



Creation of a Regional Educational Centre for Space Science and Technology

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ROSCOSMOS TODAY



Roscosmos comprises of 98 enterprises employing more than 200.000 people



Rocket & Space Industry

Space rocket & spacecraft manufacturing



Ground Test Facilities

Space rocket testing

Plesetsk,
Baikonur (rent),
Vostochny



Spaceports



128 spacecraft deployed over the last 10 years



National system of launch vehicles



Ground stations
(15 Command & Tracking Stations,
>100 Command & Tracking Systems)

Spacecraft control



Receiving & primary data processing

**Downlink stations,
subscribers' terminals**



**Social and economic domain;
Scientific research;
National security;
International cooperation**



Design and R&D



Application of space activity outputs

THE RUSSIAN FEDERAL SPACE PROGRAMME: RESULTS AND PROSPECTS



2015

SPACECRAFT

Communication, broadcasting and relay: **32**

Earth observation: **8**

Fundamental space research: **1**

HUMAN FLIGHTS

ISS RS modules **5**

Soyuz-TMA **2**

Progress-M **1**

Total 128 SC launched within 10 years.

Groundwork has been laid for creating a new generation human transport complex as a part of the complex of human spacecraft for missions to the Earth orbit and beyond

Division for contact and remote sensing of the lunar surface has been established

Facilities of the first phase of Vostochny construction have been built

Formation and maintenance of the desired orbital spacecraft constellations, providing services for the socio-economic domain, scientific and international cooperation, protection of population and territories from emergency situations of natural and man-made disasters, as well as implementation of the human program, establishment of launch vehicles and equipment, laying scientific and technical groundwork for promising space systems

2025

SPACECRAFT

Communication, broadcasting and relay: **41**

Earth observation: **23**

Fundamental space research: **4**

HUMAN FLIGHTS (2024)

ISS RS modules **7**

Soyuz-MC **2**

Progress-MC **1**

It is planned to launch 155 SC within 10 years.

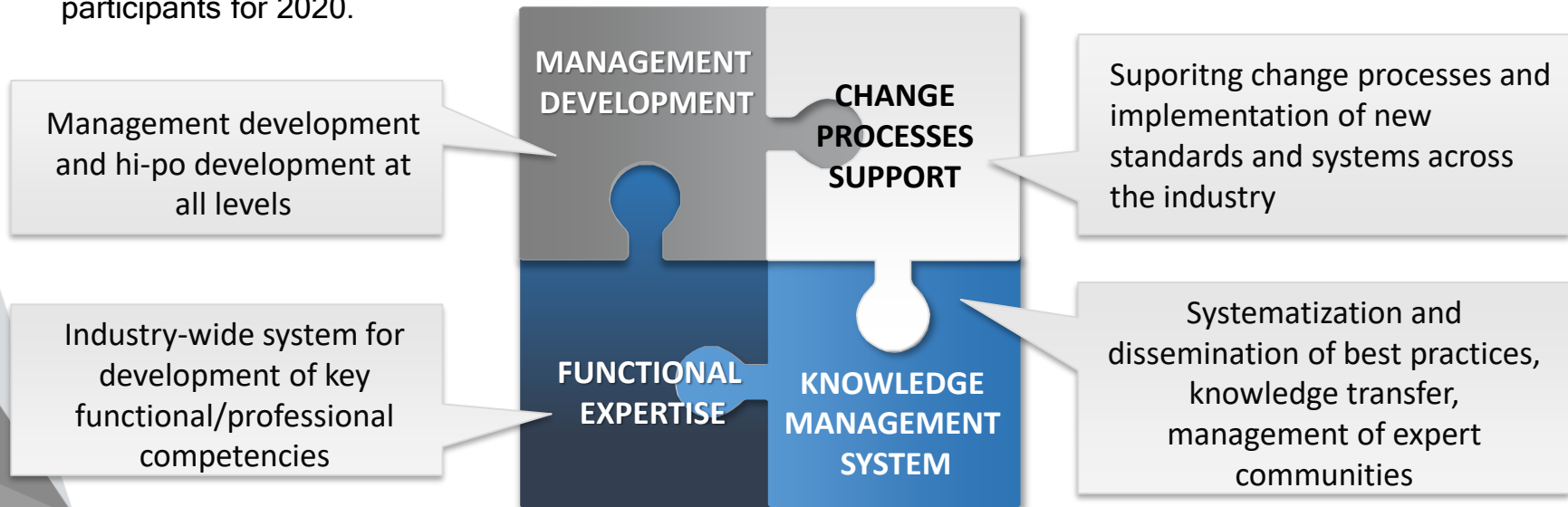
The first phase of the lunar program, which provides for 5 spacecraft launches (1 reserve), including Luna-Glob, Luna-Resurs-1 (one orbiter, two landers - primary and backup), Luna-Grunt

Functioning of the Space Launch Complex for the light, medium and heavy class LVs at Vostochny, laying the basis for a prospective LV (including super-heavy class)

ROSCOSMOS CORPORATE ACADEMY



- An industry-wide **corporate training centre** created in 2016 by the decision of Roscosmos Management Board and Roscosmos Steering Committee
- Internal service provider for **key human capital development projects** of Roscosmos (e.g. Hi-Po, talent development and succession pool training for senior management positions, “Chief Designer School” etc)
- Currently based in the city of Korolev, but will be relocated to the new office Moscow in 2018
- More than **4500 participants** of various training events per year (expected in 2017) with a **goal of 15000+** participants for 2020.



ROSCOSMOS CORPORATE ACADEMY: KEY PRODUCTS & SERVICES



1

EMPLOYEE ASSESSMENT:

- Assessment and selection of Hi-Po (all levels)
- Transfer of assessment tools and methods to Roscosmos enterprises
- Assessment at the time of appointment
- Assessment of professional knowledge and skills

2

MANAGEMENT TRAINING:

- Executive development programme
- Training of TOP-management teams
- Management development programmes designed according to individual development plans
- Coaching

3

FUNCTIONAL TRAINING:

- «Chief Designer School»
- «Chief Technology Manager School»
- Space industry projects and program management
- Quality management and standardization in space industry
- Modern manufacturing technologies space industry
- Space industry procurement
- IT in Space industry
- Human Resources management
- Economics, finance and investments
- Corporate management
- Specialized programs on demand

SUCCESSION POOL AND Hi-Po TRAINING:

- Strategic succession pool training
- Enterprises succession pool training
- Young leaders development program
- Special training for high-skilled graduates

4

ROSCOSMOS PRODUCTION SYSTEM (LEAN) TRAINING:

- Multilevel education and certification program
- Management teams and LEAN—leaders sessions
- Production systems mentors and in-house LEAN-training development programmes
- LEAN in R&D

5

RESEARCH AND DEVELOPMENT, CONSULTING:

- Development of training programs, methods, set of educational and methodological materials
- Interactive training instruments: business games, business simulations
- Assessment methods and tools, test materials
- HR consulting and research

6

ORGANIZATIONAL SERVICES:

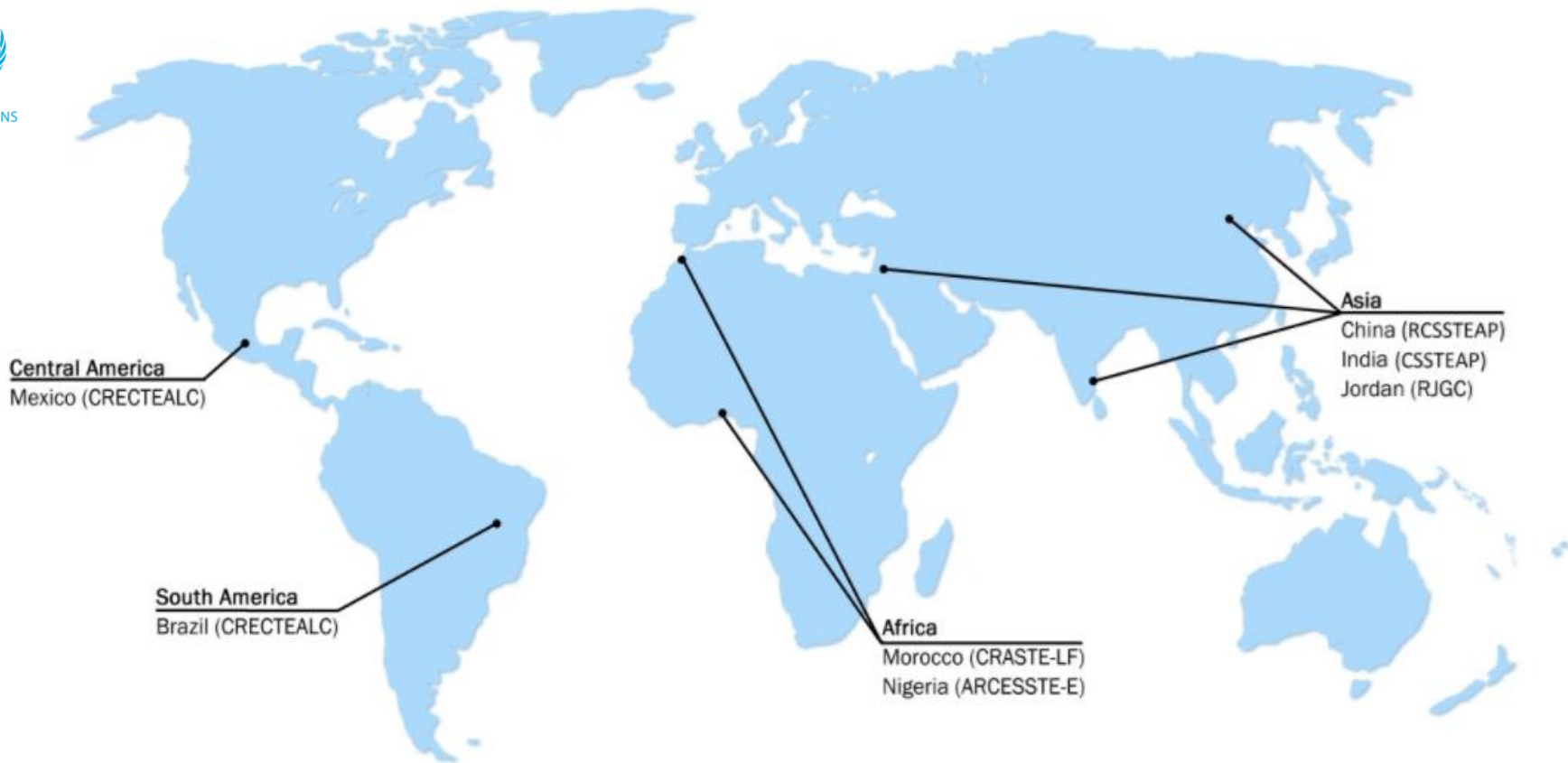
- Organization of industry conferences, meetings and strategic sessions
- Management team building events
- Competitions and conferences for youth
- Crowdsourcing projects

7

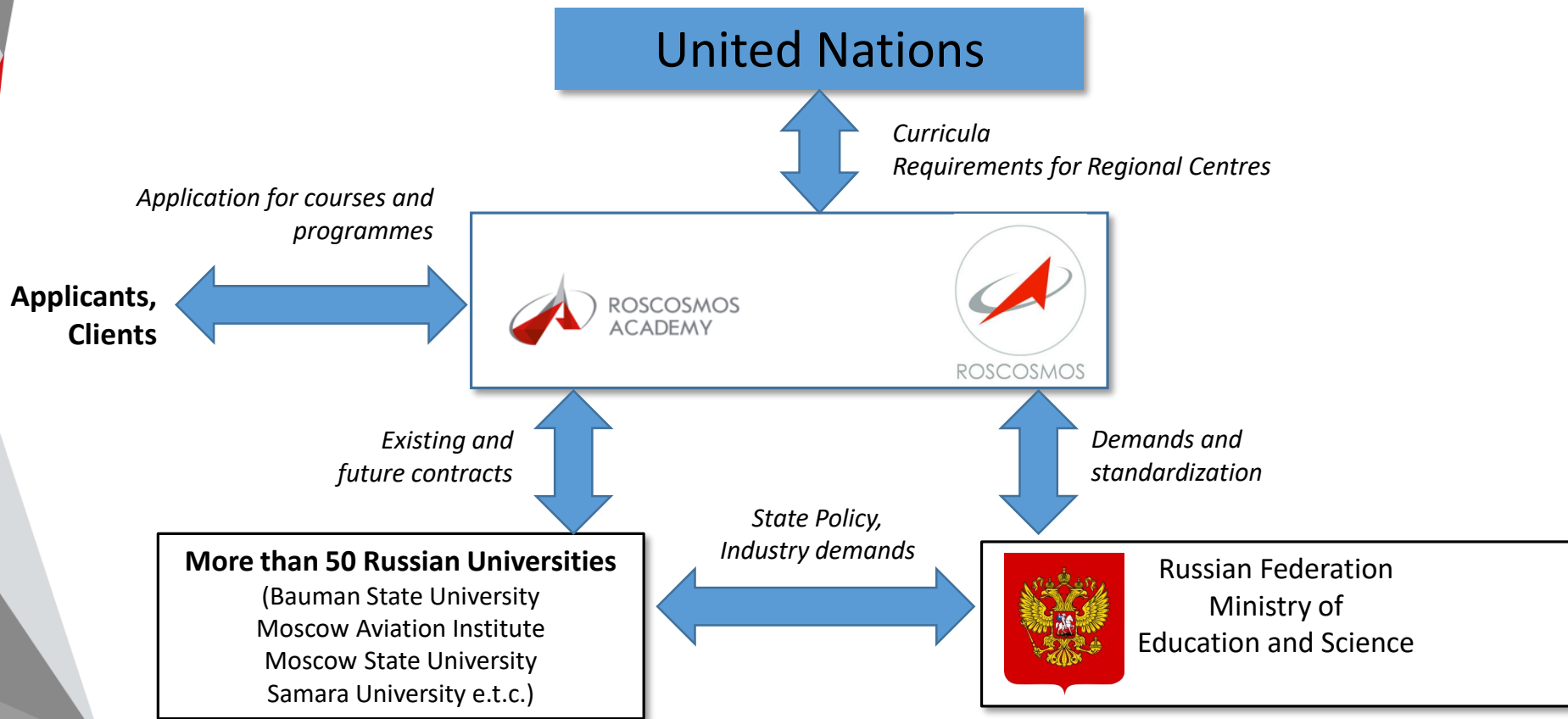
REGIONAL CENTRES FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION (AFFILIATED TO THE UN)



UNITED NATIONS



NEW REGIONAL CENTRE: THE SCHEME



BENEFITS FOR KEY STAKEHOLDERS: WHAT EACH STAKEHOLDER WILL GET?

- **UN:**
 - A reliable partner for the UN-affiliated Regional Centre located in European part of the World and supported by one of the key players in the space industry - “Roscosmos”
 - Reinforcement of the existing network of Regional Centres
 - No financial support is requested from the UN
- **RF Ministry of Education and Science:**
 - Opportunity for translation of the state policy in space education and science
 - Opportunity for using internationally recognized standards for curricula and training materials
- **State Corporation “Roscosmos”**
 - Translation of the state policy
 - Additional way of accessing new and emerging countries
 - Promotion of GLONASS navigation system
- **Higher Educational Institutions (Moscow, Samara, Krasnoyarsk etc):**
 - Opportunity to take part in course development and delivery without much involvement in administrative and organizational issues
 - Access to international partners (universities, space agencies etc)
- **Potential clients of Regional Centre**
 - One “gateway” to access the expertise of Roscosmos and its enterprises as well as leading Russian universities

Thank you!

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