



UNITED NATIONS
Office for Outer Space Affairs



*The Federal Space
Agency*



*The Government of the
Krasnoyarsk Region*



*The Reshetnev Information
Satellite Systems Joint
Stock Company*

The subject of the report:
**"The experimental model for schedules` quality
performance management in real time"**

Speaker: Shulga Evgeny Fedorovich
PhD (Dr.of tech. sci.), professor

Control Object

Optimized Schedule
Complex
Prevention Schedule
Operational Control
Schedule



Operational Control
Quality Curves
Control Subject
Functioning Reliability

Control Subject

Required Reliability of
Interaction of Subject
Control



Operational Control
Quality Curves



Control Subject
Functioning Reliability

Quality Control System for Schedule Performance

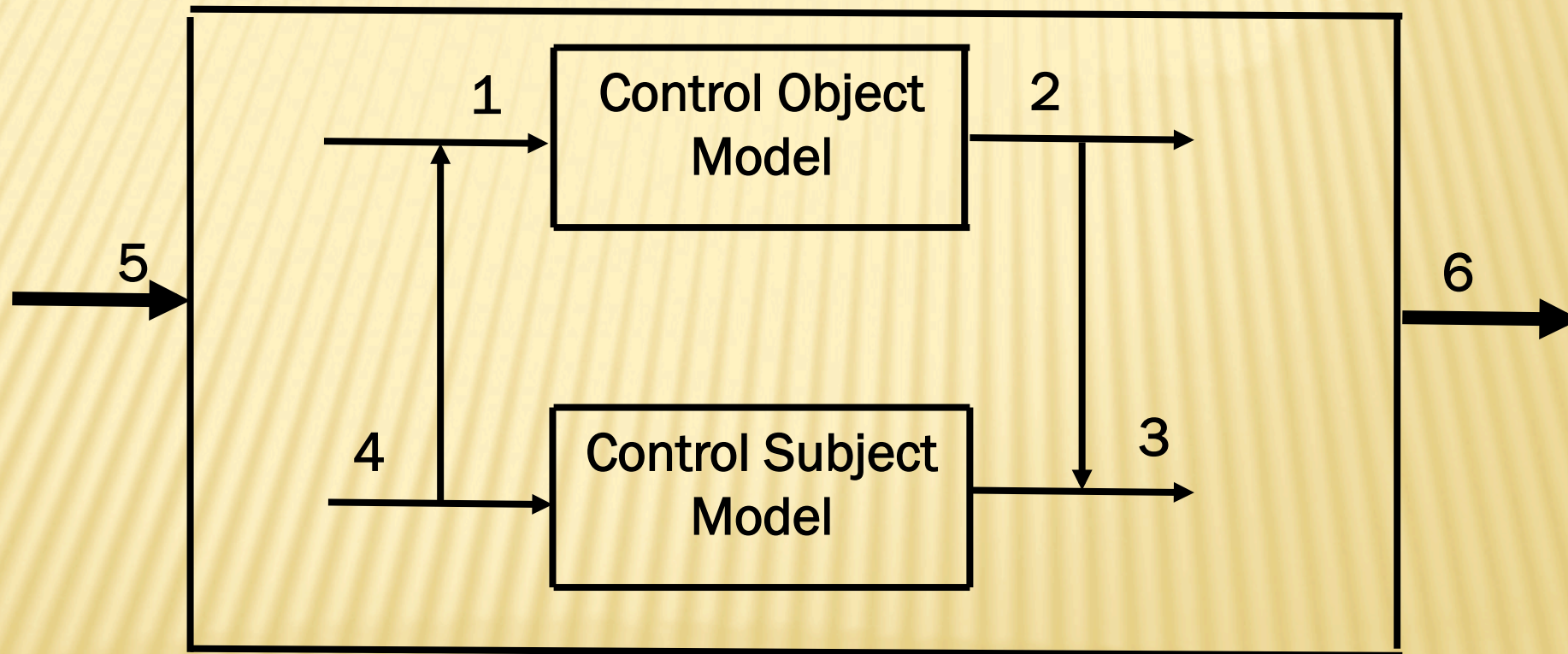
Required Reliability of
Interaction of Object
and Subject of Control



Reliability of
Interaction of Object
and Subject of
Control

Losses through
Interaction Reliability
Decrease

Model of management system



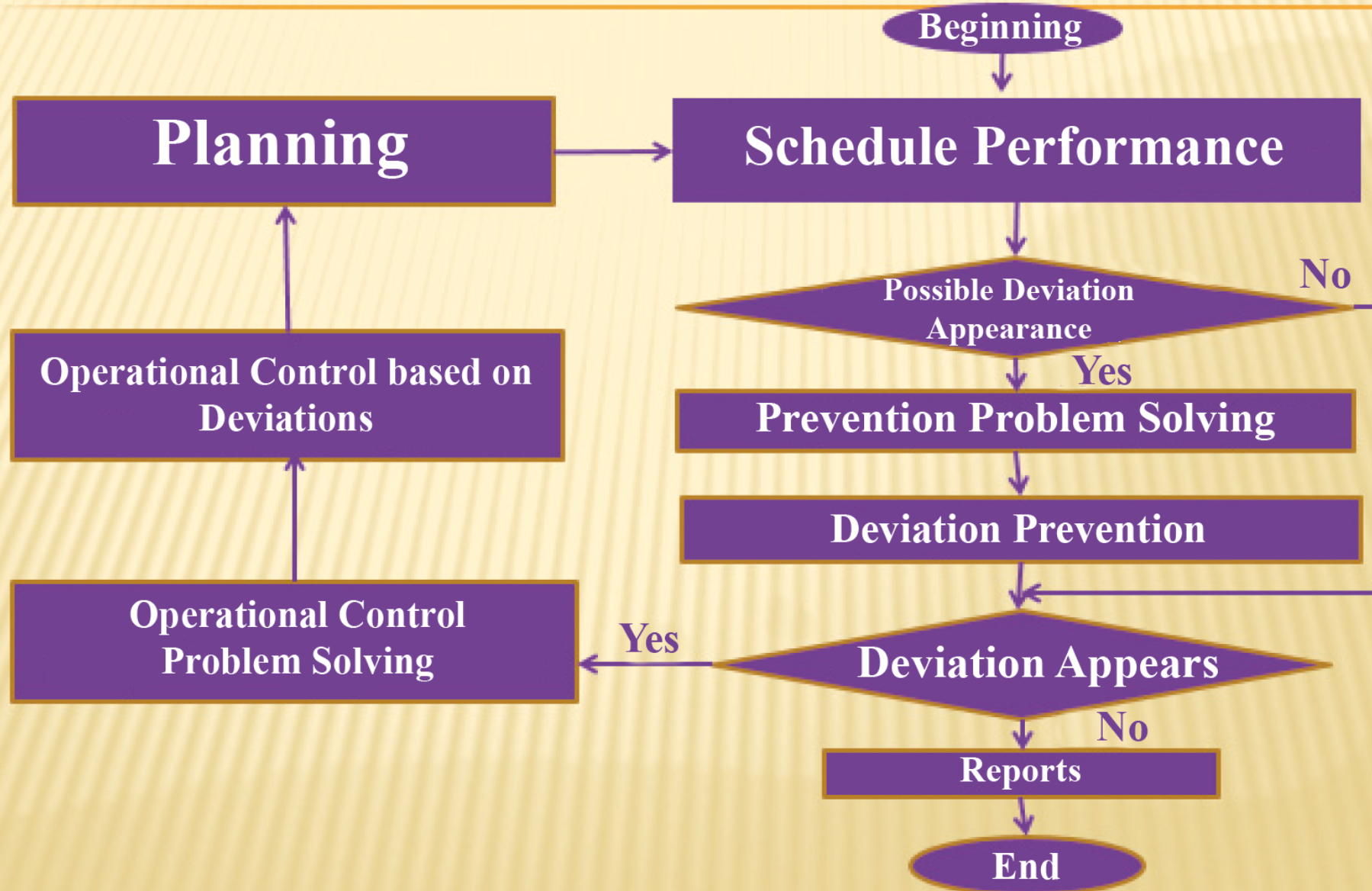
The monitoring for the evaluations, connected with the process of imitating losses

The cause	The effect
ΔT^{CB}	$\Delta \Xi$
$\Delta q^{соxp}_{кол}$	$\Delta \Xi$
$\Delta q^{соxp}_{кач}$	$\Delta \Xi$
$\Delta T^{CB}_{оу}$	$\Delta \Xi$
$\Delta T^{CB}_{полн}$	$\Delta \Xi$

The problem – the absence of the relationship between the cause and the effect "reason-quality" one

The cause	The effect
ΔT^{CB}	ΔW
$\Delta q^{соxp}_{кол}$	ΔW
$\Delta q^{соxp}_{кач}$	ΔW
$\Delta T^{CB}_{оу}$	ΔW
$\Delta T^{CB}_{полн}$	ΔW

Schedule Performance Quality Control



The conditions of the highest productivity of vehicles

$$Q^{\text{сохр факт}} = Q^{\text{сохр план}}$$

- the freight or goods safety

$$W^{\text{факт}} = W^{\text{план}}$$

- transport work

$$T^{\text{св}} = \{T_H^{\text{св}} \div T_B^{\text{св}}\}$$

schedule

- the timeliness of implementation of the

$$Q^{\text{сохр план}} = \{Q^{\text{сохр}}_H \div Q^{\text{сохр}}_B\}$$

- the safety of transportation

$$T^{\text{св}}_{\text{oy}} = \{T_H^{\text{св}}_{\text{oy}} \div T_H^{\text{св}}_{\text{oy}}\}$$

- the timeliness of operative management

$$T^{\text{полн}}_{\text{oy}} = \{T_H^{\text{полн}}_{\text{oy}} \div T_H^{\text{полн}}_{\text{oy}}\}$$

- the completeness of operational management

Informational Interaction Scheme of Training Participants



Professor



Logistics Manager



**Students: Vocational,
BSc, MSc, PhD**



**Global Monitoring
+ Quality Control
Model**



**Agricultural Complex as
Control Object**

Level of Education	Courses
MSc programme	<ul style="list-style-type: none">• Informational Systems for Automobile Cargo Processes• Fundamentals of Operational Control Technology Development
BSc programme	Optimization of Processes and Solutions
Navigation Provision	

**Thanks for your time
(attention)**