Inter-regional Technical Forum on
Skills for Trade, Employability and Inclusive Growth

Skills Technology Foresight
Building a shared vision of skills development
Dmitry Sudakov Moscow School of Management SKOLKOVO

Siem Reap, Cambodia
30-31 May 2017
Our work on global skills anticipation

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>AGENCY FOR STRATEGIC INITIATIVES</td>
<td>ATLAS OF EMERGING JOBS</td>
<td>SKOLKOVO</td>
<td>BRICS BUSINESS COUNCIL</td>
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<td>International Labour Organization</td>
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<td>GLOBAL EDUCATION FUTURES</td>
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Since 2012: future skills for 25 existing sectors of Russian economy + 9 emerging sectors of National Technology Initiative
Network of learning platforms & STEM clubs for next gen engineers

Ca. 200 jobs of the future (leading career guiding tool that stimulated transformation of Russian secondary & tertiary education)

Methodology of skills anticipation co-developed with International Labor Organizations. Pilot applications in Viet Nam, Armenia, Tunis, Tanzania, South Africa, Argentina

Discussion of skills of the future involving industrial & TVET leaders from ca. 50 countries of the world

Skills development strategy with focus on Industry 4.0 since 2015
Project team

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STF: a tool for the future building

Solid pipeline of successful projects:

- Global Education Futures (USA, Russia, Brazil, Germany, 2015-2016)
- BRICS Skills Development Working Group (Brazil, Russia, 2015)
- ILO: Skills anticipation for metal processing industry and food production sector (Tunisia, 2016)
- Tens of successful foresights in Russia, including National Technology Initiative, Competence Foresight-2030, etc.
Key features of STF

• STF is a participatory method

• STF is integrative and dialogue-building: people from different working domains engage in dialogue and establish a shared vision

• STF is qualitative, not quantitative

• STF is sectoral: it focuses on specific economic industry
Context of work

Crucial need for an integration into global division of labour

Skills development with focus on growing sectors

Growing pressure of global competition for markets and talents

Efforts of the government to kick-start changes in perspective economic sectors

Increasing gap between TVET & HE system and business requirements
How do we think about the skills transformation?

1. Workplace
   - Tool
   - Material
   - Worker
   - Product

2. System of workplaces
   - Coordination and Management
   - Logistic

3. External environment
   - Regulators / Governing Bodies
   - Systems of workplaces
   - Clients

Trends
### Key trends transforming the system

<table>
<thead>
<tr>
<th>Trend</th>
<th>Workplace</th>
<th>Workplace System (eg. factory)</th>
<th>External environment</th>
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<tbody>
<tr>
<td>Automation of public and private sectors</td>
<td><img src="image1" alt="Worker-tool" /></td>
<td><img src="image2" alt="Worker-product" /></td>
<td><img src="image3" alt="Regulators" /></td>
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<tr>
<td>Digitalization of economy &amp; society</td>
<td><img src="image4" alt="Worker-material" /></td>
<td><img src="image5" alt="Worker-customer" /></td>
<td><img src="image6" alt="Classes of consumers" /></td>
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<tr>
<td>Globalization of technological development</td>
<td><img src="image7" alt="Management" /></td>
<td><img src="image8" alt="Logistics" /></td>
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How may the transforming economy look in the next 15-20 years?

Manufacturing sector

- Highly autonomous cyberphysical systems
- Local production based on additive technologies

Service sector

- Digital, AI (and other technologies)-supported
- Technology-supported, customized services with ‘human touch’

Standardized output (largely automated)

Customized output (“human touch”)
FutureSkills initiative as a way to coin new skills

New jobs
Skills for Industry 4.0 and the new economy

Transforming jobs
Skills transforming because of new technologies

Obsolete jobs
What should we do with “redundant people”?

General logic of the Future Skills approach

Shared vision building

Designing demo-competitions

Identifying key gaps in education & training

Changing the training process