

## **New technical unions.**

Many years ago, we called our NTS group or "New Technical Union", after 16 years this name acquires a different meaning.

### **We came to the world with adaptive (low-cost and low technological)**

**innovation** - "Devices and systems for saving boiler fuel." Analysis of sales shows that our clients are mainly unitary enterprises, with active staff-oriented personnel (their hosts) or career (their hired managers of energy saving projects or executive director). Simply put - when an overwhelming owner manages the enterprise - it is interesting for him. This reduces the costs of fuel and costs for the maintenance of the energy facility. The average level of direct fuel economy is 3-4%.

**Big companies continue to look for strategic innovations** (technologies and / or equipment that saves dozens percent of fuel costs or costs) or are looking for their place in the Green Transition. And **here they are waiting for 4 problems** :

1. **Strategic innovations** are becoming increasingly rare and, in conditions of an excess of money and a deficit of ideas, they are intercepting richer and aggressive players. The rest remains to organize the next "Innovation Fund" to enjoy in muddy water by a random brilliant invention and assign it, if the author / developer has not yet realized his values or cannot run it himself or cannot arrange ownership on the new and / or promising market.

2. **Strategic innovations** moved from the category "Ready decision" in the category of prototypes and require additional money to finalize the project in technical or organizational senses. And most of the average investment applicants (gray investment mice) do not want, are not ready to spend some money, due to their absence, the lack of specialists for analyzing new projects for the accuracy or previously obtained negative experience.

3. **The volume of negative experience increased significantly.** I call it - naive or criminal fraud. In the absence of censorship on the Internet, each amateur can impunity declare a declarative level of fuel economy in their systems at 10-20-30% of its volume. Declare due to an incorrect experiment or mathematical calculation (naive) or declare obviously false data to transform adaptive technology with average indicators, in the category of strategic, with outstanding indicators and get into the field of view of large companies looking for a large profit at low costs. Or simply deceive "gray mice" who are looking for a technical miracle for 1 dollar.

**A negative moment in this situation** is that, after the end of the tests (if the investor still found resources for industrial testing) these "magic" declarations are scattered and this puts the cross in all further movements of this investor.

**Cross National** (if a Chinese / Ukrainian / Muslim deceived you - then all these nationalities, in the future, are obviously perceived as deceivers). **Cross object** (it is considered that this task cannot be solved and all work in this direction stop). **Cross Communicative** (when communicators between the parties are suspected of trying to "sell air" or they were mistaken in the past). It breaks the whole process.

**4. Green transition** will not provide energy-intensive enterprises (stallity and mining enterprises, cement and cardboard factories) and enterprises approximate to sources of raw materials (sugar, dairy, alcohol plants).

**This is the situation "for today", but it cannot continue.** There are no scientifically technical breakthroughs and is not foreseen. The fever of the global economy, and the increase in costs require from medium and large companies to revise their positions and their usual psychology of behavior with small firms. In other words, expensive and impossible to continually ignore the real technologies for adaptive cost reduction.

- It is not reasonable to continue to pretend that the big company "is having an honor" for a small company, its indulgent attention to their technical solutions and technologies.
- Not allowed former statements "Install your equipment from us for 4-6-10 months and we will pay, if we enjoy how it works."
- The practice is not allowed, when the "big brother" buys samples with maximum accompanying information for copying. All these strategies in the past, if you try to keep your business in the circle of survivors.

**This requires other psychology and greater mind** - i.e. changes the motivation of managing personnel or replace one. Companies should learn quickly and objectively analyze the accuracy of the incoming proposals to extend naive inventors or/and experienced fraudsters, selling their myths.

**A bonus of such changes may be symbiosis.** When a big company uses a "good technical solution" on its sites, and then, together with the author / new partner, refuses, adapts to a specific market and replicates the received technology for other users. In other words - the "Union of Transnational Corporation and Garage (small firm).

**Symbiosis problems are personal nonsense, greed and corruption.** Stupidity is a desire to assign all the results to yourself, exclude from the business "garage" and steer further sole. Stupidity is to get out from the garage and demand the post of Vice Preziden existing TNC. I will show it on some examples.

### **Example 1.**

In 2010, we received successful experience in saving fuel and reduce costs for two boilers at the site of a **well-known transnational russian corporation**. The two-month test was checked and confirmed again and again. At the same time, our equipment was installed on its other industrial platform and also with a positive effect. As a result, we received a proposal from one top manager of this company to "specify the development of business."

We refused to join any shadow private schemes / relationships due to the fact that the head of this TNC is a well-known Russian oligarch, which ... "Physically" does not forgive mortaries in his company. Simply put - we just wanted to live and calmly look into the eyes of his security service.

The high manager tried to organize ", business" by himself,, but using other, not verified equipment and, with the stated results 4 times more than ours. He made the dismissal of key technical staff and purchasing new equipment, with the mythical results, by the hands his new staff. Mythical results were not confirmed when testing according to the same methods.

The fuel economy project was buried, the company's financial losses only at one enterprise amounted to millions of dollars, and we lost the key client. Further more. A few years later, during the inner opals of this functionar, the company's technicians returned to us to reduce the costs for their other enterprise in Latin America. We again fulfilled this project successfully. But the Director of the Department returned again and this direction was finally buried as "not promising." In this way, we were punished for our unwillingness to steal money from the owner of the business. We have lost hundreds of thousands of dollars, the company has lost millions.

### **Example 2.**

Canada. Everyone knows that transportation of viscous oil from Canada in the United States requires to dilute this oil with a solvent in a volume of 25-35%. So, 30% of the volume of crude oil (solvent ) - it is necessary to buy, mix, transport to the United States, separating from oil and pump back from Texas to Canada. Oil company have to buy this volume every time. The solvent market ( in Canada for heavy oil ) is 15 billion US dollars per year. This topic is a priority for Canada and for the province of Albert, where significant amounts were allocated for it. The task to reduce the amount of solvent was not solved for this day.

2 years ago, we showed how to mechanical processing (without additives) of heavy oil, **on our device**, reduced viscosity by 21%. This fact is certified repeatedly by various laboratories and allows to believe that we can guarantee to **reduce the amount of solvent required by several dollars per barrel**. It is a fact.

However, the implementation of this decision in industrial conditions came across a number of objective and subjective conditions and does not develop. Including the desire of some structures to assign test results and the design of the equipment.

Together with this, parts of this technical solutions within this project - successfully operate in Russia (as part of the technology to remove hydrogen sulfide and mercaptans from crude oil) and in Ukraine for homogenization of molasses (raw materials for the alcohol industry with an initial viscosity of 2000-3000 cCt).

### **Picture for today:**

- The number of **strategic** technologies in the real sector of the industry is very limited and decreases.
- The number of applicants for them increase, win units - richer, prompt, successful, reasonable and aggressive. The rest overboard.
- The number of real adaptive technologies (local reduction of costs) is reduced even in the conservation of today's sectors of industry. Strict rules and bureaucracy in large companies blocks the initiative and employees. The general technical level of technology authors and their communicators is reduced.
- Managing staff of the company and professional communicators (consulting firms) are still looking for a low-cost miracle and ignore auxiliary technologies, without understanding their accuracy and not the desire to take responsibility.
- Reducing costs (adaptive technologies) objectively return their significance and in demand with the conditions of the total world crisis.

**Repair, prevention, low-cost improvements - more cheap way to maintain business profitability.**

**Survival of large companies depends on their readiness to change several things:**

1. The psychology of "Big Brother" to small companies and refusal of technical racism.
2. The creation of analytical centers (or by attracting third-party experts) to analyze the proposed solutions for reality and industrial use.
3. A more active provision of its industrial sites for testing / improving adaptive technologies.
4. Transparency and honesty in relations with partners.
5. Start replicating the experience gained and adapting technical solutions for other customers, together with small companies (authors of ideas and technologies).

**Example 3.** American all-terrain vehicle at \$ 2.5 billion uses plastic ties for \$0.02.



**Not to do anything - more dangerous for TNC**, because they have more costs of maintaining its business. New time makes the Union between TNC and small developers with reality and the ability to survive both. **New technical unions, such as "Shell + Garage", again on the horizon.**

**In our business, we still offer cooperation** - the use of our device, as the main element, and auxiliary nodes (devices, local origin mechanisms) that will allow to collect ready-made systems to improve the properties of heavy fuel, for boilers and ships that are still relevant.

**This way :**

- The question of local certification is removed.
- There is reasonable cooperation in dust completing, assembly, sale and service.
- Copying competitors possible, but! We do not sell equipment, but individual technical solutions, with a large intellectual share that cannot be stolen - not obvious schemes, practical experience in the installation and operation, elimination of complex situations, in 177 projects in 15 years.

**Our equipment is universally.** It reduces costs for boilers / engines on heavy liquid fuel in any design, any country of production and operation, with any nozzles, especially with modern, which are dependent on viscosity, purity and fuel composition.

On the principles of honest cooperation, we are ready to make our contribution if you also want to survive, like us.

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Useful links:

<https://www.techcult.ru/sdelay-sam/9607-v-perseverance-ispolzovany-kabelnye-styazhki> <http://worldcrisis.ru/crisis/3468059> and significant quotes

### Greta Thunberg's last straw: why the world is moving away from transnational corporations back to small workshops

In essence, the phenomenon of Greta Thunberg represents an attempt of large corporations from developed countries to retain their dominant position. Previously, there were two different mechanisms at work: first one was WTO, that puts manufacturers of products with high added value in a privileged position as compared to producers of commodities, semi-processed goods and agricultural products. However, due to deceleration of a rate of science-and-technology progress (STP) this mechanism has lost its effectiveness.

The portion of high-tech products that is not possible to copy in the developing countries has fallen sharply, and the WTO ceased to be a reliable defense for the markets of the developed countries. For this reason at the present time WTO is in a deep crisis, and President Trump has made a statement about possibility of the US leaving WTO.

The second mechanism of protection of the markets of the developed countries from average value-added products of the developing countries consists in a rise of ecological standards. The most illustrative example is as it follows: as soon as technology level and production practices in the mostly built on Western investments China's automobile assembly plants becomes highly cost-competitive as compared to the Western products, appears a new, more demanding emissions standard that for several years becomes a technology barrier, protecting Western markets. However, this mechanism is also becoming ineffective.

Under the conditions of diminishing real spending capacity of the Western mass consumers and erosion of Western middle class the mass consumer becomes unable to bear the expenses of yet another toughening of environmental regulations. When transition from Euto-5 to Euro-6 results in an increase of aggregate expenses for owning a new VW Golf by tens of percent, while its expected service life decreases, and maintenance costs are rising, then the most dutiful and environment-conscious citizen will have his doubts. Additionally, toughening of environmental standards sharply reduces competitiveness of Western products on the markets in other jurisdictions, for example, in a far away and undercivilized Ukraine insufficiently conscious consumers prefer products of Korean automobile industry having dated ecological standards.

There is no exit out of this dead-end in the framework of the existing world order, as it is beyond all doubt demonstrated by the trade war between the US and China. There were no Western countries, willing to give support to the US in its confrontation with China.

Furthermore, there is a new affliction to bear - an adaptive economic growth. It is well-known that Western transnational corporations cannot be competitive in costs. For this reason, they concentrate on the game-changing innovations, and are not interested in adaptive improvements that can be easily copied on the developing markets.

For better understanding of the difference between the two types of innovative growth let us review the following example.

In March of 2011 in the yet printed version of a magazine "D'yelo" was published my forecast "An electromobile bubble". After eight years one can observe that that forecast came true across the board.

There was no breakthrough in enhancement of the main parameters of accumulators despite significant expenses on research and development by large corporations, as well as subsidies from budgets of all without exception developed countries. Long awaited technological revolution did not materialize. The rates of growth of production of electric vehicles at the present time are many-fold lower, than the ones, forecasted in 2011, and they are still heavily depend on the government support.

Electric vehicles still are not a mass product, they are still expensive toys, high-status attributes, or, at best, functional high-status products. Absolute majority of the rare-earth metals, that are necessary for production of accumulators are still produced in China.

And now let us review the scale of support of the process of advancing electric vehicles. Thousands of websites, hundreds of thousands of articles. The level of intensity of propaganda of this technology does not closely match more than modest technological and economic results. It is clear that propaganda on such a large scale cannot be a result of actions of large corporations, it is obvious that it is an international effort of many states.

Another example is electric bikes, segways, electric scooters. In 2011 they were not present on the mass market, while presently their sales exceed that of EVs by many times. We see an explosion of sales by a factor of ten almost without any publicity stunts.

Few futurologists did not sing praise to the EVs, to that technological curse, that unfulfilled dream of the last one hundred years. And yet almost all of them disregarded an explosion in small electric devices. Furthermore, they still appear not to notice it. No, they do not negate it, they just ignore it. Why?

The reason lies in the field of futurology itself. A mass adoption of EVs would become a major breakthrough! It would become a proof of an acceleration of STP, while a mass adoption of electric scooters and segways represents an adaptive innovation. This development further attests to the fact that the rates of STP has sharply fallen.

The reason for this lies in the field of technology. An EV like Tesla is a high-technology product, it cannot be copied in China that easily. While electric scooters

are not high-tech products, and producers in South-East Asia have adopted their manufacturing in very short time. Those were new products, the culture of their exploitation did not exist, therefore, there was no need in teaching the locals in SEA Western traditions of consumption. And the Western manufacturers still cannot compete in costs.

There is a reason for this from the field of microeconomics. A workshop or mid-size plant has sufficient capacity to produce components of electric scooters, or to assemble them. There is no sense in producing them in the framework of large transnational corporations.

Further, there is a reason that has to do with raw materials. Most of production of high-grade lithium is concentrated in China.

All of before said combined is illustrative of the completely different type of economic growth, than was prevalent in 20th century, different from what was forecasted by postmodern futurologists, believers in singularity, and from what they expect in transnational corporations. For this reason they prefer not to notice this development, instead directing attention of general public toward technological bubbles.

Thus, the already for a half of century expected acceleration of rates of science-and-technology progress has not materialized, while the devices of stimulating mass demand, such as marketing and advertisement, are at their limits. Capacity of WTO for protection of markets of developed countries from the developing countries is also at its limits. It is no coincidence that trade wars are starting presently.

The reserves of financial stimulation of economies are not only at their limits, they became a major cause of growth of bubbles on financial markets. The effectiveness of raising environmental standards as a measure of protection of markets of developed countries is also at its limits. This type of protectionism increases the costs of manufacturing as well as costs of maintenance. The rapidly shrinking middle class in the developed countries already cannot afford products that meet the highest environmental standards. Besides, this type of products struggles with finding demand abroad. It is more reasonable for consumers in developing countries to purchase something less expensive, if built on old environmental standards, as well as on old standards of inclusiveness and political correctness from manufacturers from the developing markets. Further, in equation come the psychological aspects of the local consumers. For example, the consumers in China on mass opt out of purchasing the US made goods, even if tariffs are not applied to these goods.

As a result, industry of the Western countries are in a recession. Trump's idea to return manufacturing from China proved to be utopian. Rates of recession of industrial production in Germany in May 2019 constituted 0.3%, in July - 1.5%, and by the end of 2019 expected value is 5.3%

In these circumstances, the Western, and most notably, European large businesses are in a dire need for new tools of protecting their markets. So, first president Macron opined about an urgent need of a shift of business toward being



environment-friendly and introduction of tax on carbon dioxide emissions, then appeared Greta Thunberg as an emotional ram.

The idea seemed to be well-conceived: introduction of a climate state of emergency for not sufficiently conscious countries, as well as for the producers that fail to meet new climatic standards. However, two problems have become evident. No, not the attached to the phenomenon of Saint Greta strings, held by the large business. More serious problems.

The first problem is European consumers. Since it is exactly the eroding middle class that has to pay the bill for this party, by purchasing the products that are in compliance with the new environmental standards.

As a result, these Macron's April's ideas were dismissed by the voters at the election to European parliament, while Macron, having lost his popularity, in order to avoid position of a lame duck, as it had already happened to president Hollande, had to grasp at any straw, however illusory it is, such as attempts to re-launch the process of integration within the EU, or looking for grounds to make up with Putin. His position of a drowning person, fruitlessly grasping at anything is understandable, since it became clear that the scale of the coming crash will significantly exceed that of the crash of 2008.

The second problem originates from the fact that globalization is nearing its end, and its realization by Donald Trump, who has built his game on this premise, which at least has a little bit more of a potential, than Macron's. A regime of climatic emergency is utterly impossible to realize without the United States, and even Greta's histrionics will not help.

What options do remain for transnational corporations in this situation? If a war would help they had already started it, however, the states do not have money for modern wars, even small-scale ones and local. Any war will become prolonged and will turn into a mess, where high-tech weaponry will cease to be decisive, a living example being the war in Eastern Ukraine, where most casualties are caused by mortar shellings, similarly to WW2. At the same time transnational corporations, that manufacture standardized, or, to a large degree standardized products, will be hit most by trade barriers, introduced by belligerent countries, as well as by loss of their markets.

The only viable strategy of preserving the assets by large transnational corporations, specializing in manufacturing of mid-tech products, that just recently used to be high-tech, appears to be their planned transformation into a network of small national producers, oriented toward the local markets. It is notable that the further will progress the Time of Troubles, the more fragmented will the markets become, thus, the optimal scale of production will decrease. And at the peak of regionalization (a process that is opposite to globalization) in the countries with unfavorable conditions for growth in a post-crisis world it will return to a size of a workshop. Transnational corporations that grew from workshops during the stage of Modern will once again become workshops. From the point of view of economics this transformation is impossible, no less than an eruption of a volcano, which is a periodic process in geology, but not in economics. Similarly, concentration of manufacturing in the phase of Modern ("a period of Asabiyyah", "a stage of high

passionarity", "Time of Changes") and decentralization of manufacturing in the following phase of "Time of Troubles" is a normal periodic process from the point of view of civilizational analysis.

Thus, the phases of fast growth represent periods of time when various forms of concentration of capital and labor are effective. Then, in the course of the Time of Troubles, caused by transition from fast growth to slow growth, effectiveness of concentration disappears, and almost all of its forms dissipate into mid-size and small businesses, that is, in workshops. And it is possible to prove this unrealistic from the point of view of the science of economics hypothesis about a new "guild handicraft" not only through a prognostic approach. It is well-known that some mid-size or small businesses exist through centuries, family-enterprises among them, for instance, a famous Italian "Beretta", which until the period of Modern, that is, until approximately year of 1870, remained a small business, oriented predominantly toward a local market. So are well-known family enterprises in Japan that exist for many centuries. However, there is no extant form of a large concentration of production that existed during the previous (in relation to Modern) period of accelerated science-and-technology and cultural progress! The Venitians had built galleys by method of line assembly long before Henry Ford. The emperor of the Holy Roman Empire Charles the 5th was a first one to unite most of Europe.

At that time concentration of manufacturing and of capital was super effective as well. In the same fashion from the viewpoint of civilizational analysis as Lenin in Russia in the period of Modern has expropriated the assets of manufacturers and land-owners, during the previous phase of fast growth Henry the 4th in England has expropriated assets of Catholic monasteries. In the same fashion large armies and large fleets as well as large growth of territory of colonies rendered new forms of concentration of resources super effective. And none of those forms that are analogous to the present-day transnational corporations has survived!

All of them has dissipated to workshops! From the civilizational viewpoint the same process takes place presently. Having evolved from workshops, transnational corporations from the countries with unfavorable conditions for growth in a post-crisis world will return to a state of workshops. And it is worth noting that the first ones to crumble will be those, whose products were considered high-tech only recently, and presently can be easily copied on what is still called "the developing markets".

Thus, by elevating to the higher phenomenological level (from the level of economics to the civilizational level) the improbable forecast becomes a logical one, almost banal.

Can we control this process? And, if it is possible, then on what level? In my humble opinion, it is impossible to change anything on the level of corporations. Neither there is time, nor motivation on the part of management of the largest transnational corporations. They will still try, until the very Collapse, to accelerate the drastically fallen half a century ago rates of science-and-technology progress, to hopelessly attempt to return to a period of Modern, and to their own former effectiveness. Possibly, they will come up with some new scares, such as, "a state

of climatic emergency", "a state of meteoritic emergency", and so on, that, in their mind, will allow to prolong the existence of corporations at the expense of the customer, but probability of their large-scale success is very low.

However, this process can be managed on a level of a single investor. After each collapse it becomes known that someone has moved his assets to such a safe haven, that no one thought about before, or to a segment of market, or a country that suffered substantially less, than others. It is after every expropriation of property that becomes known that someone made him, or her lucky to a place that is out of reach.

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