

ТЕЗИСЫ, СООБЩЕНИЯ И Т.Д.

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THE INNOVATIVE AIMS AND STRATEGY OF DEVELOPMENT OF THE NATIONAL UNIVERSITY (as per example of the engineering faculty, PFUR): 2013—2040

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[Gist: The article is oriented to the overall policy of development of the National University of the RF, considering the PFUR as the case-study example; it is based on synergic systems approach, and identifies the aims, and strategy of development at the present level of VI-th technological cycle of the world community, til 2040: (1) the development of the “rating” as the leading University of the World, (2) to increase its income from the Global Market, and to free itself from the Govt,-Financing; (3) to mask structural reorganization as per the needs of the post-industrial society.]

Key words: structure of science, structure of educations, university.

1. Preamble.

(1.1) President V.V. Putin's “Ukaz”, Dec., 2012: to develop by 2020, at least 3 nos, of Universities of R.F., that should be among the “100 Best of the World Level”.

(1.2) Evolutionary Stages of the “World University” through the Ages, as the “Synergic Process” in time, and as an analoguee:

(1) 1800AD (Germany): early-stage of industrialization and urbanization of the nation-state, increasing influence and demands of the “First Scientific & Technological Revolution” (STR-I; I&II-Kondratiev's Cycle: 1740—1840; the dominance of “Adam Smith's Capitalist Market Mechanism and Management, and the needs of the “Anthropocentrism-I”: i.e., needs of “mass-education” in the society; socio-political failure to

understand the process provoked two revolutions, namely, the “US Freedom War” and the “French Revolution”); in this context, the key-role of the “University:

(i) University, as the “highest center of knowledge and as the “academy”, is “to educate personnel on mass-scale” (i.e. the needs of the early “Newtonian Era”; to produce large number of “higher-educated personnel” for the society, i.e., >10%);

(2) 1900AD (Germany): later-stage of “industrialization and urbanization”, the liberal-democratic form of state-functioning, increasing demand of the “First Scientific & Technological Revolution” (STR-I; IV-Kondratiev’s Cycle: 1890—1940; the dominance of “Adam Smith’s Capitalist Market Mechanism, and Management, and the higher needs of the “Anthropocentrism-I”: i.e. needs of “mass-education” and skilled-workers for industrialization: political failure to understand the process provoked two World-Wars, and the Russian Revolution); in this context, the key-roles of the University:

(i) it is “the Academy “to educate personnel on mass scale”;

(ii) it is also the “Center for Research & Development (R&D)”, for the extended needs of the “Industrial Society”, and the “STR-I” (i.e. the needs of the late “Newtonian Era”, to have “higher no, of higher-educated personnel” for the society, i.e. >20%);

(3) 2000AD (USA): early-stage of the “post-industrialization and neo-urbanization”, the neo-liberal democratic form of state-functioning, increasing process the “2nd Scientific & Technological Revolution” (STR-II; VI-Kondratiev’s Cycle: 1990—2040; the dominance of “Schumpeter’s Post-Kinesian Innovative Economic Model, Global Market, and New Management Systems”); the key-roles of the University:

(i) it is “the Academy “to educate personnel on mass scale”;

(ii) it is the “Center for the R&D” to generate “innovative ideas” for the extended needs of the “Post-industrial-Information Society & STR-II” (i.e. basically the needs of the new “Einstein Era”, and the higher needs for the “higher educated personnel” for the society, i.e. >40%);

(iii) the “Center for Entrepreneurship” (i. e. the “Innovative Management Center of Ideas and their realization in the Global Market” — it acts as an “Incubator” for the realization of ideas, with the help of “ventury-investments”, and “start-ups of “grass-root entrepreneurs”; it is a “sustainable and innovative”, (in the context of “time and place continuum”, as well as, “taxonomy” and “local frugal-needs”), “self-organizing and self-financing” academic center, to achieve self-dependent higher productivity of intellectual labors.

2. Common Features of the Top 50 Universities of the World-2012: and the Strategy of the Innovative Model of Development of the PFUR for the period 2013—2040 (with the aims as indicated in pt.1.1-1.2.3):

2.1. Common Features of the Top 50 Universities, with Two Interdependent-Aims to enhance the quality-rating and to achieve self-dependent high-level budget.

(i) University Campus: it is the multi-functional work-cum living environment; round-the-clock intellectual innovative inter-active atmosphere; it ensures easy-access to every necessary needs and services for innovative mode of living environment: name-

ly, the healthy-food, healthy-mode of living; necessary academic-credit, easy-access to global-network of information, out-sourcing services, easy access to part-time/freelance jobs as well as other necessities;

(ii) Pool of Highly Competent Teaching –Staffs (including renowned Professors from the Academic World, for a particular priority field) through high level of remuneration, and research facilities on “contract basis” (e.g. the system of “visiting professor”, “online-courses with inter-active screen”, the use of “Russian Nationals” working in foreign-universities can be effectively used on the above-mentioned principles;

(iii) Pool of Highly Competent Students (from the World-arena, through attractive Stipends, covering full-expenditures for the study-periods, easy academic-credits, and assistance-ships, part-time or freelance jobs; etc.; the main direction of pool of students: traditionally Russian/ Soviet Zone of Influences & Russian Cultural Oriented Countries: CIS Countries, East-European Countries, Developing Countries, including Asia, Africa, Middle-East, Latin America.)

(iv) Using Synergic Advantages of the Large size University: it is more than 50,000 students to a achieve synergic effect in the quality of academic environment (including, under-graduate, post-graduate, doctoral, and post-doctoral students); it is multi-disciplinary, including, fundamental sciences, social sciences, humanities, and others — to offer a flexible or optional choice of subjects of studies, along with the core-subjects of specialization;

(v) English as the Medium of Teaching: The English Medium Curriculum is the demand of the Global Market; it is due to the fact that 70% of the world students’ medium of learning is English; so the talented student-pool is easier in English medium; most of the Universities’ Post-Graduate Curriculums are conducted in English for this reason.

2.2. Three Distinct Functions of the University Campus in the Post-Industrial-Information Era (in continuation of the pt.1.3):

(2.2.1) Production of the Higher-educated Innovative Personnel;

(2.2.2) Creation of Innovative R&D Center for the Global Market Demand, based on “6P-Principles”, namely.

— Formation of Innovative Research Cell based on Motivated Creative Personnel on Ad-hoc Contract from World-Market Demand (namely from Corporative R&D Centers);

— Publication;

— Patent;

— Production of Sample for Test-Verification;

— Publicity on Global Mass-Media Systems;

— Mass-Production of Components of the “Innovated Unique-Product” on the Global-Net, and its assembling near the global-market” to minimize the initial-cost and the competitiveness as the “monopoly-product” (as an ideal case-situation);

(2.2.3) Incubator (with the use of effective Hi-tech Principles of New Management, New Economics, New Information Technology, New Division of Labor, including Ven-

ture Investments, Start-ups, Out-sourcing, and other entrepreneur-mechanisms, to make access to the Global Market, to increase the per capita productivity of intellectual labor:

Fist-Stage Projects + Consulting Services as Income-Sources (ref. 3.1: Immediate Action-Plans: 2013—2015);

Second-Stage Projects + Consulting Services as Income-Sources (ref. 3.2: Action-Plans: 2015—2040).

2.3. University Campus as a “Free-Economic Zone (FEZ)”: it is a specially privileged work-cum-living area (in terms of tax-free privileges, and other advantages, whose activities are oriented to high-priority national projects) and are ear-marked by legislation means within the national boundary, for a planned period.

2.4. Some Other Features for the PFUR, which may also enhance the quality-rating and to achieve self-dependent high-level budget.

(2.4.1) University Campus as the “Independent Innovative Center” (free from any particular doctrine, as per the needs of synergic systems perception) to Generate Ideas for Reform of the National Education System as a Whole”, eg.,

— to develop a “Unique Model of Education” w.r.t. National Identity as a Pilot-Project, as well as, to satisfy the needs of the Post-industrial Information Age and the needs of the STR-II (i.e. Kondratiev’s Cycle-VI: up to 2040),

— to create a Pilot-Project with the “R&D and Monitoring Center” for the “Development of Creative Personality” through “New Systems Education: from “Pre-pre-Natal to Post-Natal Stages” (i.e. up to “Kinder garden»-Stages), as well as, 3L-Stages (i.e. Life-Long-Learning Stages: it is the needs for a Creative Personality in the Post-Industrial-Information Age; for example, ref. Fig. 1: “Maternity Center, a Pilot-Project” as the Student Diploma-Work),



Fig. 1. “Maternity Center, a Pilot-Project”/ Diploma-Work of Kupina Y.O.

— to create a Pilot-Project with the “R&D and Monitoring Center” for the “Development of Creative Personality” through “New Systems of 3L-Education, with the help of “NIT” (including NE and NM on Global Scale),

— to create a Pilot-Project with the “R&D and Monitoring Center” for the “Development of Creative Personality” through the “Creation of Rehabilitation Centers with Synergic Systems” in the “rurban-zone of metropolis” for the “down-trodden population” (namely, physically-disable, home-less, juvenile-delinquents, orphans, petty-criminals, drug-addicts, mentally-handicapped, old-age, and similar others) based on self-organizing, self-dependent, self-financing, communes (based on NM, NE, NIT, Hi-tech, New Values, etc.); it is a part of the system to minimize the gap between the level of STR-II and the living standard of people; the new axiom: “each individuum phylogenetically is a source of wealth of the society; the society is to create the proper environment for self-realization for each; it is the spring-source of progress in the post-industrial era”,

— to act as the Center to stimulate ideas for the generation of “Soft-Power” of the Nation (as the independent “Intellectual Conscious” with a vision for the Future of Mankind);

(2.4.2) University Campus: as the Independent Intellectual Center for the welfare of Mankind as a whole (free from any particular doctrine, as per the needs of synergic systems perception), to Generate Ideas (with the accent to the role of above-national institutions) to lead the Nation in the World-Arena (e. g. mechanism to use of ocean-resources for the welfare of mankind, independent of independent nation),

(2.4.3) National Center for Strategic Development of Universities, and Academy of Sciences (RAS), in the RF (with the functions as indicated in pt.2.1—2.4);

3. Action-Plans: 2013—2015: the immediate extended activities of the PFUR, as “Semi-Government Corporation”, with the aims to “increase its annual incomes”, and to achieve “other targets” (as the continuation of functions stipulated in pt.2.1—2.4):

(3.1) Immediate Action-Plans: 2013—2015: These Joint-Venture Projects have interested “investors”, guaranteed “market” (in India and SE Asia), and “raw-materials & hi-tech” (from RF & elsewhere),

(3.1.1) JV-Project: RF+ India +Foreign Investors: Agricultural Fertilizer: Phosphate, Carbonic, Potassium Di-oxide, Torf, etc. (ref. Fig. 2: World Map showing “Active Zone for Entrepreneurship”).

(3.1.2) JV-Project: RF + India + Foreign Investors: Oil-Refinery;

(3.1.3) JV-Project: RF+ India+ Foreign Investors: Fuel from Coal;

(3.1.4) JV-Project: RF + India + Foreign Investors: Desalination of Sea-water; and various other projects.

It is to be noted that the above “synergic-systems-projects” are oriented to the guaranteed market of 4—5 billion population in the developing world, and those are in the low-income bracket, and where is a shortage of food, drinking-water, and fuel; this symbiosis of “capital”, “raw-material & hi-tech”, and “large global market” is an “unique development model”, beneficial to all; the increase of the quality of “Global Human-resources”, exponentially increases the “Global Market Potential”, and progress as well.

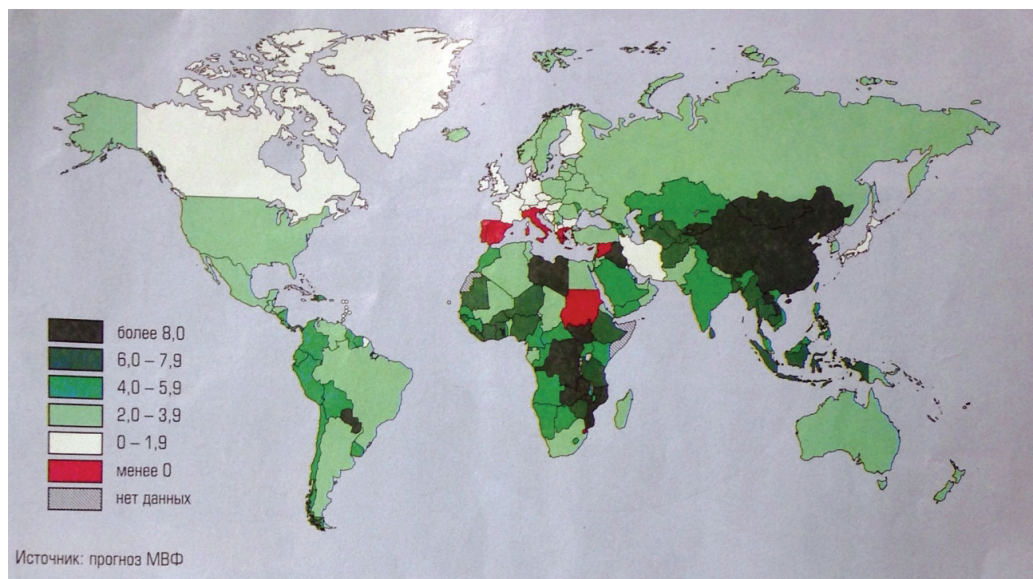


Fig. 2. World Map Rate of change of GDP in 2013 (in percent)

(3.1.5) Formation of “Revolving Funds” for the “ventury-investments” in future R&D Projects; and participation in the multi-national “Mega-Science Projects” of Global Importance.

(3.2) Action-Plans: 2015—2040:

(3.2.1) JV-Project: RF + India + Foreign Investors: Exploration of Sea-Resources, e.g., Sea-Fish-Farming, Sea-Oil-Exploration, Sea-Mineral-Exploration; and others;

(3.2.2) JV-Project: RF + India + Foreign Investors: Development Projects for Global Infrastructures, e.g., Global “Fiber-glass Information-Cable-Grid”, Global “Energy-Grid”, Global “Transport-Grids” (namely, “Tube”, “Surface”, “Sea”, and “Air”) for Global movement of goods and people;

(3.2.3) JV-Project: RF+ India+ Foreign Investors: e.g., Self-dependent, Self-organizing, Self-Financing. Closed-cycle New-Rurban Settlements, New Urban-Redevelopment Projects, for the development of dynamic diversified “New Citizen-Community” with New Values as per the needs of the “Post-Industrial Information Age”, and various other Projects with this Synergetic Vision of the future of Mankind.

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**ИННОВАЦИОННЫЕ ЦЕЛИ И СТРАТЕГИИ
РАЗВИТИЯ НАЦИОНАЛЬНОГО УНИВЕРСИТЕТА
(на примере инженерного факультета РУДН):
2013—2040 гг.**

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Статья ориентирована на общую политику развития национального университета РФ (на примере РУДН), в основе которой лежит синергетическая система, а также на определение его цели и стратегий развития в данном VI техноцикле до 2040 г.: 1) развитие параметров университета для поднятия «ретинга» как у ведущих университетов мира, 2) увеличить доход поступаемый от глобального рынка и освободить университет от государственного бюджета, 3) проведение структурной реорганизации с учетом потребностей постиндустриального общества.

Ключевые слова: структура науки, структура образования, университет.