

Dmitry Payson

- In Dresden since March 2025
- D. of Sci in Economics (2011, thesis topic "Institutions and Institutional Design in Space Activities");
- PhD (2003, spacecraft design + economy);
- Spacecraft engineer (Moscow Aviation Institute, 1994)

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2025 – : Dresden Senior Fellow, TU Dresden

THE HEBREW
UNIVERSITY
OF JERUSALEM



2023-2025: Researcher, The Hebrew University of Jerusalem



2020-2022: Managing Director, Sber Research and Innovation Center



2014-2018: Director, Roscosmos/United Rocket and Space Co. Research and Analysis Center



2011-2014: Deputy Director, Skolkovo Foundation Space Cluster



2005-2011: Research positions in TsNIIMash, Roscosmos lead research institute

Dmitry has over 25 years of experience in research, teaching, and leadership within the fields of space policy, economics, and innovation. He has played a key role in fostering the space innovation ecosystem and space economy research in Russia. Notably, Dmitry served as Director of the Roscosmos Research Center and Vice-Director of the Skolkovo Space Cluster, a leading hub for space innovation support. His other projects include Flight into the Future and Orbit of the Youth student space project competitions.

Dmitry left Russia for Israel in 2022 and now continues his research as a Dresden Senior Fellow at TU Dresden.

Dmitry Payson – what I can do

1. Space design projects coordinating and consulting
2. Lecturing in space history and space domain as such
3. Economy/policy/industry organization analysis and design
4. Market analysis, report preparation
5. Education and professional development programs
(international space activity, space policy & economics)
6. Project evaluation
7. Startup & venture expertise
8. Research in space policy & economy
9. Foresight projects methodology and coordination

Teaching / Lecturing



Moscow State University



Moscow Aviation Institute



International Space University



TU Dresden



Skoltech University



The Hebrew University of Jerusalem

Recent Lectures

- ➔ TU Dresden The End of Space Race space history lectures (Luft- und Raumfahrtkolloquium) – eng (2025)
- ➔ TU Dresden Issues in Space Economics lecture – eng (2025)
- ➔ Space programs and technologies actualities lectures with leading Israeli universities (Technion, the Hebrew University, Ben-Gurion University) - eng (2022-2024)
- ➔ Lecture courses in space activities' economics and organization as part of the Master programs with Moscow State University – ru, 2019-2021
- ➔ Cosmonautics Basics course as part of the Space Class high school project, <http://www.payson.ru/2019/index2019.html> - ru
- ➔ Outreach and educational projects History and practice of space activity <https://www.youtube.com/playlist?list=PLHCBGdx6NxTuZEjAnQMUR6o2XMwZKXuWI> – ru (2019-2020)

Lectures: The End of Space Race (2025)



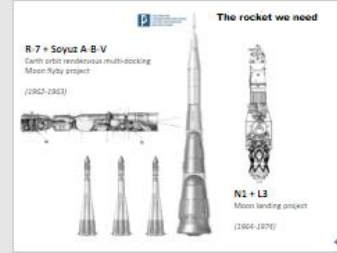
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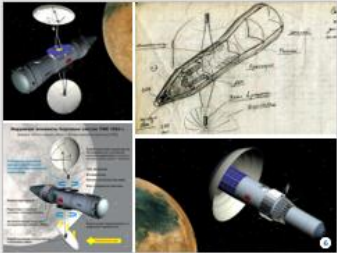
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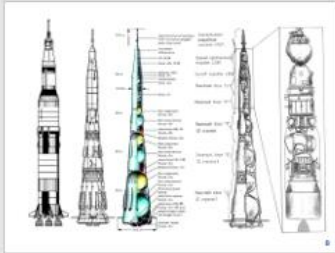
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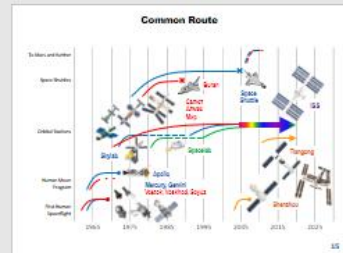
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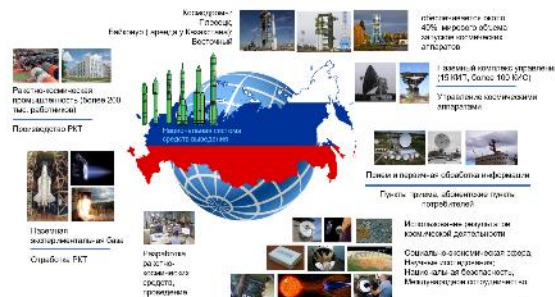
15

- Для чего нужна
- Как развивалась
- Где вход?

<http://www.payson.ru>



Орбитальная пупиллориза – 140+ космический аппарат.



ПАО «Роснефть» имеет
срок годности «Неограничен»
на 21.03.2020 г. (срок не истек)



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АО «Российская космическая
система» / Москва
<http://www.russiaspace-systems.ru>



Центр изучения
объёмов жилищной
экономики
и фискального
У. Москва
<http://www.nso.ru>



Косованатика, Лекция 1. Пути...

39

5 пусков автоматических парабол «Восток» с собаками и лемингами

1959

9 пусков капсулы Mercury из FN Redstone и Atlas, в том числе 2 – с обезьянами

А.Шеннон
В.Горюхов
В.Береснев
В.Терехин

1960

1961

1962

1963

Ю.Гагарин
В.Титов
Е.Варенков
У.Шерид
Г.Айвер

Коммунисты. Первый 2. Первые люди в космосе.

53

Космонавтика. Лекция 2. Первые люди в космосе

5

Эллипс ($v_0 > \sqrt{gR}$)

Окружность ($v_0 = \sqrt{gR}$)

Парабола ($v_0 = \sqrt{2gR}$)

Гипербола ($v_0 > \sqrt{2gR}$)

Центр Земли C , радиус R , начальная скорость v_0 .

И - 7,9 км/с для Земли

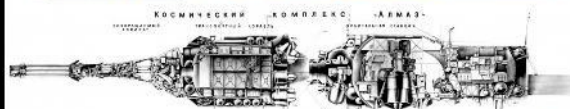
II - 11,2 км/с для Земли

III - ~ 42 км/с для Земли

IV - 220 км/с для Земли

- Космическое Движение 2, Начало

25

A portrait of a man in a military uniform, likely a general, with several medals on his chest. He is wearing a dark jacket over a white shirt and a patterned tie. The background is a plain, light color.

Космическая Пещера 3. Золотой век

58

- Зачем зубы, пасти и красота боевым самолетам – понятно. А зачем шашечки и полосы наносят на ракеты-носители?



Воскресенский, Денис С. Царство

4

Движение тела по окружности.

Закон всемирного тяготения. Три космические скорости.

Космические орбиты. Конические сечения: эллипс, парабола, гипербола. Законы Кеплера.

Закон сохранения импульса.

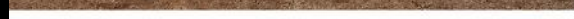
Формула Циолковского. Движение ракеты.

E. G. Gerasimov F. Turetta



28 марта 1955 года Алексей Леонов совершил первый в мире выход в космос

18 марта 1985 года Алексей Леонов совершил полет в мире космоса



Space Exploration Primer

(Introduction history-based course)

1. The Beginning. First rockets and satellites
2. Humans in space. Space Race starts
3. Golden Age of 1960's
4. Moon Race
5. Space settlements: first orbital stations
6. Big crossroad. Salyuts and Space Shuttle
7. Golden Fall. Buran and Mir
8. Big space science. Robotic Solar System exploration
9. Science and applications in the Earth orbit
10. International space station
11. Future of the space exploration
12. Where is the entrance? Starting the space career

<http://press.cosmos.ru/istoriya-i-praktika-kosm-deyat-kurs-payson>

<https://www.youtube.com/playlist?list=PLHCBGdx6NxTuZEjAnQMUR6o2XMwZKXuWI>

Basics of the Space Activities

(13 Master level lectures)

1. Course intro, definitions and principles.
2. Space activities' goals and products, private and public goods.
3. Space actors. Industry/Academia/Government. Public and private involvement. PPP and New Space.
4. Space industry. International status, dynamics and prospects.
5. Space law and regulations.
6. Space programs, planning and strategies.
7. Space economics. Industry structure. Value chains. Research challenges.
8. Space history overview.
9. Space activities of the major global actors: US, ESA/EU, China, India
10. Russian space activities
11. International space market structure, figures and trends.
12. New Space phenomenon and private enterprises.
13. Space activities in the Century XXI: issues, problems, prospects

[**http://www.payson.ru/msu2020-2021/index2021.html**](http://www.payson.ru/msu2020-2021/index2021.html)

Main Publications

1. Payson, D. and Kosenkov, I. (in press). Changing Dynamics in Russia's Space Economy. In A. P. D'Costa (Ed.), Oxford Handbook of New Space Economy. Oxford University Press.
2. Payson, D. (in press). Space Industry Ecosystem In A. P. D'Costa (Ed.), Oxford Handbook of New Space Economy. Oxford University Press.
3. Payson, D., Paikowsky, D., Falkov, Ya. Orchestrating Power: The Cultural–Institutional Nexus and the Rise of Digital Innovation Ecosystems in Great Power Rivalry //Systems (in press)
4. Payson, D. New Space and Newest Space // Outer Space Future for Humankind: Issues of Law and Policy. Vol.26 in Essential Ail and Space Law series / The Hague: Eleven, 2021. - 460 p. - pp.31-50. URL: <https://www.boomdenhaag.nl/en/webshop/outer-space-future-for-humankind>
5. Payson D., Frolov I. Multi-Level Structure of The International Space Market and Analysis of Labor Productivity in the Rocket and Space Industry //Cosmic Research. 2020. vol. 58. No 3. pp. 218-226. URL: https://www.researchgate.net/publication/341908299_Multi-Level_Structure_of_the_International_Space_Market_and_Analysis_of_Labor_Productivity_in_the_Rocket_and_Space_Industry
6. Payson D. et al. The Mishin Diaries, A New Significant Primary Source of Space History Information // Acta Astronautica.2016. v.123. pp.192-199. <https://www.sciencedirect.com/science/article/abs/pii/S0094576515302551>
7. Payson D.B. Space Activity: Evolution, Organization, Institutions - M. : Book House LIBROCOM, 2010, 2nd ed. 2013. - 312 p. (in Russian).
8. Payson D.B. Technical policy of creation of space segment of satellite communication systems. - Moscow, MAI, 2005 - 100 p. (in Russian)

Skolkovo Foundation, national innovation development hub

**Dmitry was Deputy Director of Space and
Telecom Cluster ib 2011-2016**

Since 2010 Russia develops an innovation center
Skolkovo in Moscow South-West outskirts



Skolkovo City of Innovations

SkolTech
Campus



Matryoshka
Business Center
(investment
project)



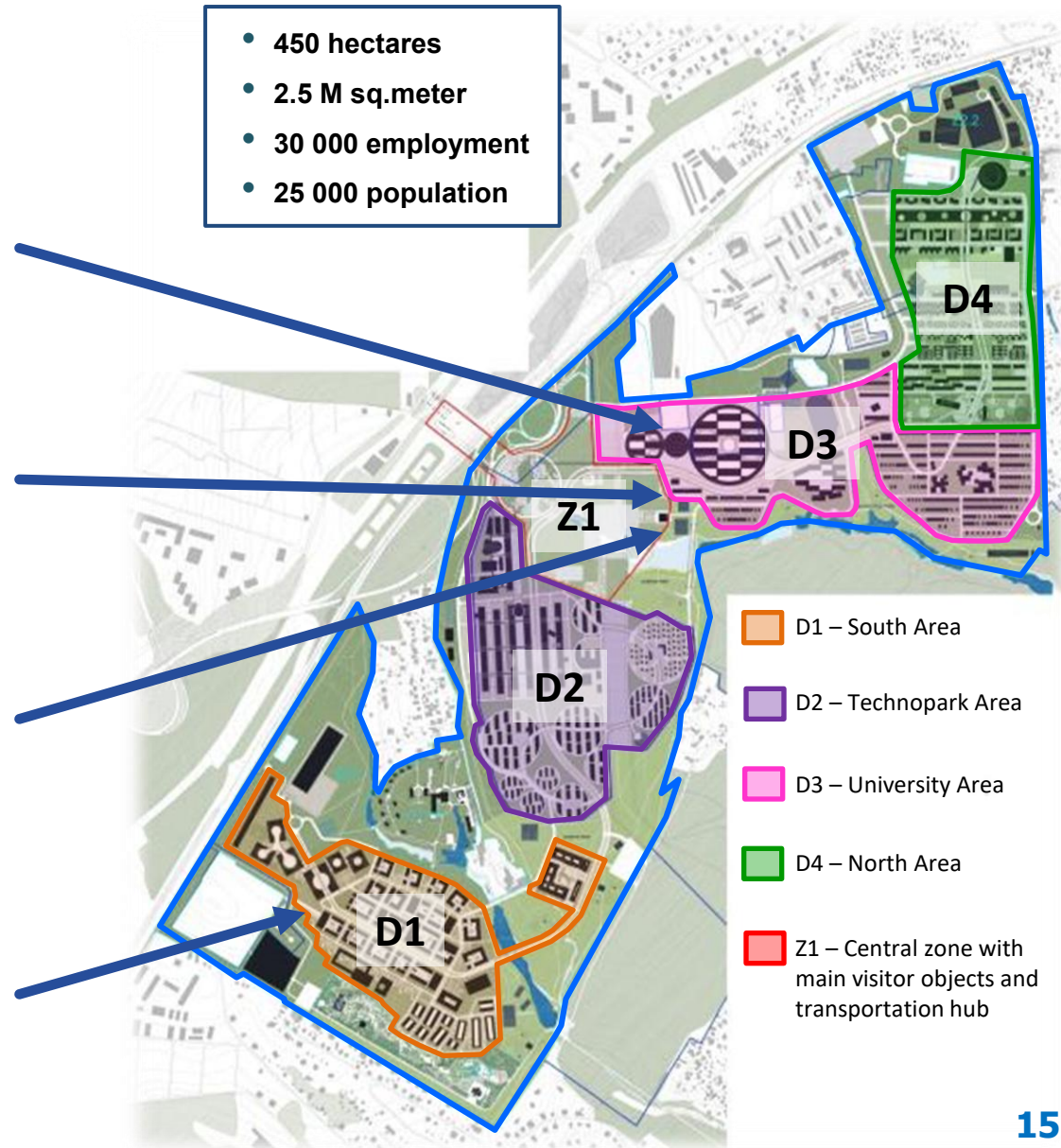
Hypercube
(opened Fall 2012)



Technopark
Office Center



- 450 hectares
- 2.5 M sq.meter
- 30 000 employment
- 25 000 population



Space Technologies and Telecommunications Cluster early development (2010-2013)

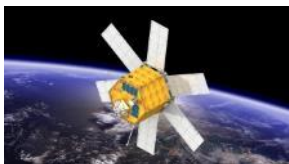
116 participants

€ 24 M revenue in 2013

740 employees

4 industrial partners

Domains of excellence for Skolkovo Space Cluster participants



AZMERIT

DAURIA
AEROSPACE

СПУТНИКС

sense:space



Small satellites and smallsat subsystems



PlumSpace



МУЛЬТИСКАН

CLOUDEO

Geoinformation systems and services



Nanotech
express



INDUSTRIAL
GEODETIC
SYSTEMS

SPiRiT Navigation

Навигатор
Группа компаний

Navigation technologies and equipment

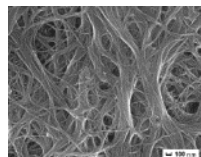


GEOSTAR
NAVIGATION

MULTICLET

ЦЕНТР КОМПЕТЕНЦИЙ
КОСМОС КОМПОНЕНТ

Electronic component base for space and terrestrial applications



CARBON CHG
Composite materials

MicroMechanica

Materials and technologies for aerospace industry



СПЕКТРАЛАЗЕР

ООО «СУХЭ»

УНУ
УНИВЕРСИТЕТ НАУКИ И ТЕХНИКИ

Components and subsystems for terrestrial and space systems

Space Cluster expert pool

Anonymous independent expertise - a key element of decision-making system for Skolkovo participant status assignment and grant distribution

«Core» of Space Cluster expert pool - 138 experts

2/3 – PhDs and Professors

516 experts participate in grant memorandum assessment on particular domains of activities

Expertise (% of total expert number):

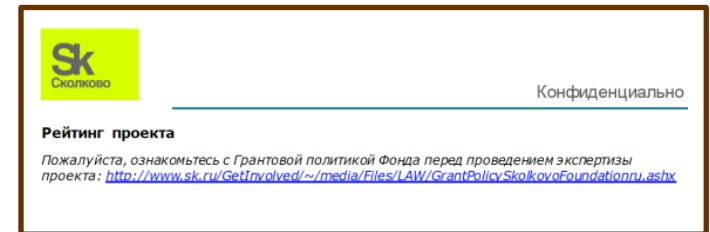
50% - space applications;

20% - manned spaceflight;

35% - space science;

50% - space infrastructure;

30% - commercialization prospectives.



Cluster experts – valuable intellectual resource for both Skolkovo and national space industry

Industrial Partners

	Roscosmos
	Energiya Rocket and Space Corporation
	Reshetnev Information Satellite System
	Dauria Aerospace
	Boeing
	Airbus Corp



In 2012-2013 the agreements are signed between Skolkovo and Boeing Corp. defining Boeing Research Center deployment and International Aviation Academy construction in Skolkovo

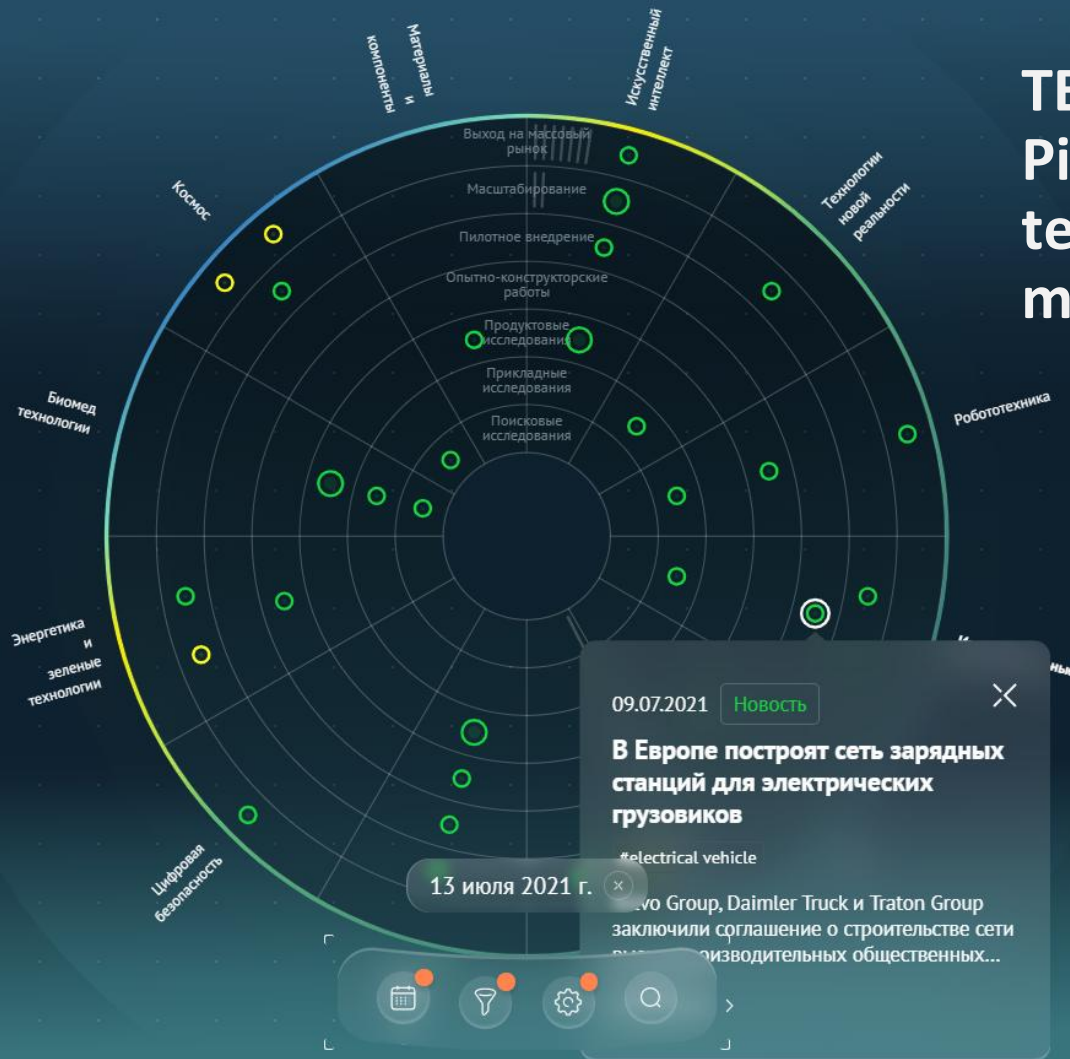


Sberbank Research and Development

**Dmitry was Managing Director for
Research in 2020-2022**

TECHRADAR

Pilot online system for technology news monitoring



Other projects

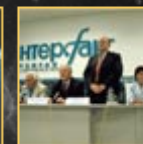
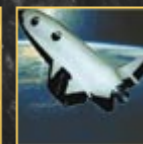
Dmitry organized and lead a number of Russian and international projects in space technologies and space education

Robert A. Heinlein Flight into the Future Project Contest (2007-2009)

ROBERT A. HEINLEIN FLIGHT INTO THE FUTURE PROJECT CONTEST

The Robert A. and Virginia Heinlein Prize Trust is pleased to announce the start of the Robert A. Heinlein Flight into the Future Project Contest. The main goal of the competition is to identify and support talented young researchers and to encourage their innovative activities in space commercial utilization that will help to bring humanity closer to Heinlein's dream of our future in space. The Flight into the Future contest is open to citizens of the European, African, Middle Eastern countries and India who will be under 30 years of age at the time of the award ceremony on July 7th, 2008, which is the birthday of Robert Heinlein. The contest work languages are English and Russian.

Фонд Премии Хайнлайн объявляет о проведении в 2007-2008 гг. международного конкурса молодежных проектов в области космонавтики Flight into the Future / Полет в Будущее. Основная цель конкурса - выявление и поддержка талантливых молодых исследователей и поощрение их творческой активности, направленной на создание инновационных проектов, реализация которых позволила бы приблизить мечту Роберта Хайнлайна о космическом будущем человечества. На конкурс принимаются работы, выполненные гражданами государств Европы, Африки, Ближнего Востока и Индии в возрасте до 30 лет включительно (на момент подведения итогов конкурса - 7 июля 2008 г.). Рабочие языки конкурса - английский и русский.



Flight into the Future Poster is available!
Получите плакат "Полет в Будущее"!



Download Invitation to Participation
Получить Приглашение к участию в конкурсе



Go to Flight into the Future page
Главная страница конкурса "Полет в Будущее"



Go to Heinleinprize.Com homepage
Главная страница проекта "Премия Хайнлайна"



Got questions?..
Вопросы?...



<https://www.heinleinprize.com/programs>

Major Corporate Projects

- Federal Space Program(s) – assorted involvement since 2005
- Lunar exploration, satellite application program design (2005-2011)
- National Contact Point for RU/EU/ESA cooperation (2006-2010)
- Skolkovo Foundation Space Foresight (2012)
- Roscosmos restructuring effort (2014-2016)
- Roscosmos Program for Innovation development (2016-2018)
- Roscosmos professional development programs (2014-2018)
- Roscosmos Venture Fund effort (still on hold)
- Early drafting of SFERA satellite application program (2018)
- Update of Space Activities Licensing system supporting the SME actors (consulting, 2019)
- Drafting the new procedures for ISS Russian segment utilization (consulting, 2019)
- Sberbank Vision 2035 (2020)

Museum & Preservation projects

- ➔ Cosmos Pavilion (VDNKh) – early phase consulting (2015)
- ➔ Moscow Museum of Transportation – exhibition & installations design, curator design, content design (2022-2025)
- ➔ Moscow Polytechnic Museum – curator design (2024)
- ➔ Moscow-Moon 2024 – concept and scenario design (2024)
- ➔ Temporal exhibitions and tender applications
- ➔ Mishin Diaries history preservation project (transcription and publication of Russian Chief Designer diaries)

COSMOS Pavilion



COSMOS Pavilion

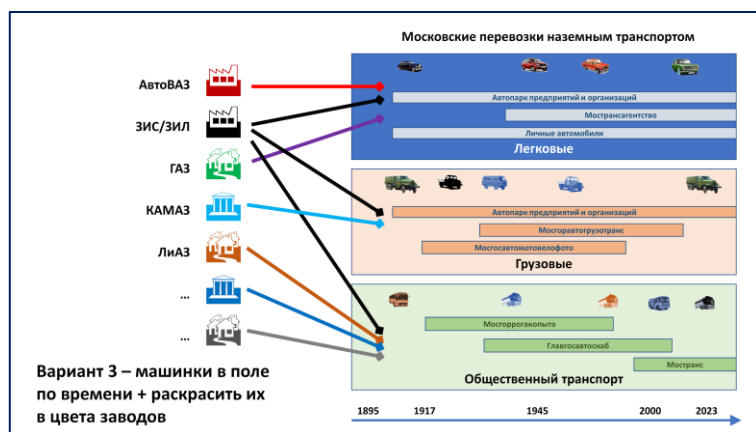


Moscow Museum of Transport



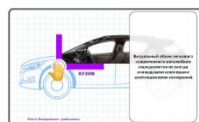
Основные Средства

Moscow Museum of Transport



Сюжет 10.1.2.6 «Токио/Решения часа пик»

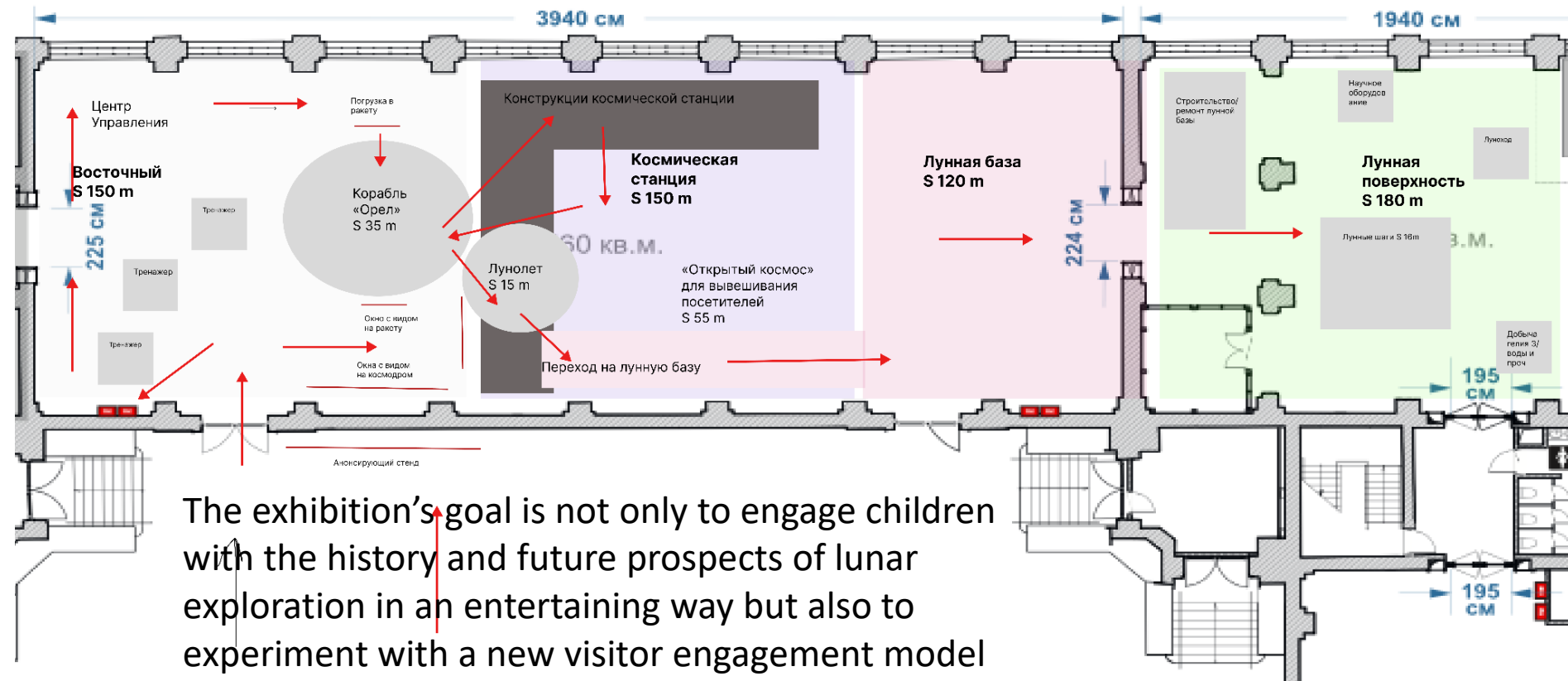
Год	Содержание (тезисы)	Дополнительное техническое описание	Основной сдвиг / мотив для разрыва	Рефы, источники
1927	Первая линия метро запущена в 1927 г. Токийское метро - очень сложное. Операционные работники для независимых операторов (10-минутный и частный), используются три разных колес, сложная система тарификации с транзитными туннелями и перекладами между станциями и возможностью доплатить за проезд в автоматах внутри метро. Самая известная особенность токийского метро - специальные служение «заталкиватели» (pushers) в	В токийском метро используются три разных колес — 1435 мм, 1372 мм, 1067 мм. Первые линии использовали колесо 1435 мм (европейское), но позже была выбрана колес для совместной работы с городской и пригородными метрополитенами. Токийское метро занимает второе место после шанхайского по пассажирообороту (2019), однако отстает от токийской системы национальной городской электрички (на метро приходится 20-25% ежедневного объема перевозок).	Адаптация токийского метро к работе в час пик: разметка станций для ожидания, работа «заталкивателей»	Билет системы токийского метрополитена Станция Токио (1927 г.) Современная станция Возвращение 1



Примерная раскраска

№	Время	Текст	Инфографика	Референсы и источники изображений
1	00.00-00.05	Визуальный облик современного легкового автомобиля определяется ключевыми пропорциями. Именно от них зависит «характер» автомобиля	Часть салона под рейсиной в разрезе Базовая машина в линиях без морфинга	
2	00.05-00.11	Dash to Axle: Расстояние между приборной доской (передней кромкой лобового стекла) и осью переднего колеса. Его называют также «расстояние престижа»	Базовая машина без морфинга, показано измерение DLA	

Moscow-Moon 2044



The exhibition's goal is not only to engage children with the history and future prospects of lunar exploration in an entertaining way but also to experiment with a new visitor engagement model centered around introducing characters into the narrative. This approach aligns the exhibition's storytelling with literary and cinematic techniques, creating a dynamic plot filled with events, surprising twists, and opportunities for visitors to connect and identify with the characters.

Moscow-Moon 2044



A group of scientists and several space tourists are sent to the lunar base. Among the scientists is the **Daughter** — a graduate student at the lunar university, gathering material for her research work. The spacecraft is piloted by the **Father** — an experienced cosmonaut pilot who, in fact, should have retired by now, but took advantage of the shortage of personnel on tourist flights and works as a pilot-guide (most cosmonauts dislike being distracted by tourists' silly questions, but the Father “stays in the game” by accepting this). The **Dog** accompanies the Father as his assistant. Having a group of scientists and tourists allows the Father to delegate explanations of many flight details, and, moreover, visitors to the exhibition can take on their roles themselves.

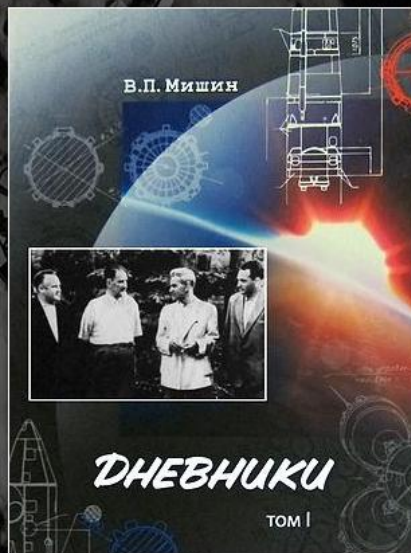
Moscow-Moon 2044





Дневники ВАСИЛИЙ МИШИН

The Diaries of VASILY MISHIN



Василий Павлович Мишин (1917-2001) – выдающийся российский ученый, один из основоположников практической космонавтики. В 2014 г. изданы «Дневники» В.П.Мишина – обширный массив исторической информации «из первых рук».

Издание «Дневников», подлинник которых находится в собственности Фонда Росса Перо и был предоставлен МАИ для расшифровки, стало возможным благодаря ученикам, соратникам, родным Мишина, историкам и энтузиастам космонавтики. Среди них – О.М.Алифанов, Ч.Вик, Д.Вудс, В.Ю.Данилов, Е.В.Данилова, М.Ю.Данилова, М.В.Матвеева, В.В.Хубаева, К.В.Мишина, Н.И.Мишина, И.М.Моисеев, Д.Б.Пайсон, В.С.Рачук.

Сегодня открыт свободный доступ к электронной версии «Дневников».

NEW Дополнительные материалы, включая "Взгляд с Запада" Ч.Вика

Vasily Mishin (1917-2001) was a prominent Russian engineer and scientist: one of the founders of the reality of spaceflight. In 2014 the Mishin Diaries have now been published and can serve an extensive source for the first-hand historical information.

The original Diaries manuscripts are now owned by the Perot Foundation and was generously provided by them to the Moscow Aviation institute for this transcription project. The actual publication was made possible by Mishin's students, coworkers, family members as well as spaceflight historians and enthusiasts, including Oleg Alifanov, Elena Danilova, Maria Danilova, Vasily Danilov, Maria Matveeva, Kira Mishina, Nina Mishina, Vera Knubaeva, Ivan Moiseyev, Dmitry Payson, Vladimir Rachuk, Charles P.Vick and David Woods

The digital version of the Diaries is available from this page.

NEW The Mishin Diaries – A western perspective by Charles P.Vick



DOWNLOAD VOL.1

DOWNLOAD VOL.2

DOWNLOAD VOL.3

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