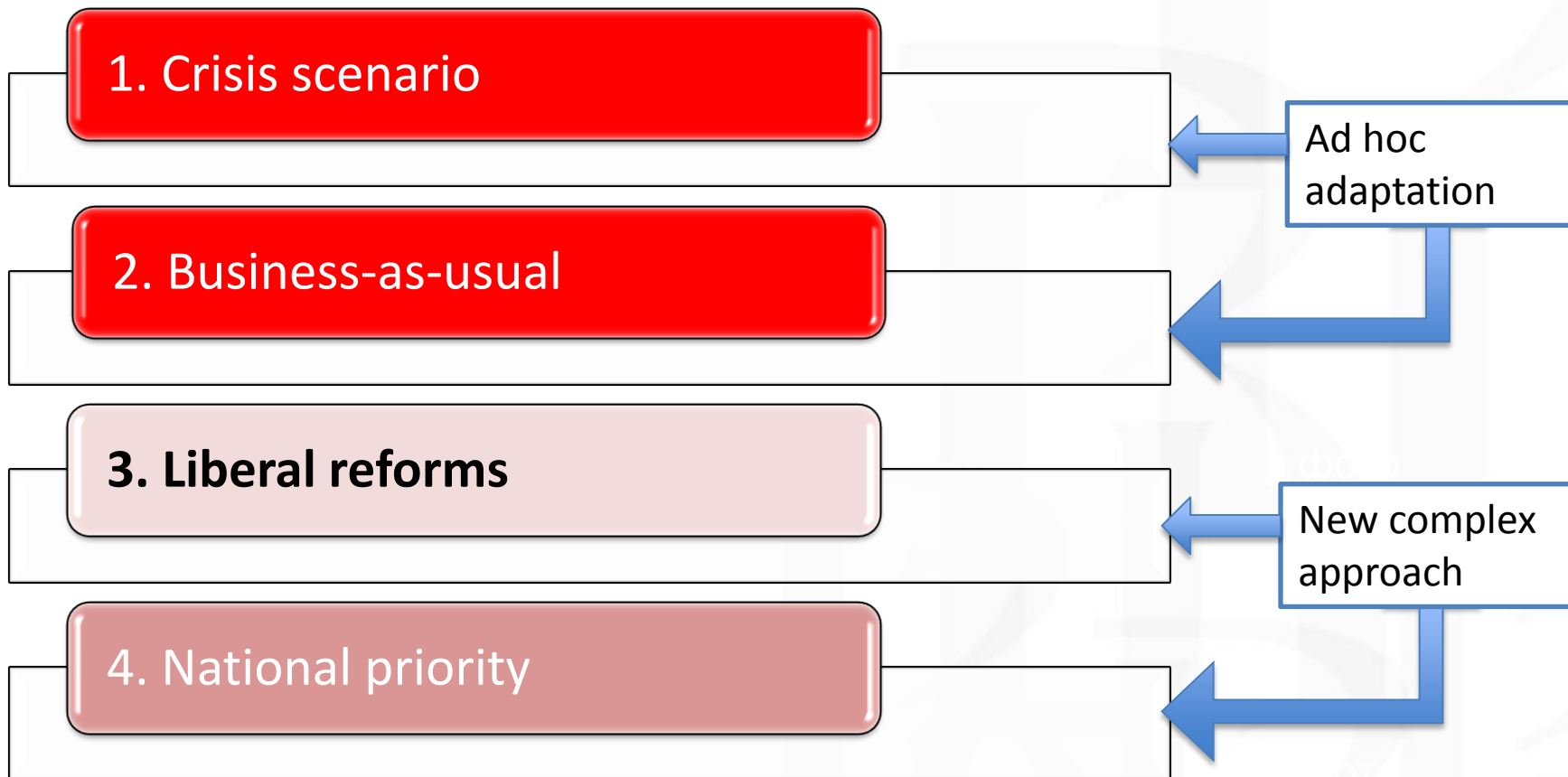
# Strategy building

Global prospective

Russian national prospective  
& Scenarios

Russian Business prospective  
& the most probable scenario

# Scenarios - Russian national prospective



# Russian national prospective- correcting factors till 2020

- Economic crisis
- Technological embargoes
- Politization of tariff policy
- High role of industry/energy sector on water demand and on water utilities costs
- Water demand decreases. Tariffs remain low. Operating costs jumps.

**Current formula** =inefficiency of  
water sector

**Vs**

**Sustainable and business  
correct formula:**  
Lower water demand\*smart  
tariff policy

# National programs in water sector – inefficient political projects

- Federal program Clean Water 2011-2017
- Water strategy of Russian federation to 2020

**Federal: regional: private  
budget indicators - fail**

**Subsidies form Federal budget  
decrease– replacement of  
obsolete equipment -  
postponed (Mosckovskay  
oblast` 2013)**

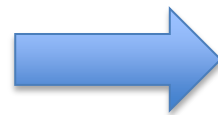
**Predictable tariffs turned to be  
low frozen tariffs**

**Quality indicators - fail**

# Strategy – major goals of a company

## Institutional challenge

- the **State** does not create objective stimulus for modernization and innovations in water utilities sector
- Capital investments do not lead to rise of revenue
- **Progress for progress** does not work in private sector
- **Consumers** are not ready to pay more for water *per se*



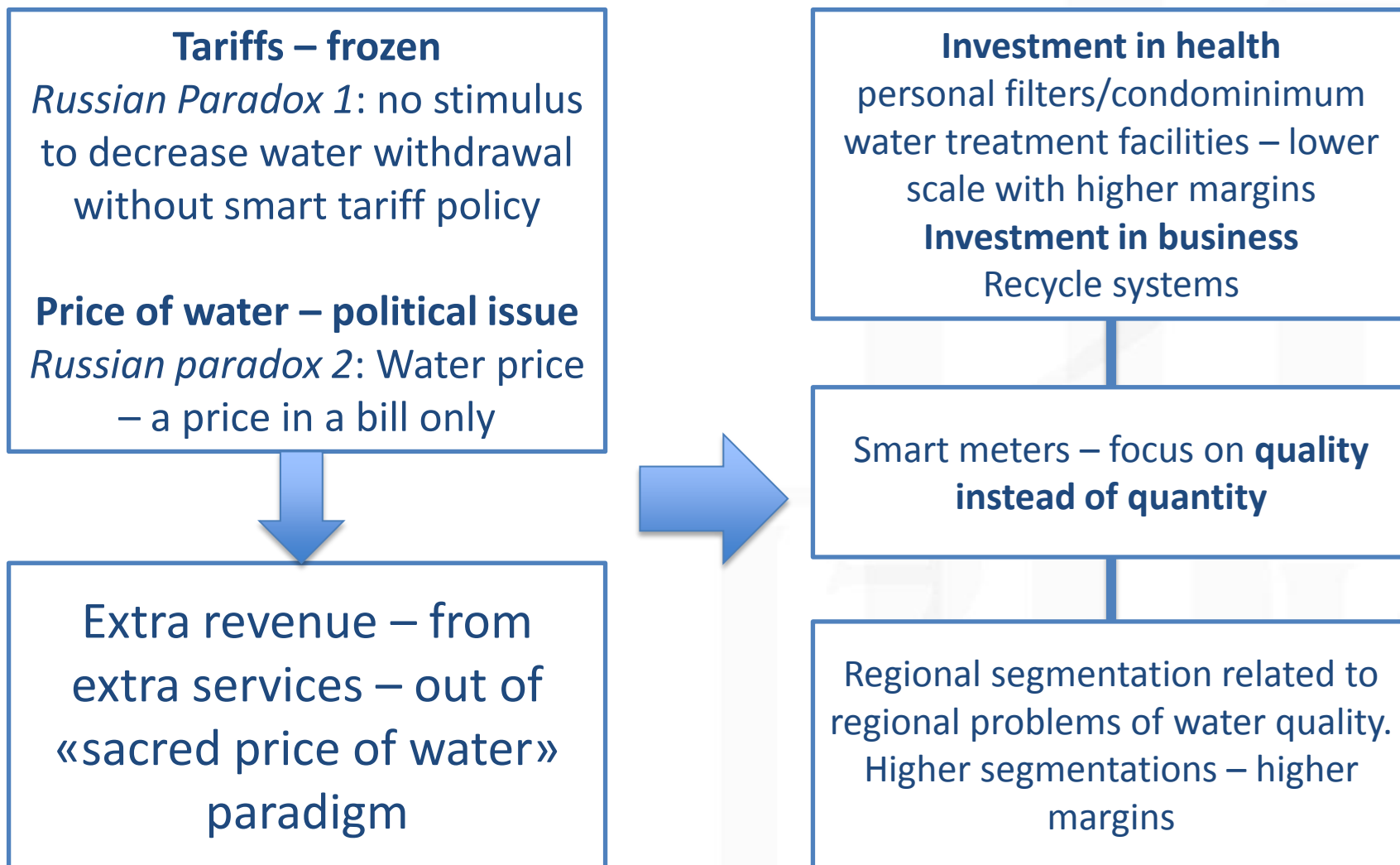
## One Strategy – profit maximization

Revenue maximization

Cost cutting

Minimization of «expensive risks»

# Strategy – Revenue maximization



**3-5 years challenge**  
More over-due debt  
More accidents



## Objective costs

- Energy efficiency
- Leak monitoring
  - ✓ Sensors
  - ✓ IT-systems for industry

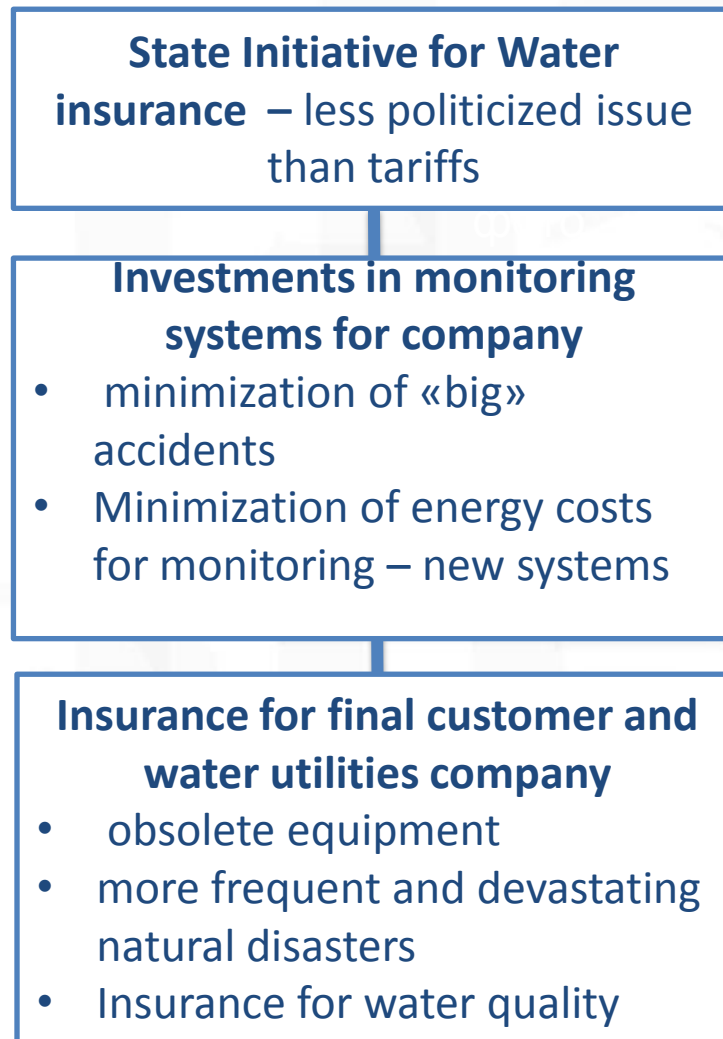
## Financial management for overdue debt

- state initiatives & potential of elections

Replacement of the most obsolete equipment



**Major challenge for Insurance instruments**  
Equipment is too obsolete to be guaranteed against losses



# Global agenda – areas of innovation – ideal strategies

## *forward osmosis*

*stormwater management*  
**wave energy**  
*nitrogen removal*  
*WWT for urban slums*  
**ozone sanitizer**  
*infrastructure simulation*  
*ballasted clarification*  
*underwater sensor communications*  
**aquatic ballast treatment**  
*nanoporous membranes*

## *non-fouling membranes*

*underwater power management*  
*underwater video inspection*  
*real-time detection of toxins*  
**tunable surfactants**  
*biogas from wastewater*  
*smart sequestration*  
**UV water treatment**  
*infrastructure management systems*

## *chemical disinfection*

*microbial fuel cell treatment*  
*nutrient recovery*  
**acoustic contaminant trapping**  
**MEMS sensors**  
**bottle-top filtration**  
*reservoir evaporation reduction*  
**engineered membranes**  
*viral removal of bacteria*  
**drought-tolerant lawn seed**

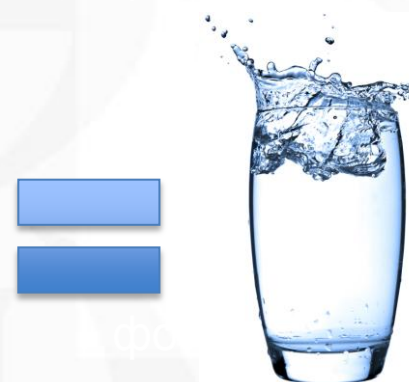
Symposium on Water Innovation in Massachusetts



Source: <http://www.slideshare.net/dgoodtree/massachusetts-water-industry>

## Free niches

1. Recycle technologies- CleanTech, NEWater
2. Smart data and smart energy – for monitoring and optimization of water supply - big cities only
3. Quality technologies but with old water pipes: real-time micro organism detection, quality monitoring sensors
4. Pipe and basic equipment replacement
5. Quality technologies: from chlorine to bio-tech, UV
6. Smart tariff policy, diversified quality standards (the more and better water you use the more you pay) – sensors and meters
7. Local Water cluster / import from MA, Israel, Singapore etc





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# Thank you for your attention!

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