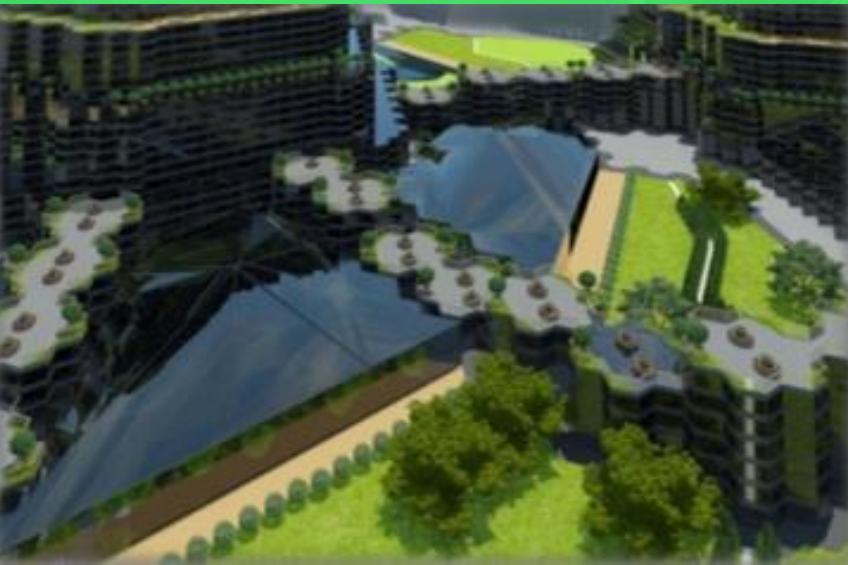


MONOSOTA ECOS

Part II



INDUSTRIAL MULTIFUNCTIONAL ECOLOGICAL AUTONOMOUS
CENTER
OF A NETWORK OF ECO-SETTLEMENTS



THE PROJECT OF WELL-BEING AND PROSPERITY



We present the latest concept of building ecological self-sufficient "Living cities" of the future with high efficiency, many times higher than today, with unique characteristics.

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DESCRIPTION

01



It is proposed to form a unique urban planning concept of a new generation, to create a single harmoniously built complex of objects for various purposes, using the latest technologies, the uniqueness of natural structures and their properties. The new approach will allow us to obtain completely new economic indicators and performance characteristics, including showing the social benefits of the project.

Description

An energy autonomous self-sufficient eco-complex with a population of more than 100 thousand people and an area of over 7 million square meters, in addition to housing and social facilities, includes shopping and entertainment, agro-industrial, energy complexes and an intelligent eco-terminal.

Conceptually, it is an eternal house, with regeneration functions, reconstruction and automatic replacement of worn or outdated elements.

Technically, this project is a multi-level energy autonomous universal eco-complex of many multifunctional objects for various purposes. In fact, it is a single complex mechanism created for a comfortable life and efficient work with a well-established infrastructure and a wide range of options.

Transport and logistics issues have been solved in environmentally friendly and safe ways based on the latest technologies. A transport ecosystem is proposed, combining the functions of an elevator and public transport are highly efficient high-speed highways of individual use for the movement of people and goods in vertical and horizontal planes. Thanks to this, residents will be able to reach any point of the eco-complex in a matter of minutes, without a long wait and in comfortable conditions, as well as receive food and goods at home via pneumatic systems without the need for manual labor.

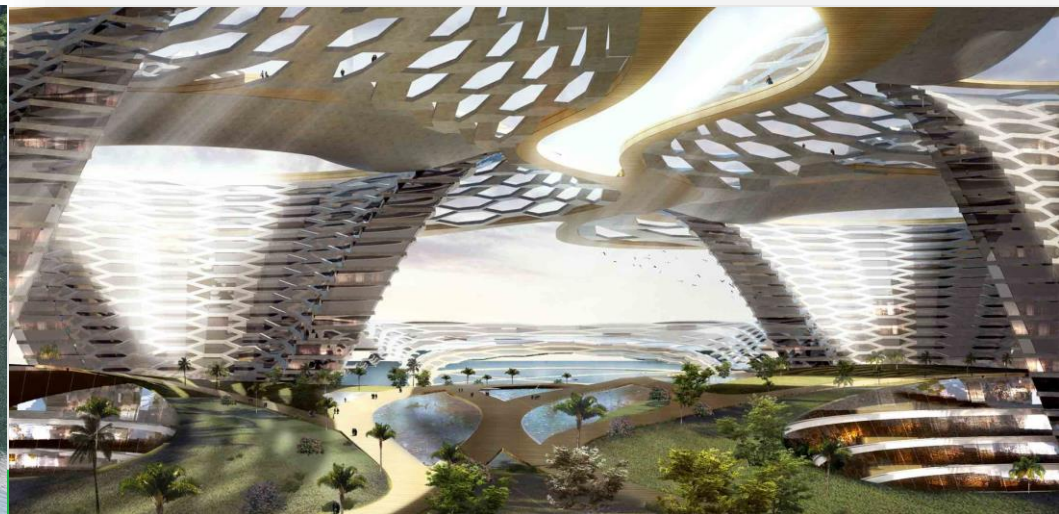
Description

A distinctive feature is the provision and formation of a large number of demanded jobs - more than 2/3 of the residents of the eco-complex.

The processes of training and retraining of personnel are provided, trends and a strategy for the development of the economy of the eco-complex are calculated.

From the point of view of ecological cleanliness, the project is unique. The absence of vehicles with internal combustion engines, "green zones", hanging and winter gardens, agricultural complexes for growing fresh eco-products, silence and the absence of gas pollution - all this forms a unique environment of the eco-complex.

It is also noteworthy that all construction works are carried out in accordance with the internal standards of eco-construction without wet processes, construction debris, heavy and high-rise equipment, almost noiselessly, and only eco-materials neutral to the human body are used, without radioactive and other negative radiation.



Description

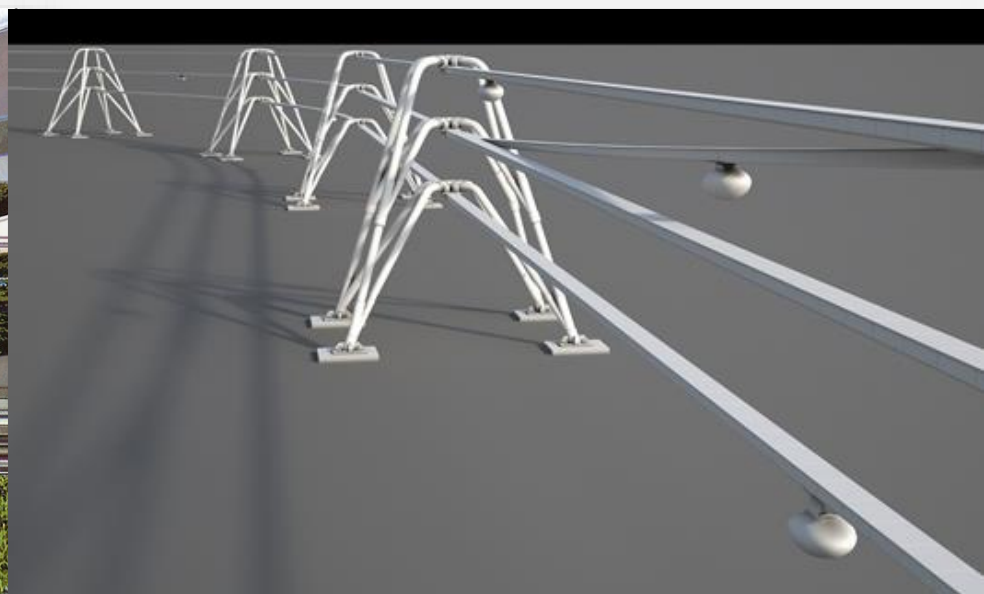
- ✓ Garbage collection and various waste is combined with waste recycling systems, as a result of which recyclables and granulate are obtained for further use. Therefore, there are no garbage dumps, garbage chutes, dirt, unpleasant odor, rats, cockroaches and crows in the eco-complex.
- ✓ The eco-complex is equipped with unique energy-autonomous light-greenhouse systems for growing eco-products, with a total area of over 5 million square meters.
- ✓ This system allows you to regularly and year-round receive fresh berries, mushrooms, vegetables, herbs, poultry meat, eggs and other products, equipped with processing and refrigeration centers. It is able to provide products to 750 thousand residents of the city.

Light-greenhouse systems are uninhabited objects of increased biological safety equipped with unique equipment, pressure chambers, complexes for analysis and purification of air media and biomass at the molecular level. The systems are a complex of isolated objects of a completely closed cycle, as close as possible to natural conditions.



2. MAIN ACTIVITIES

1. Provision of services for the organization of container trains, as well as single and group container and wagon shipments of goods;
2. Provision of a complex of related services (terminal processing, delivery/delivery, warehouse services, informing about the movement of containers, etc.);
3. Sale of residential premises into ownership, renting of apartments (including social, in total about 50,000 apartments);
4. Food services (a chain of stores with year-round sale of inexpensive own-made fresh eco-products in agro-complexes and products of partners);
5. Trade services (sale of other non-food products of own production and partner companies);



6. Entertainment services (a network of above-water and underwater restaurants with interactive tables and various cuisines of the countries of the world, cinemas, bowling clubs with billiards, play areas, a year-round water park, walking green areas with a contact zoo, areas for celebrating and viewing various events, waterfalls with a drop of over 70 m. filling reservoirs, water is distributed across the reservoirs of each of 7 levels);

7. Sports and educational services (rock climbing, a network of fitness centers with a swimming pool, fishing, a telescope room for stargazing, cultural and historical halls with interactive screens, a hall for demonstrations of physical and mathematical laws and chemical compounds, halls for distance and real learning, conferences and speeches);

8. Tourist services (about 2,000 rooms, with indoor pools, a network of baths and saunas);

9. Office services (provision of business premises, with conference rooms);

10. Parking services (vertically integrated parking complexes).

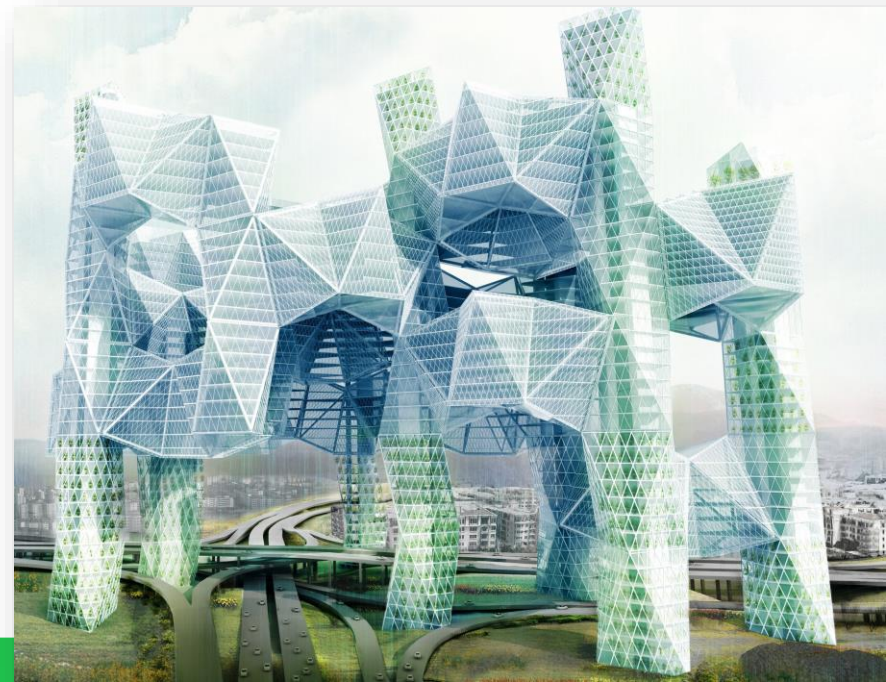


3. AREA INDICATORS

The project achieves high economic indicators due to the strategically correct choice of location, competent placement of objects of the described directions, the effectiveness of the latest technologies, flexible formation and a wide variety of activities on extensive modified areas:

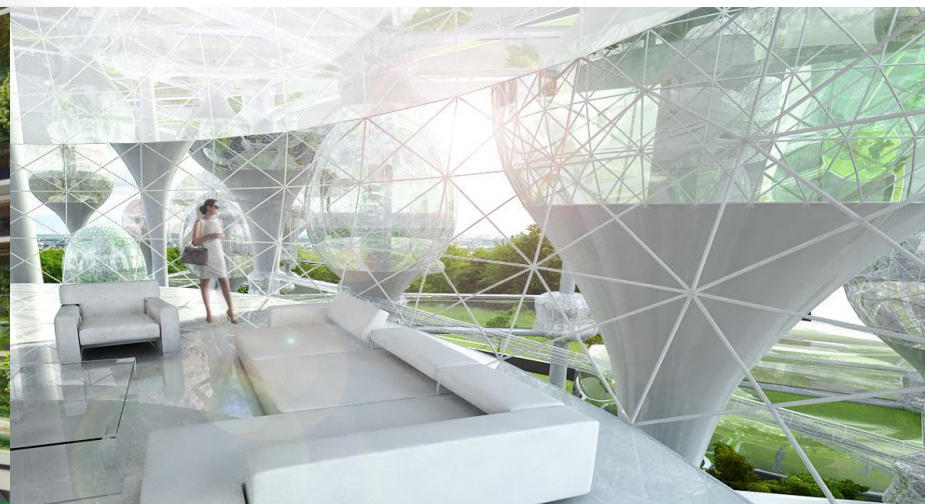
- Total/usable area of the eco-complex: 7000 000/5 061 500 sq.m
- Shopping and entertainment area: 1 130 000/847 500 sq.m
- Sports and educational zone: 122 000/91 500 sq.m
- Production and storage area: 1 500 000/525 000 sq.m
- Agro-industrial zone: 450 000/300 000 sq.m
- Office area: 370 000/277 500 sq.m
- Residential area: 4 000 000/3 200 000 sq.m
- Tourist cluster: 120,000 sq.m
- Transport and parking area: 558 000 sq.m

Thanks to the unique design - its reconstruction functions, the area of the eco-complex can be reconstructed over time and increased to 12 million square meters.



4. RESIDENTIAL AND OFFICE AREAS

- Comfortable, spacious apartments and offices of any necessary size and layout, equipped with intelligent centers, air conditioners with climate control, systems with automatic watering and illumination of plants. The number and area of apartments/offices on the floor can also be regulated.
- To reduce the cost and simplify social logistics, all entrance groups of apartments and offices are equipped with multifunctional mobile intercoms for ordering and automatic delivery of food, ready-made food and goods via pneumatic systems "to the threshold".
- Ceiling systems will be multi-level LED panels that give volume, allowing you to adjust the intensity and color of light streams. The ceiling height is provided for 3 meters 20 cm.
- Interior wall panels with the function of "mobile reconstruction" allow you to quickly, without noise and construction debris, change not only the configuration, but also the purpose of the premises.
- All facilities are equipped with the option of increased heat and sound insulation thanks to unique monostructural technologies.



5. OBJECTS OF SOCIAL SIGNIFICANCE



A special point of the social program is the issue of digitalization of health, the formation of cultural education, a broad outlook, multifaceted vocational education and advanced training courses.

In addition to medical centers, harmoniously integrated into the segments of green zones, there are preventive and wellness complexes, where preference is given to prevention, healthy nutrition and lifestyle, physical culture and a competent approach to personal and public health.

6. TRANSPORT SYSTEM



Moving inside the eco-center takes place by means of individual cabins, instead of elevators and their long waiting. Transport systems operate in both vertical and horizontal directions. Therefore, they are able to deliver passengers to their destination without transfers. Passengers will not have to leave the transport cabin on the street to get to other facilities and quarters of the eco-center.

The possibility of breakage of autonomous individual systems is practically excluded, because after the trip, upon arrival at the parking lot, a technical inspection is automatically carried out. But such cases are provided for transport systems, and such situations are compensated by parallel lines and developed infrastructure.

7. INTELLIGENT LOCAL CENTERS



Intelligent local centers can form various configurations of control systems for light streams, audio, sensor systems for various purposes, space scanning, air analysis.

Intelligent systems are friendly, sociable, can independently build a dialogue, have several degrees of protection. Their programs for monitoring and communication with an apartment or office are easily integrated into mobile devices.

Each resident of the eco-complex constantly has access to text, photo and video reports: on the state of the air and temperature, water consumption, equipment turned on, closing windows, doors and other set parameters.

At the same time, the "global planning" function is offered, which allows you to schedule meetings, automatically booking a place for them and, possibly, a menu in a restaurant; shopping, production of various works, use of services and much more.

8. THE FUNCTION OF BUILDING REGENERATION



The function of building regeneration allows us to consider a monostructural construct as an "eternal house", the service life of which is practically unlimited.

Elements of load-bearing structures, wall panels, assemblies and parts, taking into account the reconstruction and the passage of each inspection object regularly have absolute novelty, as they are constantly updated and replaced with new ones. The number of updates and reconstruction stages is unlimited.

9. ADDITIONAL SYSTEMS



- ✓ Windows and exterior walls are equipped with the necessary systems for regular washing in automatic mode by washing robots.
- ✓ The issues with the natural landscaping of residential areas inside the facilities have been resolved, thanks to automatic cartridges with the functions of illumination, watering and fertilizing.
- ✓ All rooms are ventilation insulated, have an adjustable supply of warm, cool and exhaust air. This allows for the proximity of functionally different rooms.
- ✓ The system includes a unique geomassive heat exchanger, which stabilizes the temperature of the air intake. In winter it removes the warmth of the earth from the granite plateau, in summer it removes the coolness. The system is self-regulating and does not require expensive control equipment.
- ✓ The ceilings have a fire extinguishing function, adaptability to communications and simplification of high-quality ceiling finishing.

10. SAFETY

- Especially carefully worked out in the eco-complex security issues: from fire and terrorist to various kinds of natural disasters.
- Unique algorithms of interaction of robotic systems have been developed to protect residents. There are locking compartments combined with "green zones", automatic systems local fire extinguishing, pneumatic and hydraulic systems, electronic warning systems with rapid deployment fire drones (less than 120 seconds).



11. STAGES OF PROJECT IMPLEMENTATION

1. Preparatory stage

Term: 4 months.

Planned amount: 10 million \$

2. Design and approval

Term: 36 months.

Planned amount: 25 million \$.

3. Production

Term: 18 months.

Planned amount: for approval

4. Construction and installation works and commissioning

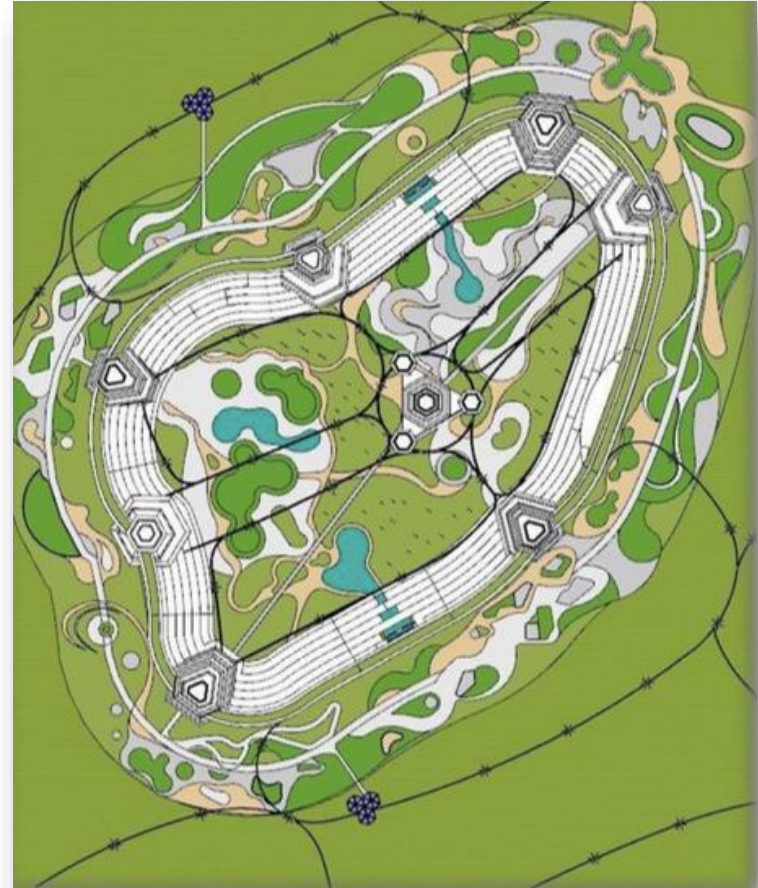
Term: 48 months.

Planned amount: for approval

5. Maintenance services for the eco-towers complex

Term: permanent

Planned amount: an average of 3 million \$ per month



11.1 STAGES OF PROJECT IMPLEMENTATION

1. The preparatory stage includes the analysis of existing title documents for the land plot, carrying out a complex of engineering surveys (topographic survey, geodesy, geology, environmental surveys).
2. The design stage is carried out continuously for 36 months in all 5 queues. A unified system of construction and internal planning solutions can significantly reduce the cost of design work for 1 sq.m3.
1. The term of approvals for all stages of the project is approximately 9 months.
1. The production stage is calculated during the execution of project work and the adjustment of the business plan of the project. With reasonable expenses for the creation of own production and a complex of production and storage facilities of the facility, the cost of production of parts and assemblies can be reduced by 10-20% both in cost and in production time.
1. Assembly and installation and commissioning work will be about 48 months. The design features of eco-towers and the delivery of partially assembled parts from production facilities will help significantly reduce the construction time of facilities and the use of large-sized equipment.

12. SOURCES OF INCOME OF THE PROJECT

This project is unique in terms of the possible scope of its implementation. A wide range of urban and entertainment solutions and services.

- ✧ shopping and entertainment sphere
- ✧ sports and educational
- ✧ residential
- ✧ logistics
- ✧ production and warehouse
- ✧ offices
- ✧ tourism
- ✧ medicine
- ✧ and other



CHARACTERISTICS OF THE ECONOMIC EFFICIENCY OF THE PROJECT

With the level of income and costs included in the calculations, the project must be recognized as effective. The investment idea under consideration is characterized by the following indicators:

- The simple payback period for full investment costs, excluding construction time, is 3.8 years.
- The discounted payback period, taking into account the real comparison rate of 10% per annum, is about 6 years from the start of the project.
- The annual net profit of the project is estimated at 25-30 million rubles.
- The positive value of NPV confirms the expediency of investing in the project under consideration.
- The real internal rate of return of the project (IRR), i.e. the conditional rate of income for the project without taking into account inflation, is 22% per annum;
- The return on total investment costs is defined as the ratio of the net present value of the project (NPV) to the discounted value of investment costs and is 65%.

13. ADVANTAGES OF THE PROJECT

- ✎ the highest investment attractiveness;
- ✎ resource savings of over 30% in the production of assembly and assembly works and production processes, and in the operation of facilities up to 70%;
- ✎ versatility and reconstruction of premises for various purposes, saturation of them with various equipment and options;
- ✎ the use of ultra-efficient unique transport highways of vertical-horizontal type;
- ✎ implementation of unique intelligent, energy, climate, emergency, fire and other systems;
- ✎ innovative technologies of eco-construction, without the use of "wet processes", expensive and cumbersome mechanisms, heavy and high-altitude equipment;
- ✎ use of energy-saving technologies;
- ✎ system and individual waste processing complexes, treatment systems and facilities;
- ✎ year-round production of a wide range of own eco-products;
- ✎ own internal separate water supply.

14. RISKS

Risk	Solution method
1. Technological risk: achieving the required characteristics	• Involvement in the development of reputable research institutes, involvement of experienced industry specialists; • Use in production of materials that are manufactured industrially with a high degree of accuracy; • A special program of testing and fine-tuning on several samples.
2. Commercial risk - the object may not be in demand	• Preliminary presentation of the project by a potential customer at the design stage; • Participation in conferences, exhibitions and seminars on the presentation of certain types of project activities; • Conclusion of preliminary agreements with banks and investors for co-financing of the project.

Risk	Solution method
3. Production risk. Organization of production of object supplies	• Attraction of large, production-efficient suppliers of parts with a positive business reputation, conclusion of long-term cooperation agreements; • Duplication of suppliers; • Use of standard products and materials in the construction of the facility; • With financial justification, the creation of its own production site.
4. The risk of meeting customer demand for sales in the right amount	• the formation of its own trained team of designers and builders; • the possibility of changing the purpose and area of objects depending on market conditions; • constant direct work with potential customers and agencies
5. Natural force majeure	• all work on the project will be insured in a reliable insurance company; • all necessary design work will be carried out at the site of potential construction of facilities.

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