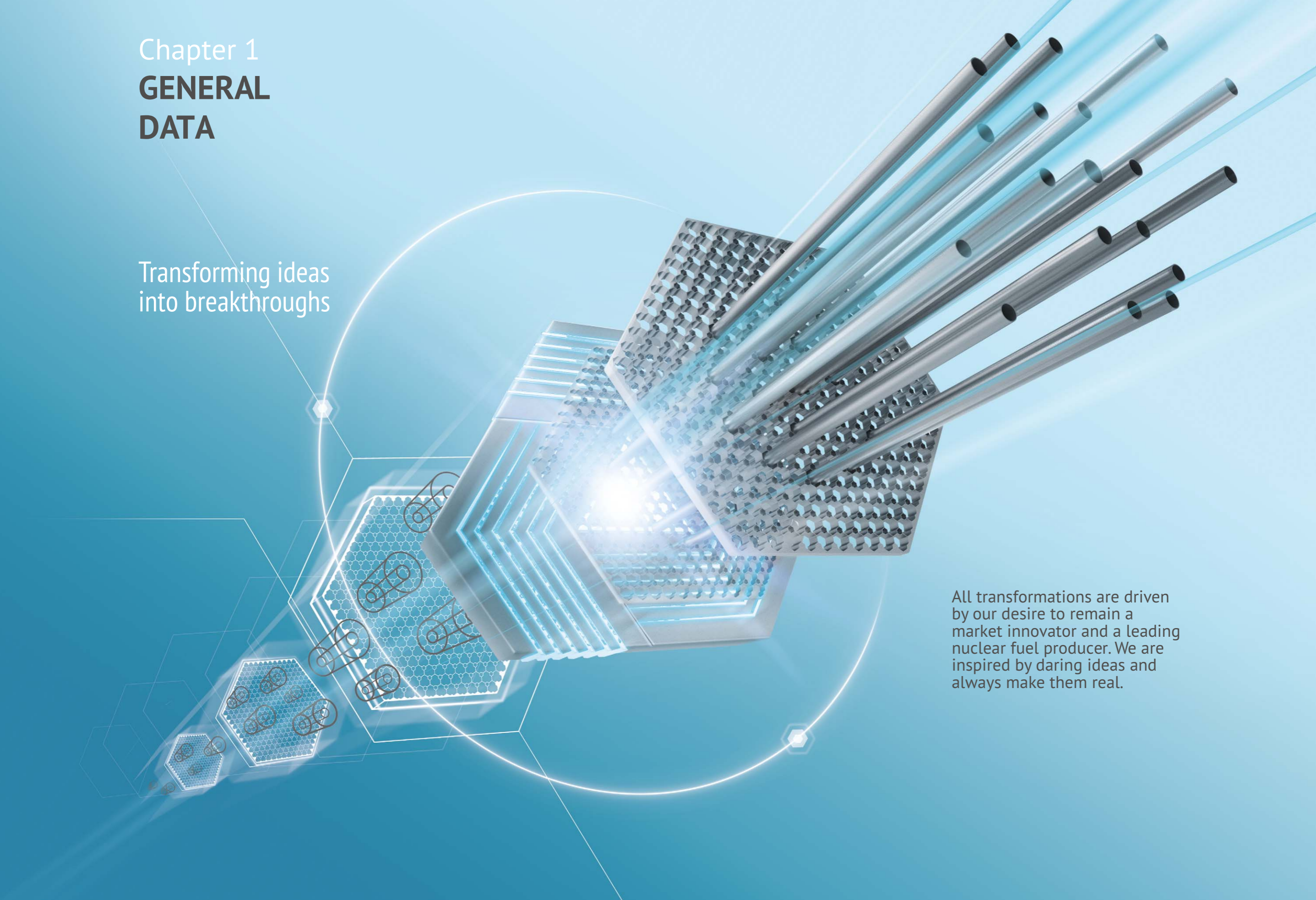


# Chapter 1 **GENERAL DATA**

Transforming ideas  
into breakthroughs

All transformations are driven by our desire to remain a market innovator and a leading nuclear fuel producer. We are inspired by daring ideas and always make them real.



# Chapter 1

## GENERAL DATA

GRI G3.1: 2.1 2.2 2.4 2.5 2.6 3. 2

GRI G3.1: 2.7

### Company Background Information

TVEL JSC – is a parent company of the Fuel Company of ROSATOM State Atomic Energy Corporation.  
 Full name: Joint Stock Company TVEL.  
 Abridged name: TVEL JSC.  
 The company is registered by Moscow Registration Chamber on September 12, 1996.  
 Location: 24, Bolshaya Ordynka Street, Moscow, 119017, Russian Federation.  
 Postal address: 49, Kashirskoe Shosse, Moscow, 115409, Russian Federation.  
 History of the Company: see official website [www.tvel.ru](http://www.tvel.ru).  
 Electronic versions of TVEL FC 2013 Report and prior reports: [http://www.tvel.ru/wps/wcm/connect/tvel/tvelsite.eng/finance/Annual\\_Report/](http://www.tvel.ru/wps/wcm/connect/tvel/tvelsite.eng/finance/Annual_Report/).

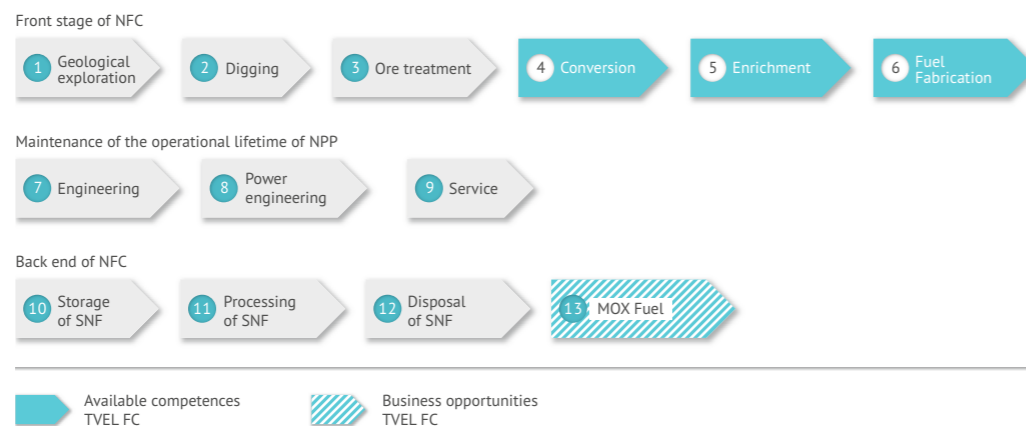
The Fuel Company is comprised of enterprises engaged in nuclear fuel fabrication, uranium conversion and enrichment, production of gas centrifuges as well as research and development organizations.

### Basic Characteristics

The core activity of TVEL FC is development, production and sale of nuclear fuel for power and test reactors in Russia and abroad, as well as of associated nuclear and non-nuclear products in strict compliance with safety requirements: nuclear, radiation,

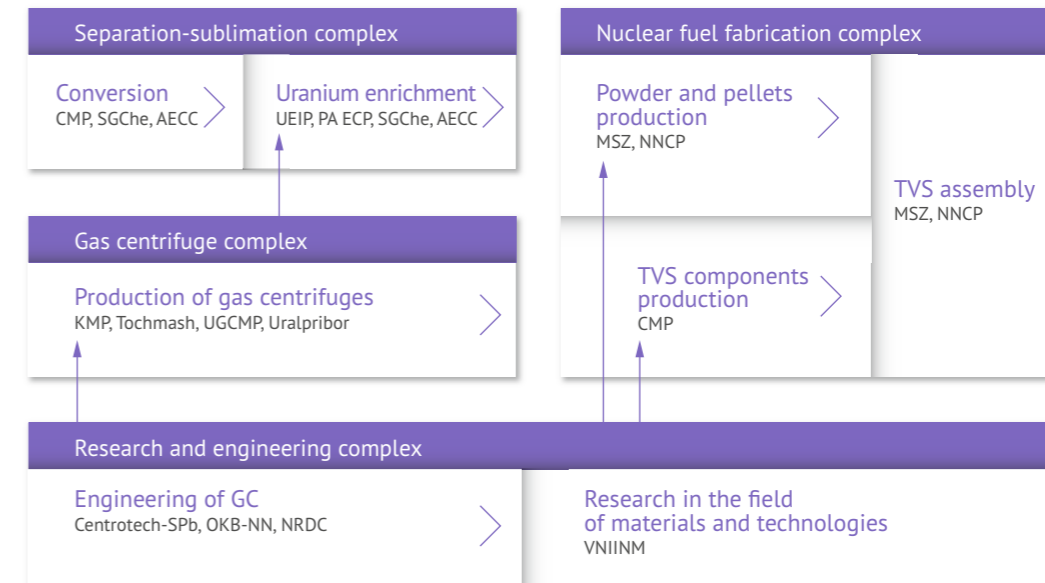
industrial, fire, environmental, labor protection, physical protection of nuclear facilities and readiness for emergency response. TVEL FC takes central place in the structure of ROSATOM State Corporation in terms of the front end nuclear fuel cycle.

Fig. 1. TVEL FC Position in Nuclear Fuel Cycle



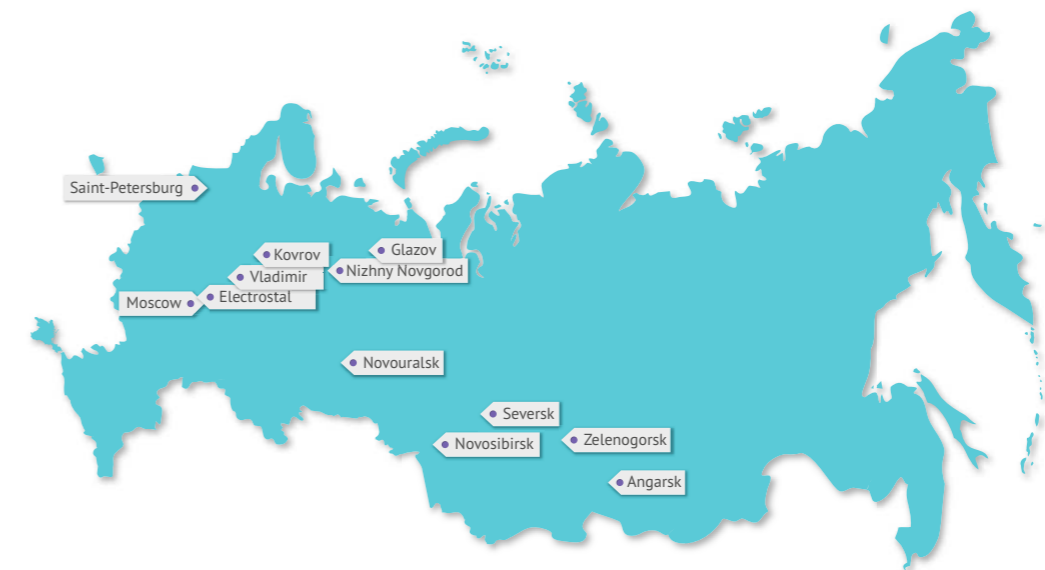
The Fuel Company is the sole supplier of nuclear fuel to Russian nuclear power plants. TVEL FC supplies nuclear fuel to 76 power reactors in 15 countries all over the world, research reactors in 9 countries worldwide and caters to transportation plants of the Russian Nuclear Powered Fleet. One out of every six power reactors in the world runs on fuel manufactured by TVEL FC.

Fig. 2. Specialization of TVEL FC Enterprises in Nuclear Products Manufacture



TVEL JSC is the Operations Management Center of the Fuel Company.

Territory of TVEL JSC enterprises



\* Chapter 1 Section "Place of TVEL FC in the World Market of FE NFC"

The Fuel Company has enterprises all over the Russian Federation.

As far as specifics of social environment are concerned, three enterprises of TVEL JSC are located within Closed Administrative Territorial Units (Seversk, Novouralsk and Zelenogorsk) and one is located within a company town (Glazov) where they happen to be backbone enterprises and major taxpayers\*.

In addition to core business that involves production of nuclear fuel, TVEL FC supplies

to the Russian and international market a wide range of non-nuclear products: zirconium, lithium, calcium, magnets, thin-walled pipes, polishing powders, pinch rolls, zeolite catalysts, superconductor materials, etc.

TVEL FC has proprietary research and development design divisions that contribute to successful operation of hydrometallurgical, metalworking, machine-building and rolling facilities.

GRI G3.1: 2.8

The Fuel Company comprises of four complexes that correspond to type-specific production of the FE NFC.

#### Separation-Sublimation Complex comprises of a group of integrated plants engaged in enrichment and conversion of uranium (Table 2)

- Joint Stock Company Angarsk Electrolysis Chemical Complex (JSC AECC), Angarsk, Irkutsk Region. [www.aecc.ru](http://www.aecc.ru)
- Joint Stock Company Production Association Electrochemical Plant (JSC PA ECP), Closed Administrative Territorial Unit Zelenogorsk (Krasnoyarsk territory). [www.ecp.ru](http://www.ecp.ru)
- Joint Stock Company Siberian Group Of Chemical Enterprises (JSC SGChE), Seversk, Tomsk Region. [www.atomsib.ru](http://www.atomsib.ru)
- Joint Stock Company Ural Electrochemical Integrated Plant (JSC UEIP), Novouralsk, Sverdlovsk Region. [www.ueip.ru](http://www.ueip.ru)

#### Nuclear fuel fabrication complex comprises of industrial enterprises that manufacture nuclear fuel for various reactors (Table 3)

- Joint Stock Company Mashinostroitelny Zavod (MSZ JSC), Elektrostal, Moscow Region. [www.elemash.ru](http://www.elemash.ru)
- Joint Stock Company Novosibirsk Chemical Concentrates Plant (JSC NNCP), Novosibirsk, Novosibirsk Region. [www.nccp.ru](http://www.nccp.ru)
- Joint Stock company Chepetsky Mechanical Plant (JSC CMP), Glazov, Udmurt Republic. [www.chmz.net](http://www.chmz.net)
- Joint Stock Company Moscowpolymetalplant (JSC MZP), Moscow. [www.mzp.ru](http://www.mzp.ru)

#### Gas centrifuge complex is a group of industrial companies producing gas centrifuges and accessories for enterprises of separation-sublimation complex (Table 4)

- Kovrov Mechanical Plant Open Joint Stock Company (KMP OJSC), Kovrov, Vladimir Region. [www.kvmz.ru](http://www.kvmz.ru)
- Joint Stock Company Vladimir Production Association Tochmash, Vladimir, Vladimir Region. [www.vpotochmash.ru](http://www.vpotochmash.ru)
- Limited Liability Company Ural Gas Centrifuge Manufacturing Plant (UGCMP Ltd.), Novouralsk, Sverdlovsk Region

\* More details about TVEL FC activity within the special regions of presence see Chapter 4 Section "Development of the Regions of Presence".

#### Research and engineering complex (Table 5)

- Joint Stock Company A.A. Bochvar High-Technology Research Institute of Inorganic Materials (JSC VNIINM), Moscow. [www.bochvar.ru](http://www.bochvar.ru)  
State Scientific Center of the Russian Federation JSC VNIINM is a leading organization of ROSATOM State Corporation on the issues related to materials and fuel cycle technologies, fissile and nuclear materials treatment technologies. Scientific and technological activities of the Institute are focused on the development of fundamental and applied research, increasing the share of the Russian nuclear energy industrial complex on the global market of nuclear materials and technologies, safe and efficient production of electricity and heat at NPP, and promotion of safe use of nuclear energy.
- NRDC LLC, EDB-Nizhny Novgorod, Centrotech-SPb, Uralpribor Ltd. represent the R&D organizations focusing primarily on gas centrifuges development and maintenance of the entire life cycle of the product.

Table 2. Key Performance Indicators of Main Enterprises Comprising the Separation-Sublimation Complex in 2013

Indicator, unit of measurement	AECC	PA ECP	SGChE	UEIP
Proceeds (net) from sales, mln RUB	6,188	12,860	15,117	19,395
Gross margin, mln RUB	2,764	4,161	3,197	8,539
Profit tax, mln RUB	368	495	230	1,239
Net profit, mln RUB	1,309	1,175	451	3,701
Net assets, mln RUB	15,469	33,102	28,022	51,681
Labor efficiency, mln RUB/person*	4.45	4.8	2.9	5.9
Environmental expenses of TVEL FC, mln RUB	43.5	26.7	913.5	702.8
Average headcount of staff, persons**	1,389	2,680	5,362	3,276

Table 3. Key Performance Indicators of Main Enterprises Comprising Nuclear Fuel Fabrication Complex in 2013

Indicator, unit of measurement	MSZ	NNCP	CMP	MZP
Proceeds (net) from sales, mln RUB	15,065	7,805	11,399	1,169
Gross margin, mln RUB	4,587	1,616	2,053	219
Profit tax, mln RUB	462	64	7	75
Net profit, mln RUB	2,225	104	-336	168
Net assets, mln RUB	27,619	15,230	12,991	3,010
Labor efficiency, mln RUB/person	3.56	3.85	2.94	7.44
Environmental expenses of TVEL FC, mln RUB	114.6	110	209	2.7
Average headcount of staff, persons	4,233	2,023	3,883	152

\* The value herein and thereafter is given inclusive of external funding (funds from the state budget and international technical assistance).

\*\* Employees under civil law contracts, external part-timers and women on maternity and childcare leave are not considered herein and below

**Table 4. Key Performance Indicators of Main Enterprises Comprising Gas Centrifuge Complex in 2013**

Indicator, unit of measurement	VPA Tochmash	KMP	UGCMP
Proceeds (net) from sales, mln RUB	1,728	5,045	2,251
Gross margin, mln RUB	158	807	88
Profit tax, mln RUB	65	32	10
Net profit, mln RUB	-246	94	-52
Net assets, mln RUB	3,631	3,416	4,551
Labor efficiency, mln RUB/person	1.05	2.64	2.28
Environmental expenses of TVEL FC, mln RUB	24	23	0
Average headcount of staff, persons	1,645	1,908	987

**Table 5. Key Performance Indicators of JSC VNIINM in 2013**

Indicator, unit of measurement	VNIINM
Proceeds (net) from sales, mln RUB	4,379
Gross margin, mln RUB	829
Profit tax, mln RUB	94
Net profit, mln RUB	306
Net assets, mln RUB	5,968
Labor efficiency, mln RUB/person	4.16
Environmental expenses of TVEL FC, mln RUB	39.3
Average headcount of staff, persons	1,158

## Value creation\*

Value (integrated value) generated by the Fuel Company is not only about marketable product and increased profitability of TVEL FC enterprises. It is also about a great vari-

\* Terms "Value Creation", "Outputs", "Outcomes", "Business Model", "Capitals", "Inputs" are used in this Section in accordance with International Integrated Reporting Standards (see <http://www.theiirc.org>). This Section represents the study of TVEL FC performance in accordance with the said Standard

ety of other economic, social and environmental activities.

With its considerable presence in the national economy and likewise considerable impact – economic, social and environmental – on the regions of its presence, TVEL FC is seeking to maximize positive effects of its activity despite specific environmental impact of its production facilities and indirect environmental impact of its key products (e.g. at the back end of the nuclear fuel cycle).

The Company conducts its activities with due account for a great number of external and internal factors and in close cooperation with stakeholders\*. This cooperation is characterized by the fact that tangible and intangible resources (financial, environmental, production, human, social and intellectual capitals) used by the Company are controlled by the Company itself and by TVEL FC and its stakeholders. Therefore, conversion of capital in the course of activities

is of great importance to the Company and its team.

This business model describes the activity of TVEL FC to create value as a system of the used capitals, production process, and products and results obtained. The purpose of the system is to implement strategy and achieve short-, mid- and long-term goals. The business model embraces factors in the risks inherent in activity of the Company and the ability of the latter to manage them. This business model represents inputs used by TVEL FC personally and in conjunction with stakeholders, and outputs that contribute to capital changes.

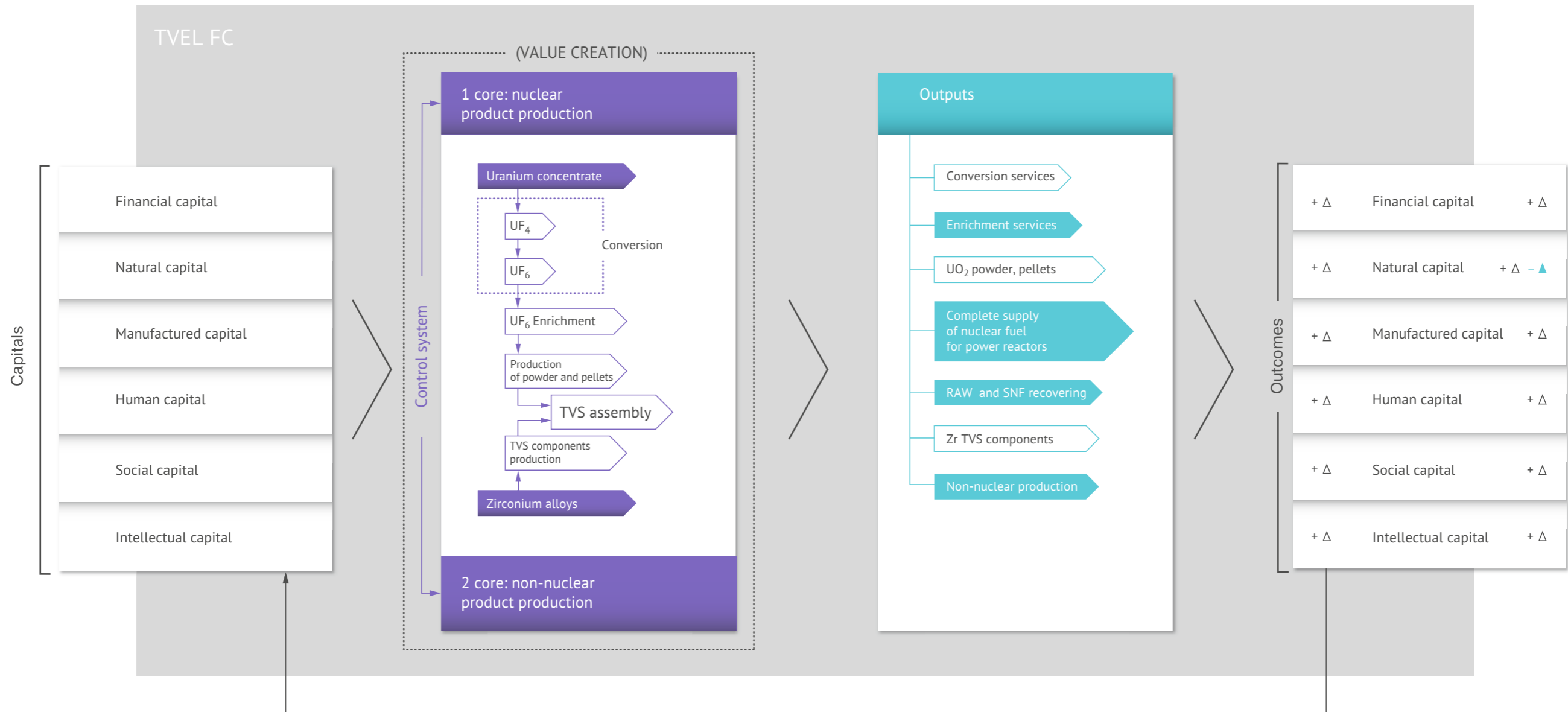
Since any business seeks to make profit which in turn happens to be the source of development of the Company, Financial Capital is most vital to TVEL FC. Capital gains secure current operations and promote investments thereby generating other outcomes used by the Fuel Company.

\* Chapter 4 Section "Social Capital".

\*\* Under the International Integrated Reporting Standards, "the Capitals" implies resources and relations that serve as the sources and results of value (integrated value) creation process.

Fig. 3. TVEL FC Business Model

External environment:  
stakeholders, resources,  
risks, opportunities



- Main outputs
- Additional products and services

**Table 6. Inputs and Conversion thereof in the Course of TVEL FC Activity**

Capital	Input elements, including		Changes, including	
	internal	external	internal	external
Financial	<ul style="list-style-type: none"> <li>Profit and monetary assets of prior period</li> <li>TVEL FC Reserves</li> </ul>	<ul style="list-style-type: none"> <li>Cross financing</li> <li>Consolidated investment resources</li> <li>Industrial reserves</li> <li>Federal target programs</li> <li>Loans, credits, subsidies</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Net money flow</li> <li>Profit, company's reserves</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Dividends</li> <li>Taxes and deductions</li> <li>Participation in industrial reserves</li> <li>Payment of interest</li> </ul>
Natural	Raw materials	Environment	<ul style="list-style-type: none"> <li>+Δ Access to new sources of raw materials</li> </ul>	<ul style="list-style-type: none"> <li>-Δ Direct and indirect environmental impact</li> </ul>
Production	High-tech production base, materials	Public infrastructure	<ul style="list-style-type: none"> <li>+Δ Modernization and technological upgrade</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Development of public infrastructure</li> </ul>
Human	Personnel	Experts, consultants	<ul style="list-style-type: none"> <li>+Δ Quality personnel growth</li> <li>Increased personnel involvement</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Personnel potential development in the regions of presence</li> </ul>
Social	Relations within TVEL FC  TVEL FC initiatives aimed at suppliers, authorities and local population	Initiatives by ROSATOM State Corporation and by the third parties	<ul style="list-style-type: none"> <li>+Δ Strengthening reputation of TVEL FC</li> <li>New projects and development programs</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Transparency practices</li> <li>Development of business activities in the regions of presence</li> </ul>
Intellectual	Items of intellectual property of TVEL FC	<ul style="list-style-type: none"> <li>Global achievements of science and engineering</li> <li>Domestic projects</li> <li>Intellectual resources of the country</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Development of scientific potential of TVEL FC, R&amp;D results, items of intellectual property</li> </ul>	<ul style="list-style-type: none"> <li>+Δ Development of scientific potential of the country</li> </ul>

Conversion of natural capital under this business model takes place in the course of production activities of the Fuel Company. The Company is engaged in two businesses: production of nuclear and non-nuclear products. Nuclear production chain is shown in details from uranium concentrate to fuel assemblies (“the TVS”):

High-tech base, modern equipment, machinery and materials (production capital) comprise one of the most important factors for efficient business and functioning of the Fuel Company.

Research and development (Intellectual Capital) related to improvement of the industrial and technological base provide considerable boost to TVEL FC business and the entire nuclear industry and science on the whole.

Priorities for the nuclear industry are availability of highly qualified specialists (Human Capital) and development and improvement of their skills. It is impossible to overestimate the degree of business dependence on competent staff and impact of human capital on the Company.

The relationship between TVEL FC and its suppliers and contractors, clients and customers, partners and society (Social Capital) has a considerable impact on the business

and make “Social Capital Management of TVEL FC” one of the priority topics of this Report.

For more details about TVEL FC projects that comprise its Social Capital – see Section “Stakeholders Engagement”.

Being a responsible company that exists in the system based on stakeholders engagement, TVEL FC generates value for itself and for its stakeholders alike.

Activities of TVEL FC yield positive results for stakeholders, such as:

- dividends;
- taxes and deductions;
- promotion of nuclear and radiation security;
- development of sectoral research and fundamental science;
- development of personnel within the regions of presence;
- promotion of social accord and business activity in the regions of presence.

**Management System** is the focal point of TVEL FC business model. It is management technologies help the Company to convert resources in an efficient manner and generate value through capital growth.

More details regarding the performance results broken down by capitals described in TVEL FC business model are available in the relevant sections of this Report.

\* Nuclear products manufacture is described in greater detail in 2012 TVEL JSC Annual Report – Section “Business Model” and on Website [www.tvel.ru](http://www.tvel.ru).

## Mission, goals of TVEL FC

Mission of TVEL FC is to cater to the needs of its customers in the sphere of nuclear fuel cycle and in the related sectors in strict compliance with requirements of safety, security, environmental and social awareness.

**Strategic Goals**  
 TVEL FC focuses on global leadership in terms of front end nuclear fuel cycle (FE NFC) and competitive edge worldwide in terms of the NFC in conditions of social accord.

## Values of TVEL FC

reliable, safe and top quality products consistent with the highest international requirements and standards;

result – making customers and partners of the Company confident about their future through establishment and development of stable, predictable and long-term relations;

“one step ahead” – dedication to technological and economic supremacy worldwide;

efficiency – continuous optimization of business processes to enhance flexibility in unstable external environment;

“stronger together” – self-development and self-fulfillment of employees of the global Company.

TVEL FC places value in promoting the growth of the inputs.