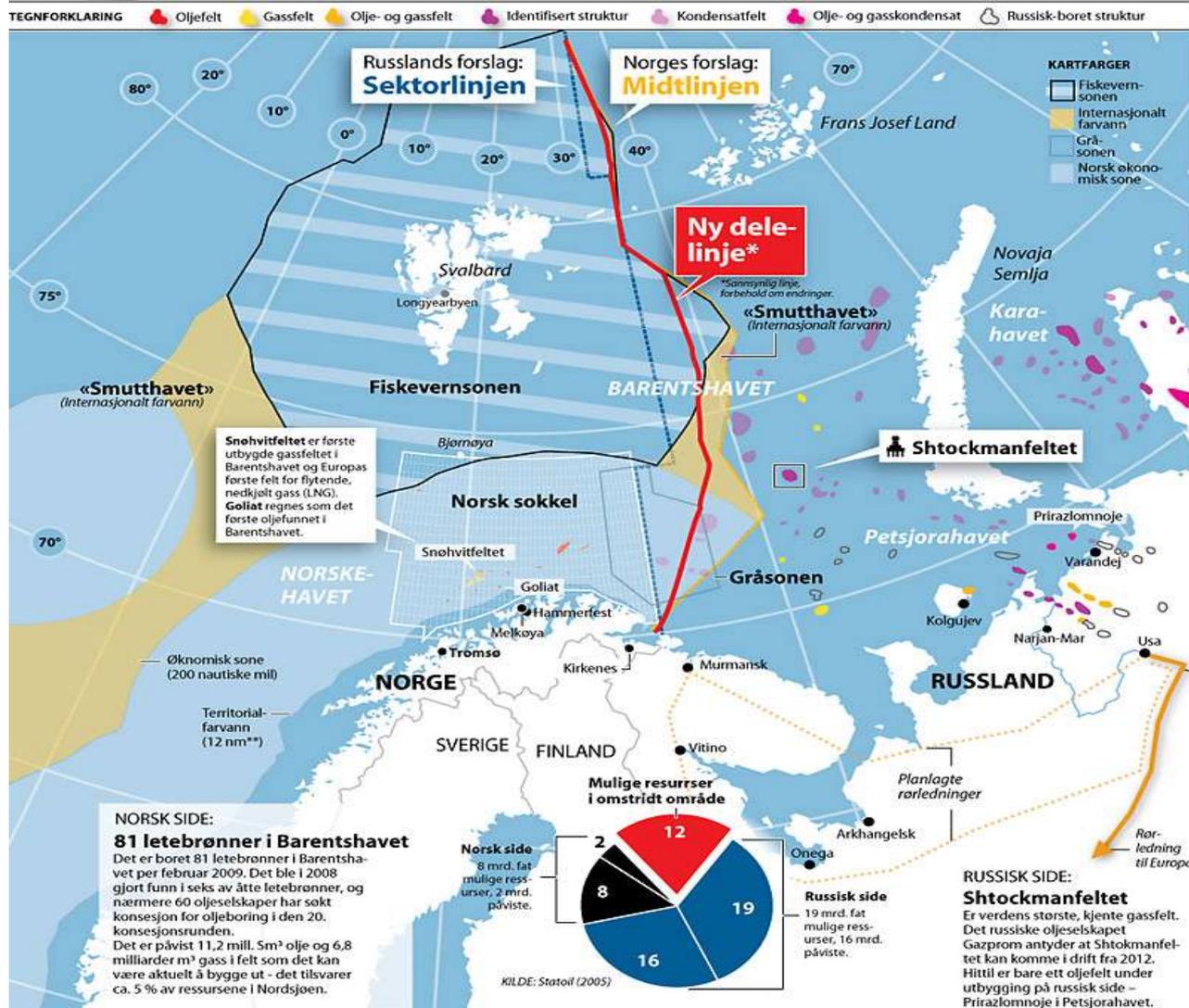




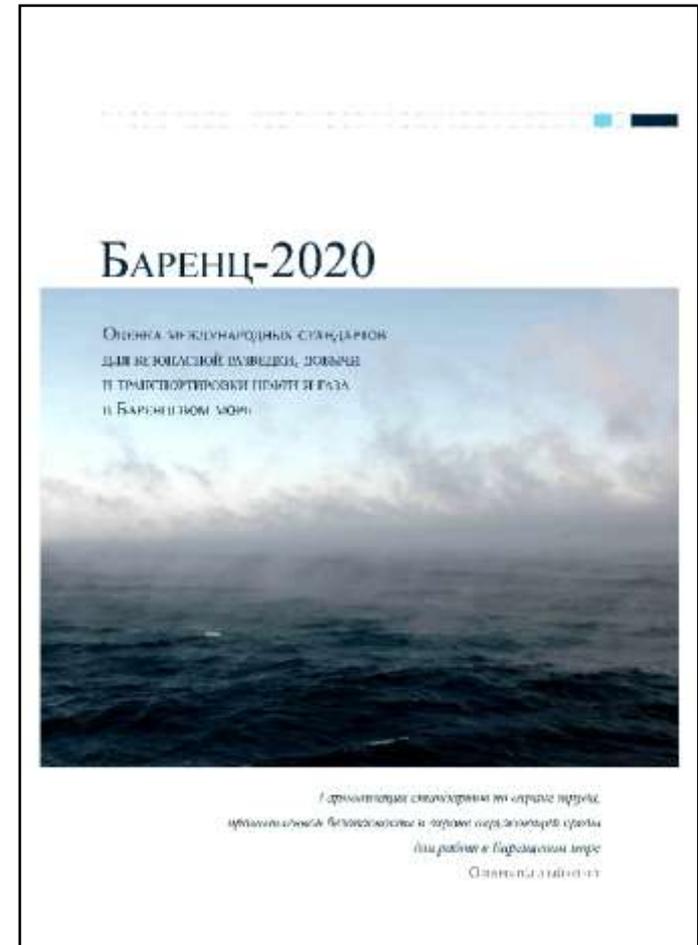
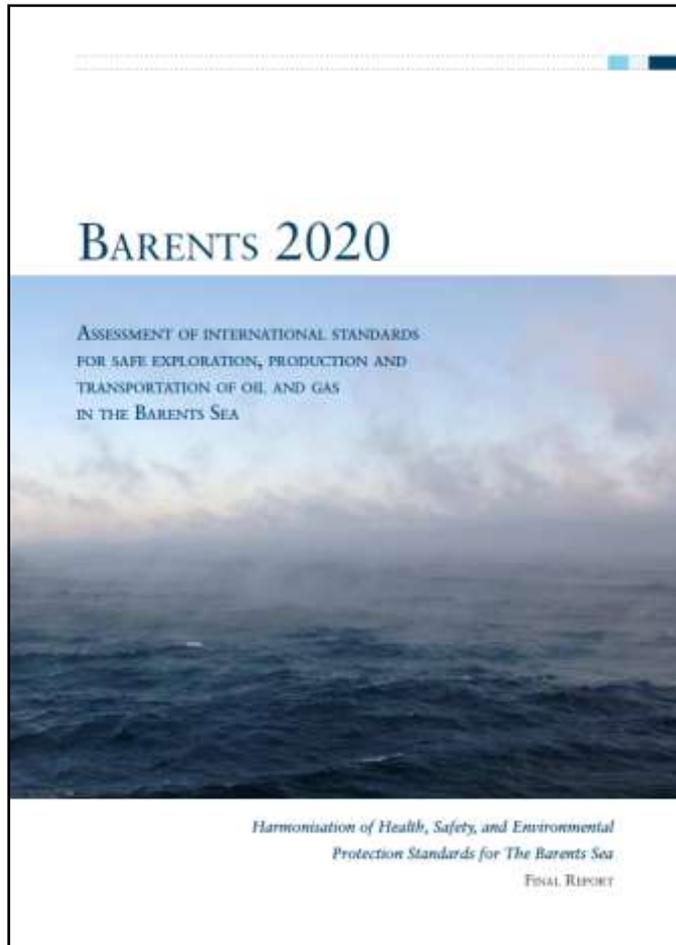
Key Tendencies and Areas for Energy Developments of Russian Arctic Zone and their Pressure for Geoecological Risks Established Early

Roman Samsonov
Head of Gas and Arctic
SKOLKOVO
Energy Center
Salekhard, 1 of November 2017

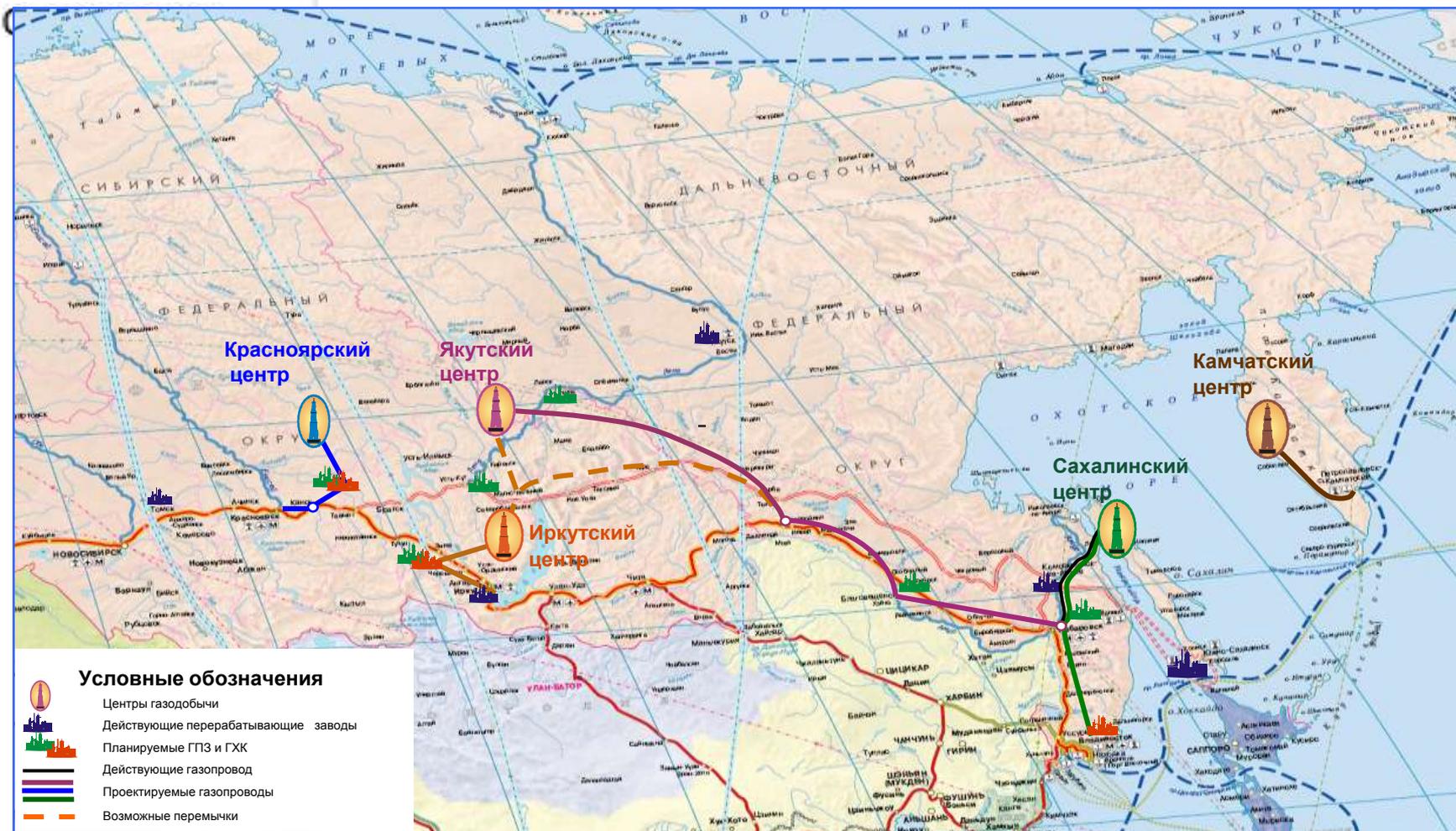
Barents 2020



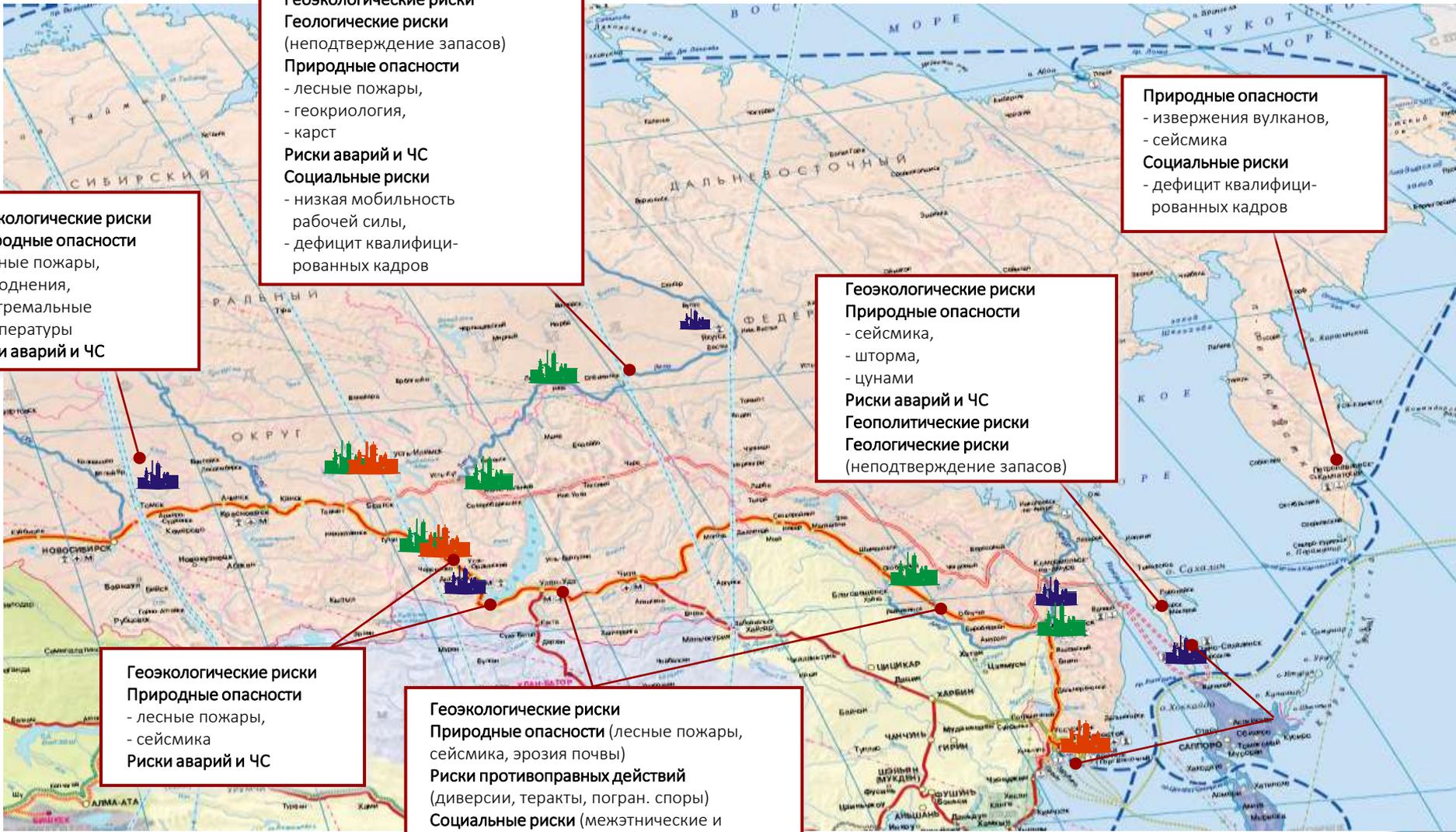
Results of Barents 2020



Gas Resources Developments Map Eastern Siberia and Far East



Projects risks of Eastern Siberia and Far East Developments



Геозжологические риски
Геологические риски
 (неподтверждение запасов)
Природные опасности
 - лесные пожары,
 - геокриология,
 - карст
Риски аварий и ЧС
Социальные риски
 - низкая мобильность
 рабочей силы,
 - дефицит квалифици-
 рованных кадров

Природные опасности
 - извержения вулканов,
 - сейсмика
Социальные риски
 - дефицит квалифици-
 рованных кадров

Геозжологические риски
Природные опасности
 - сейсмика,
 - шторма,
 - цунами
Риски аварий и ЧС
Геополитические риски
Геологические риски
 (неподтверждение запасов)

Геозжологические риски
Природные опасности
 - лесные пожары,
 - наводнения,
 - экстремальные
 температуры
Риски аварий и ЧС

Геозжологические риски
Природные опасности
 - лесные пожары,
 - сейсмика
Риски аварий и ЧС

Геозжологические риски
Природные опасности (лесные пожары,
 сейсмика, эрозия почвы)
Риски противоправных действий
 (диверсии, теракты, погран. споры)
Социальные риски (межэтнические и
 межнациональные конфликты)

Space monitoring

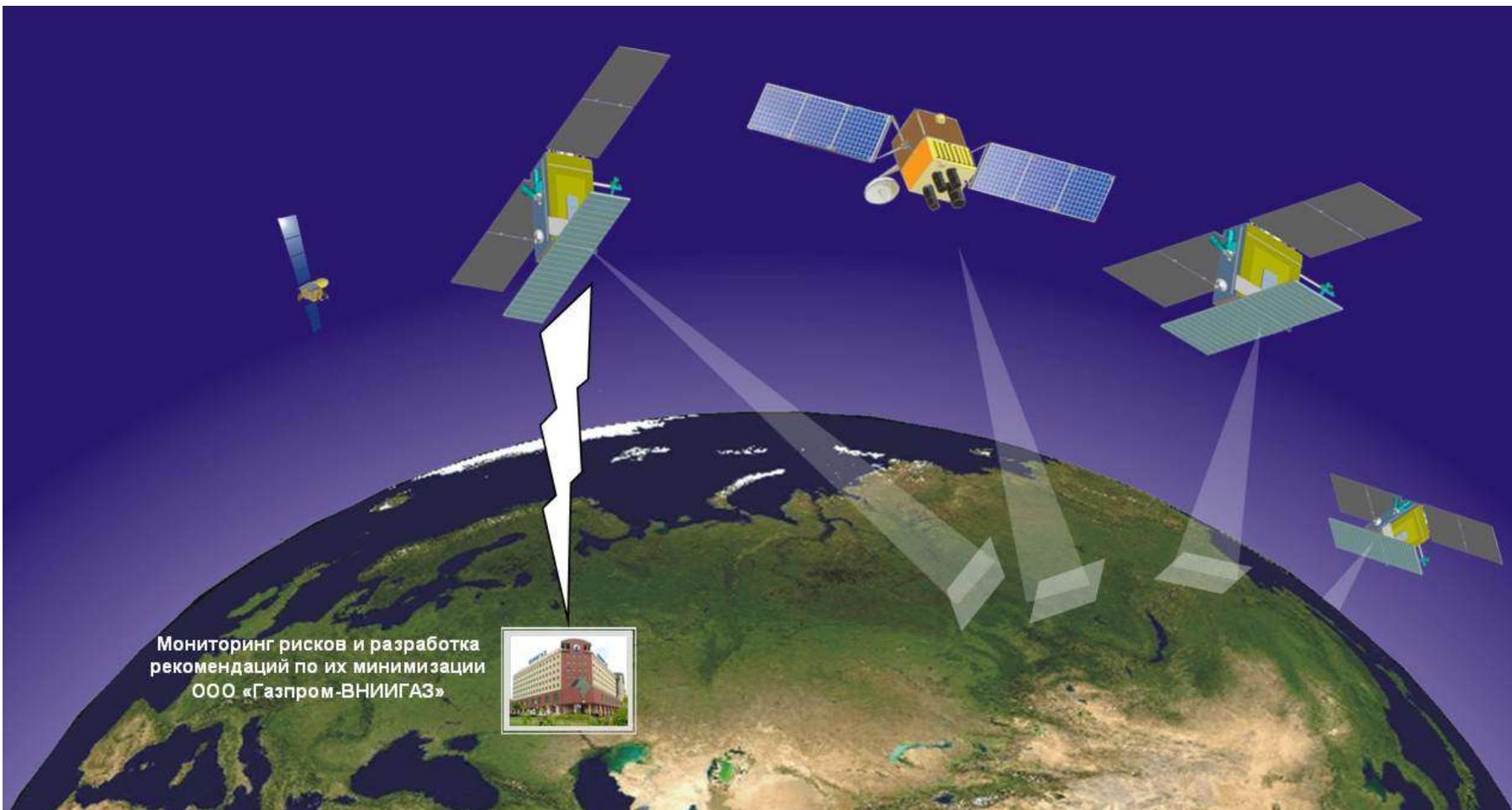
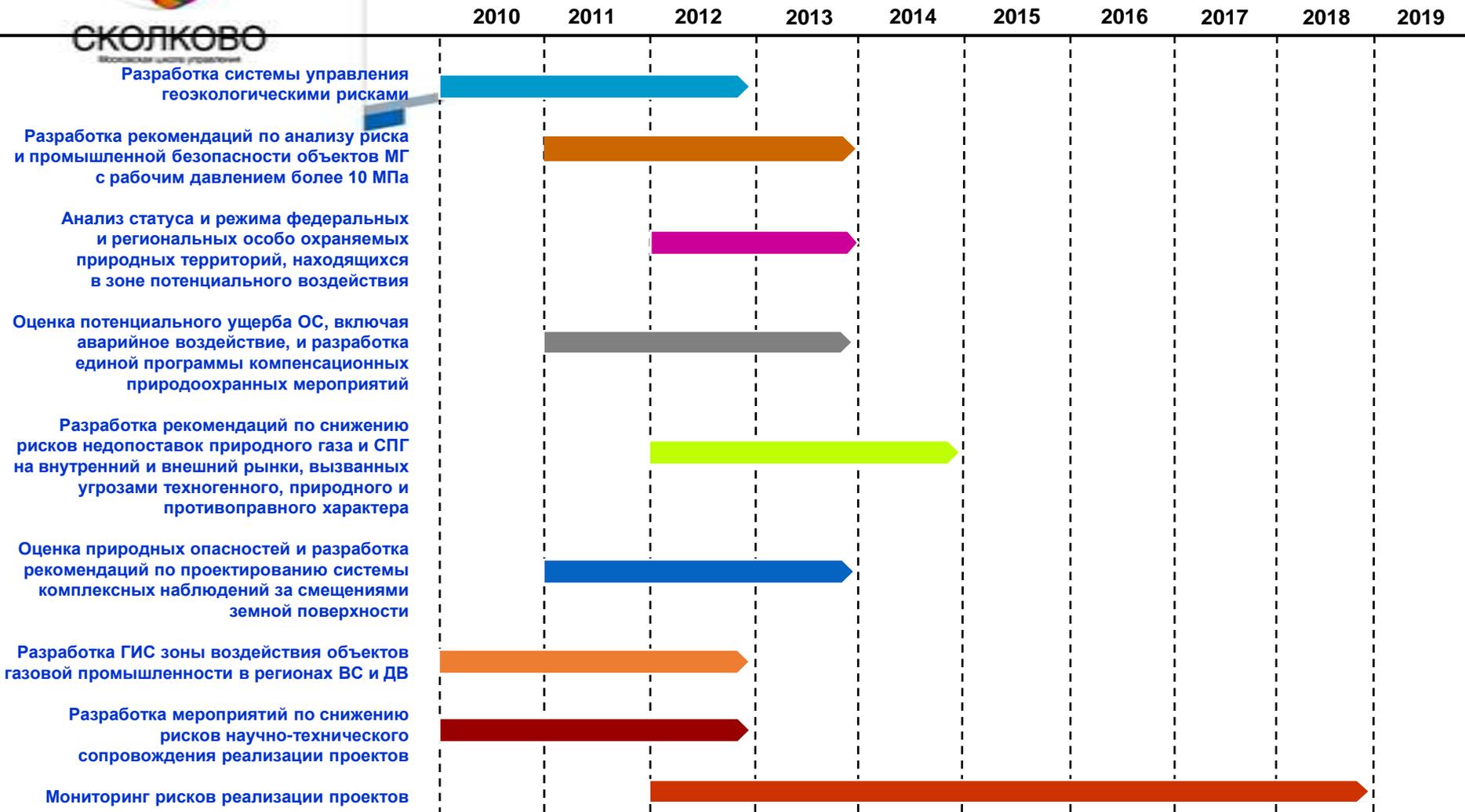


График реализации мероприятий -

Оценка и управления рисками реализации проектов



Major Activities



Open Research



- We conduct research on the most pertinent energy sector issues, utilizing top Russian and international experts
- Our research is publicly available, and distributed both in Russian and in English



New energy policy



New technologies and energy sources



New business models and company strategies



Global oil market transformation



Transform global gas markets



New mobility



Internet of Energy

Outreach

- Open lectures on energy issues with the world's leading experts
- Expert roundtables
- Internships and scholarships for students
- Summer schools
- Youth forums
- Programs for high school students
- Conference presentations
- Social media, YouTube





Educational Programs

- The target audiences for our Energy Center educational programs are high-level energy company personnel, including both operational and top-level management
- Our educational programs utilize the results of our consulting activity and our research
- Our educational programs are enriched with the expertise of the Energy Center team and invited experts of the highest level
- We offer a wide array of educational initiatives, ranging from one-day seminars to more comprehensive long-term programs
- Upcoming programs:
 - ◆ *Joint program with EDI «International Gas Business and Cooperation»*
 - ◆ *Energy Transition*
 - ◆ *Internet of Energy*
- SKOLKOVO has more than a decade of successful experience in implementing corporate programs. We number among our clients both leading Russian and international companies, as well as federal public authorities



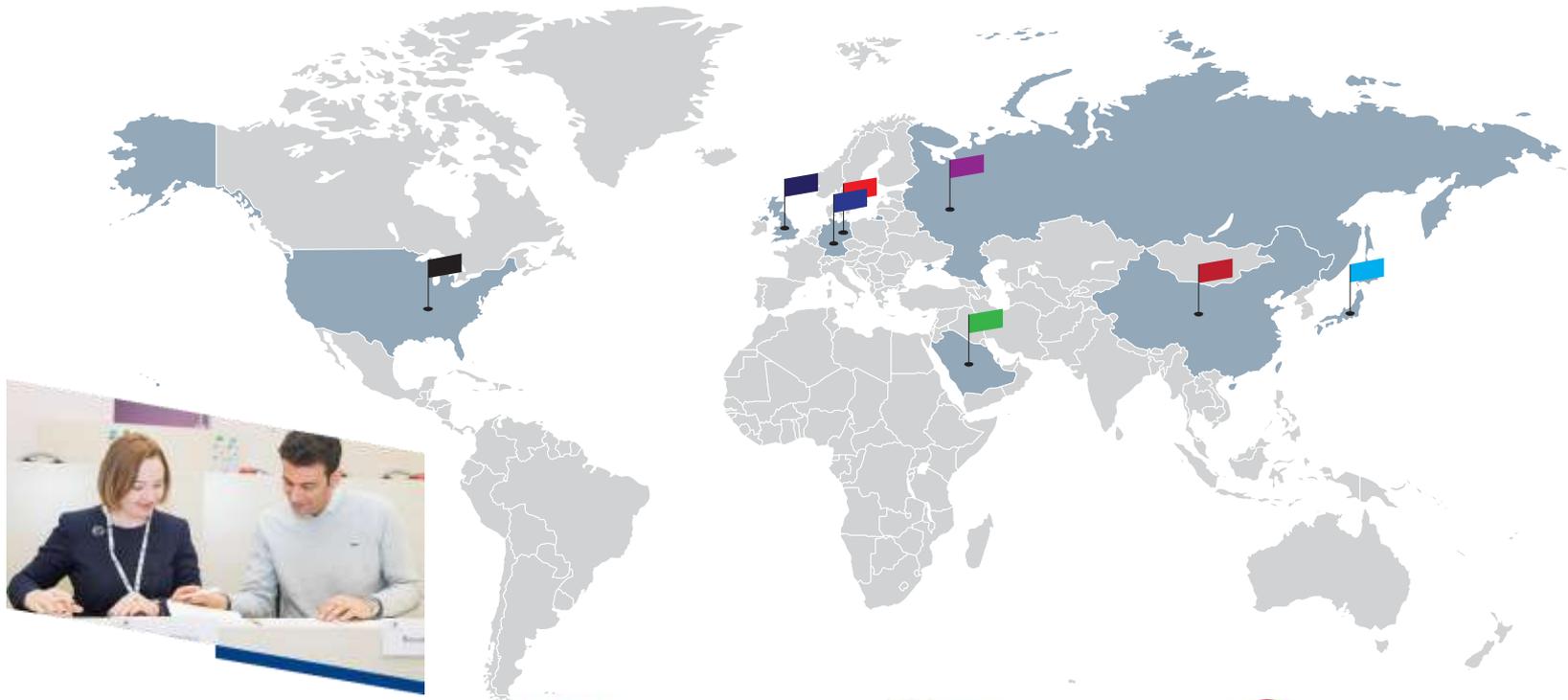
Strategic Consulting for Companies and Public Authorities

- SKOLKOVO Energy Center engages in consultations with energy companies and develops recommendations for balanced sectoral public policy
- Our primary principles – independence and fairness
- Our main directions – market analysis, development of market strategies

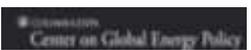
- Our clients gain access to the qualitative expertise of our professional team, and obtain knowledge from **invited researchers** who are drawn from leading expert centers



Partners Network




Oxford institute of Energy



Columbia University, NY



ERI China



KAPSARC, Riyadh



IFRI, Paris



IEE, Tokyo



SKOLKOVO



EAE, Groningen

SKOLKOVO Energy Club

SKOLKOVO Energy Club - a unique project in Russia that encourages industry leaders to exchange views via the platform of the SKOLKOVO Business School. 'Industry dialogues' of the SKOLKOVO Energy Club (e.g., regarding **gas, oil, power utilities**) provide an opportunity to discuss vital questions of the industry agenda via informal discussions

Energy Club Activities:

Foresight sessions

Periodic sessions on essential industry challenges



Energy Dialogues

- SKOLKOVO Energy Center is the best platform for informal international dialogue and expert meetings
- The events 2017:
 - ◆ *Oil Dialog*
 - ◆ *Gas Dialog*
 - ◆ *Russia - EU expert dialogue*
 - ◆ *Arctic dialogue*
 - ◆ *New energy dialogue*



Energy Center TEAM



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Director of the SKOLKOVO Energy Center



Marina Dedenko

Head of Development



Ekaterina Grushevenko

Researcher, Oil & Gas



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