CLUSTER APPROACH TO THE VALORIZATION OF SMALL HISTORICAL TOWNS ON THE EXAMPLE OF SESTRORETSK

INTRODUCTION

RELEVANCE

Despite national projects, programs and current developments in small towns, as well as regulations in the field of cultural heritage, it is not possible to ensure such an integrated development. At the same time, the relatively high social community of small towns becomes an impetus for civic initiatives, which, given the weakness of municipal government, are the most effective tool in working with small towns. However, all these measures are not methodologically supported, and there is an obvious lack of an organized and well-developed approach to the development of small urbanized entities. Most often, the task is reduced to functional enrichment, value increment - for this process, the term valorization is used in foreign projects.

TARGET

development of a cluster approach to the valorization of small towns as a method that contributes to the sustainable development of small urbanized entities.

TASKS

Consider existing trends in the spatial development of Russia;

Define the concept of valorization, consider its main stages, tools and rules;

Analyze the structure of small towns, identify their ability for innovative development;

Develop a comprehensive concept of the cluster approach for use in urban planning;

Conduct an analysis of the spatial development of cities on the northern coast of the Gulf of Finland, determine the place and potential of Sestroretsk;

Develop a project for the valorization of Sestroretsk and determine the cluster approach as optimal for small historical towns.

HYPOTHESIS

It is assumed that in terms of structural integrity and high cultural identity, a small city has a higher potential for innovative development than megacities. To realize the innovative potential of a small town and maintain its well-being, the work proposes a cluster approach to valorization, that is, the restoration of the value characteristics of the territory, as the most effective when working with small urbanized formations with special conditions of historical and cultural identity.

SUBJECT OF STUDY

the innovative potential of Sestroretsk as a small town and the possibility of its valorization with the help of a pilot project of a research cluster.

OBJECT OF STUDY

The city of the Leningrad region, Sestroretsk, was chosen for consideration, which can be classified as a small town due to its single socio-economic specialization.

SCIENTIFIC NOVELTY

The author for the first time revealed the advantage of small towns in terms of the ability to innovative development, the thesis about the need for their detailed statistical study is affirmed. For the first time, a cluster is used as a model for the sustainable development of a small city environment, a methodology has been developed for identifying and realizing the potentials of a small city based on local

THEORETICAL SIGNIFICANCE

The work enriches the concept of valorization as a method of managing historical and cultural heritage with a new approach and models of working with the territorial potential of urbanized entities. A structural approach is being developed to small towns, which makes it possible to identify their problems and possible solutions. A special contribution to the theory is the development of the concept of an urban cluster, the classification of its types, the theoretical features of its application to small urban systems.

PRACTICAL SIGNIFICANCE

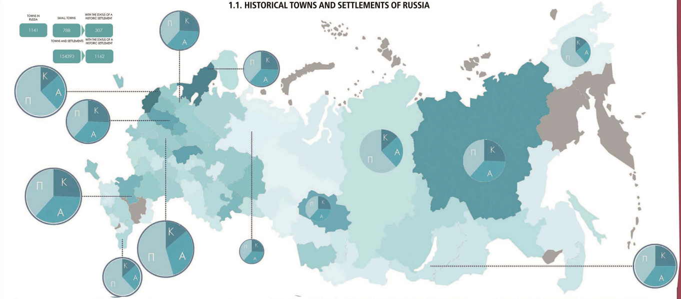
In a practical aspect, the developed cluster approach to valorization forms an effective method of working with urban systems in the presence of architectural and urban heritage. An important feature of the approach is the wide opportunities for the active inclusion of heritage in the urban environment, which solves the extremely acute issue of the town-planning significance of historical and cultural monuments with the help of management strategies.

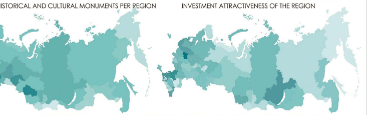
PROVISIONS FOR THE DEFENSE

1. The existing legislative, regulatory and economic base of Russia hinders the development of small towns, leads to their death and the loss of connectivity of the spatial settlement frame;
2. Small towns are formations with a stable and compact structure, capable of long-term and effective development based on internal potentials;
3. Small historical cities have greater flexibility and potential for innovative development than megacities due to internal, cultural, social and economic connectivity;
4. Valorization as a method of management and project development of the territory provides opportunities for the evolution of urban planning systems of various scales, including small urbanized formations with historical and cultural value;
5. The cluster is an effective tool for working with urbanized entities, ensuring the involvement of potential territories, their aggregation into clusters, their synthesis into systems and the long-term maintenance of their functioning; the cluster approach is effective for adapting generalized management methods to the unique environmental conditions of small historical towns

CHAPTER I. SPATIAL DEVELOPMENT OF RUSSIA

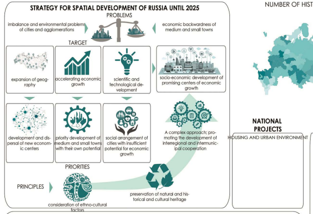
1.1. HISTORICAL TOWNS AND SETTLEMENTS OF RUSSIA




NUMBER OF HISTORICAL AND CULTURAL MONUMENTS PER REGION

INVESTMENT ATTRACTIVENESS OF THE REGION

STRATEGY FOR SPATIAL DEVELOPMENT OF RUSSIA UNTIL 2025


PROBLEMS

imbalance and environmental problems of cities and agglomerations

economic backwardness of medium and small towns

TARGET

expansion of geography

accelerating economic growth

scientific and technological development

socio-economic development of promising centers of economic growth

development and dispersal of new economic centers

priority development of medium and small towns with their own potential

social arrangement of cities with insufficient potential for economic growth

A complex approach; promoting the development of interregional and intermunicipal cooperation

PRIORITIES

PRINCIPLES

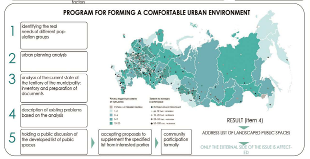
consideration of ethno-cultural factors

preservation of natural and historical and cultural heritage

NATIONAL PROJECTS

HOUSING AND URBAN ENVIRONMENT

PROGRAM FOR FORMING A COMFORTABLE URBAN ENVIRONMENT


1. identifying the real needs of different population groups
2. urban planning analysis
3. analysis of the current state of the territory of the municipality: inventory and preparation of documents
4. description of existing problems based on the analysis
5. holding a public discussion of the developed list of public spaces

accepting proposals to supplement the specified list from interested parties

community participation formally

RESULT (item 4)

ADDRESS LIST OF LANDSCAPED PUBLIC SPACES

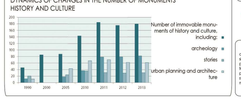
ONLY THE EXTERNAL SIDE OF THE ISSUE IS AFFECTED

1.2 PRESERVATION AND DEVELOPMENT OF HISTORICAL AND CULTURAL HERITAGE

PROTECTION STATUS OF OBJECTS OF HISTORY AND CULTURE

	FEDERAL VALUES	REGIONAL VALUES	MUNICIPAL VALUES	IDENTIFIED
MONUMENTS	54233	63900	2565	105114
ENSEMBLES	14897	6460	162	
SIGHT-PARTICULAR PLACES	169	1852	37	

DYNAMICS OF CHANGES IN THE NUMBER OF MONUMENTS HISTORY AND CULTURE



RESTORATION METHODS

REPAIR
periodical works to maintain the monument carried out by conventional construction methods

CONSERVATION
work to preserve the monument, requiring the adoption of special measures to strengthen and protect in case of mass damage

RESTORATION
comprehensive work to extend the life and change the existing appearance of the monument to better reveal its artistic qualities and emphasize its social value

COMPLETE CONSERVATION

CRITICAL RESTORATION

COMPLETE RESTORATION

ADAPTATION
a complex of various operations designed to give the work a look or properties that will ensure it not only further preservation, but also the opportunity to play its role in the cultural system, that is, adapt it, include it in modern culture

1.3VALORIZATION OF HISTORICAL AND CULTURAL HERITAGE

RECOGNITION OF VALUES

BURRA CHARTER (1979)

CULTURAL SIGNIFICANCE IS EXPRESSED IN THE AESTHETIC, HISTORICAL, SCIENTIFIC, SOCIAL ROLE OF HERITAGE FOR PAST, LIVING AND FUTURE GENERATIONS

PRE-DESIGN STAGE:

STUDYING YOUR NEEDS

STUDYING POTENTIAL USES (BEST USE ANALYSIS - HBU)

DEVELOPING A POST-PROJECT MANAGEMENT PLAN

attractiveness of regions, factor of high quality of life	local identity, active citizenship	related activities, volume and complexity of tasks	special status and increased social significance	conductor of sustainable development	high potential energy of the complex	basic element of social and territorial capital
attendance, investment potential	the basis of effective marketing, the attractiveness of educational and educational activities	job creation, a factor in the emergence of innovative and creative enterprises	guaranteed payback and source of excess income from taxation	no overspending of non-renewable resources of the environment	a significant fund of historical buildings in terms of useful area	convenient and accessible environment for commercial and non-commercial activities

OBJECTIVES OF VALUE ASSESSMENT

1. stakeholder identification
2. categorization of values
3. evaluation of values
4. summarizing the assessment of values
5. discussion with stakeholders
6. repeating procedures to avoid conflicts

TYPES OF VALUES

MARKET:
USER COST
COST OF PRESERVATION AND MAINTENANCE
COST OF COPYRIGHT
TRADITIONAL CULTURAL VALUES
(AESTHETIC, HISTORICAL, COGNITIVE)
COMMUNICATIVE:
SYMBOLIC
THE VALUE OF SOCIAL IDENTITY
THE VALUE OF URBAN QUALITY AND LANDSCAPE
SOCIAL AND VALUES OF DEVELOPMENT FACTORS:
VALUE CHAINS
EDUCATIONAL
INNOVATIVE
THE VALUE OF COMMUNITY INTEGRATION

BUSINESS RESPONSIBILITY PROGRAM (REAP UNIDO)
METHODOLOGY FOR ASSESSING CULTURAL PROJECTS

Corporate Social Responsibility (CSR) based governance and accountability mechanism to support small and medium businesses

INDIVIDUAL/EXPERT INTERVIEWS · FOCUS GROUPS · DISCUSSION/OBSERVATION · BEHAVIOR MAPPING · CROSSING ROADS · HISTORICAL DOCUMENTS

ASSESSMENT METHODS

REQUIRE ADAPTATION TO THE TASK OF WORK WITH HISTORICAL AND CULTURAL HERITAGE

COST AND BENEFITS METHOD UNINTENDED COST ANALYSIS	IMPACT ASSESSMENT METHOD BEST COST ANALYSIS	HIDDEN PREFERENCE METHOD STATED NEEDS METHOD

VALORIZATION TOOLS

PUBLIC-PRIVATE PARTNERSHIP

PUBLIC-PRIVATE-PUBLIC PARTNERSHIP

GRANTS SUBSIDIES

CONCERN LOANS

PUBLIC INSURANCE

ONLINE PLATFORMS

BANKING SOFINANCIROVANIE

GUARDIANCY

CROWDFUNDING

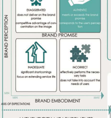
VOLUNTEERING

DEVICE PROJECT (RE-USE)

CONSERVATION/RESTORATION
THE PROJECT OF PRESERVATION SHOULD BE IN CONSISTENCY WITH THE FUTURE USE STRATEGY, BE CONSIDERED WITH CULTURAL SIGNIFICANCE AND BE DIRECTED TO THE END USERS

VALORIZATION
STRATEGIES AND A SET OF ACTIONS AIMED AT ACTIVELY STUDYING CULTURAL HERITAGE, CREATING THE BEST CONDITIONS FOR ITS USE AS AN OBJECT OF PUBLIC VALUE

AUTHENTICITY AND BRANDING


BRAND PERCEPTION
EXAGGERATED
AUTHENTIC
BRAND PROMISE
INADEQUATE
INCORRECT
BRAND EMBODIMENT
AXIS OF EXPECTATIONS

AUTHENTICITY MEASUREMENTS:
FORM
MATERIAL
DESIGN
POSITION AND ENVIRONMENT
USE AND FUNCTION
IMPOSSIBLE AND ESSENTIAL CHARACTERISTICS

KEY PRINCIPLE IS THE LEAST POSSIBLE DEGREE OF MODIFICATION (BURR CHARTER, ART.20)

FINANCIAL ASSET

VALUE NETWORK MODEL

DELIVERYING VALUE BY FOSTERING RELATIONSHIPS BETWEEN USERS THROUGH TECHNOLOGY

HERITAGE NOT FOR CONSUMER	EXTERNAL FACTORS	CONCEPT OF VALUES	REAL GOALS	REAL VALUES
for citizens, i.e. potential participants in heritage development strategies	it is not only network factors, but also the role of participant diversity	not established by experts, but arising as a result of network interaction	intangible benefits, not just production, which improves organization	development of social and territorial potential

BUSINESS PLAN

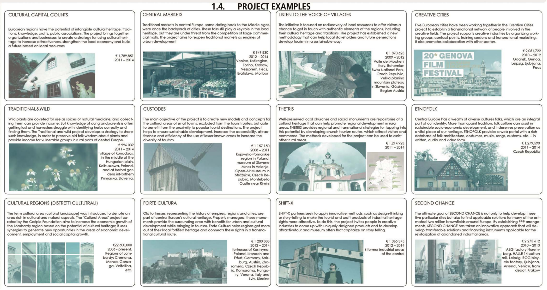
idea development and business concept development feasibility assessment

choice of business model development of approved basic ideas

evaluation of offer availability critical assessment of resources

STAGE I: BUSINESS CONCEPT	STAGE II: BUSINESS MODEL	STAGE III: PRESENTATION
IDENTIFYING THE NEEDS OF THE LOCATION COMPARISON WITH OTHER EXAMPLES STANDARDIZATION STAKEHOLDER IDENTIFICATION COMPARISON OF ALTERNATIVE OFFERS MULTI-FACTORY ANALYSIS ROUGH QUANTIFICATION	DEFINITION OF THE OFFER DEFINITION OF THE TYPE OF ORGANIZATION/OPERATION IDENTIFICATION OF POSSIBLE ALLIANCES SCALE ECONOMY DEFINITION OF RELATIONSHIPS WITH STAKEHOLDERS MANAGEMENT MODEL MANAGEMENT PLAN	SHOW THE FEASIBILITY AND MERITS OF THE PROJECT CONDUCT AN IMPACT ANALYSIS ON RELEVANT INDICATORS IDENTIFY RELEVANT POSITIVE EXTERNAL INFLUENCES SHOW FINANCIAL STATEMENTS AS CLEARLY AS POSSIBLE QUANTIFY COSTS AND BENEFITS

1.4. PROJECT EXAMPLES


CULTURAL CAPITAL COUNTS

European regions have the potential of intangible cultural heritage, traditions, knowledge, crafts, public associations. The project brings together organizations and businesses to create a strategy for using cultural heritage to increase attractiveness, strengthen the local economy and build a future based on local resources

€ 1,789,851
2011 – 2014

CENTRAL MARKETS

Traditional markets in central Europe, some dating back to the Middle Ages, were once the backyards of cities. These fairs still play a key role in the local heritage, but they are under threat from the competition of large commercial malls. The project aims to reopen traditional markets as engines of urban development

€ 949 830
2012 – 2014
Venice, Usti region, Torino, Krakow, Vezprem, Pecs, Bratislava, Moribor

LISTEN TO THE VOICE OF VILLAGES

The initiative is focused on rediscovery of local resources to offer visitors a chance to get in touch with authentic elements of the regions, including their cultural heritage and traditions. The project has established a new methodology that can help local stakeholders and future generations develop tourism in a sustainable way.

€ 1 870 625
2009 – 2012
Valle dei Mocheni Italy, Bohemian Swiss National Park, Czech Republic

CREATIVE CITIES

Five European cities have been working together in the Creative Cities project to establish a transnational network of people involved in the creative fields. The project supports creative industries by organizing working groups, contact points, training sessions and transnational marketing. It also promotes collaboration with other sectors.

€ 2,051,722
2010 – 2012
Gdansk, Genoa, Leipzig, Ljubljana, Pecs

TRADITIONAL&WILD

CUSTODES

THETRIS

ETNOFOLK

CULTURAL REGIONS (DISTRETTI CULTURALI)

FORTE CULTURA

SHIFT-X

SECOND CHANCE

MORE THAN HALF OF ALL RUSSIAN CITIES HAVE HISTORICAL AND CULTURAL POTENTIAL

OFFICIAL IDENTIFICATION OF HISTORICAL AND CULTURAL POTENTIAL HAPPENS MOST EFFECTIVELY AT THE REGIONAL LEVEL

OFFICIAL DATA ON THE PRESENCE OF HISTORICAL AND CULTURAL HERITAGE IN THE TERRITORY OF THE REGIONS DO NOT COME WITH THE DATA ON THE LOCATION OF HISTORICAL SETTLEMENTS, BUT IT IS ALMOST IDENTICAL WITH THE DATA ON INVESTMENT POTENTIAL

HISTORICAL AND CULTURAL VALUE IS SECONDARY IN RELATION TO ECONOMIC PARAMETERS, AND THEREFORE IT IS NOT REALIZED

SMALL CITIES BECOME ATTRACTIVE WHEN THEY HAVE THEIR OWN POTENTIAL

THE PROBLEM OF IDENTIFICATION

THE ONLY TOOL TO IDENTIFY AND DEVELOP THE POTENTIAL OF ARCHITECTURAL AND URBAN PLANNING HERITAGE
- DEVICE -
THE MOST COMPLEX AND THE MOST UNDEVELOPED RESTORATION METHOD

ADAPTATION

VALORIZATION EUROPEAN TERM	REVALORIZATION DOMESTIC TERM
to give value, to give value	"the return of the value lost by the object"

SOUTH. BOBROV
The theory of restoration of art monuments

methodological aspects of operations for adaptation (adaptation) of an object, that is, its inclusion in culture, which makes it valuable

VALORIZATION → ADAPTATION → VALUE OFF INCLUSIONS TO CULTURE
D.S. LIHACHEV
ECOLOGY OF CULTURE

bringing the monument into a valuable form for society, which is one of the important conditions for its preservation for the future

ADAPTATION PROJECT IS A COMBINATION OF IDEOLOGICAL, MATERIAL AND FUNCTIONAL ASPECTS: MEASURES TO IDENTIFY VALUES, CONSERVATION AND VALORIZATION OF CULTURAL HERITAGE

ALL ECONOMIC COMPONENTS NEED TO BE RETHOUGHT FOR APPLICATION TO A CULTURAL HERITAGE SITE

THE VALUE OF CULTURAL HERITAGE IS REVEALED AS A FACTOR IN THE DEVELOPMENT OF THE SOCIAL AND TERRITORIAL CAPITAL OF THE TERRITORY

THE VALUE INCREASES WHEN THE FACTORS OF EXTERNAL INFLUENCE OF THE NETWORK OR COMPLEX OF OBJECTS ARE ON

CULTURAL HERITAGE VALORIZATION PROJECTS REQUIRE JOINT EFFORTS OF THE STATE, BUSINESS AND COMMUNITY

PUBLIC SECTOR	PRIVATE SECTOR	COMMUNITY
government and public land owners	business developers private land owners	local residents non-profit organizations end users of the environment

PUBLIC-PRIVATE-COMMUNAL PARTNERSHIP
AS THE MOST COMPLEX FORM OF INTERACTION TO CREATE A SEMI-FORMAL MECHANISM

ST. DELLA TORRE

PROJECTS DEMONSTRATE THE SIGNIFICANT ROLE OF LOCAL COMMUNITY INITIATIVES IN THE PROCESS OF VALORIZATION

CHAPTER II. SMALL CITIES IN THE URBAN PLANNING SYSTEM OF RUSSIA

2.1 SYSTEM THEORY

FUNDAMENTAL FACTORS

system device · composition of the system (subsystems and elements) · current global state of system conditioning · the environment within which organizing processes are deployed

HYPOTHESES AND LAWS OF SYSTEM THEORY

HYPOTHESIS OF SEMIOTIC CONTINUITY	a change in a system is a change in its environment due to external and internal influences
THE LAW OF REQUIRED VARIETY	an increase in the diversity of elements of systems as a whole can lead to both an increase in stability and its decrease
LAW OF HIERARCHICAL COMPENSATION	the actual growth of diversity at the highest level is ensured by its effective limitation at the previous levels
LAW OF DIFFERENCE	the activity of two identical systems tends to progressive accumulation of differences
LAW OF EXPERIENCE	information associated with a change in a parameter destroys or replaces information about the initial state of the system
LAW OF THE MINIMUM	the stability of the whole depends on the smallest relative resistances of all its parts at any moment.

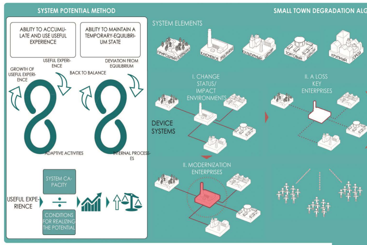
BASIC PRINCIPLES OF SYSTEM THEORY

FEEDBACK PRINCIPLE	stability in complex dynamic forms is achieved by closing feedback loops
PRINCIPLE OF ORGANIZATIONAL CONTINUITY	intermediate links are established between any two systems, introducing them into one chain of ingression
THE PRINCIPLE OF COMPLEMENTARY RELATIONSHIPS	systemic divergence contains a development trend towards additional connections
EXTERNAL ADDITION PRINCIPLE	coordination impulses of the system center are specified in accordance with the nature of local processes due to feedback
PRINCIPLE OF PROGRESSIVE SEGREGATION	each differentiation is a local integration, a local solution connecting with others in a system of solution or global integration
PRINCIPLE OF PROGRESSIVE MECHANIZATION	as systems evolve, parts become fixed with respect to certain mechanisms
FUNCTION UPDATE PRINCIPLE	an object appears as organized if the properties of its parts appear as functions of the preservation and development of this object

COMPLEX (COMPLEX) ADAPTIVE SYSTEMS (CAC)

consists of subsystems that are also SAS · exchanges matter, energy and information with the environment · has properties that are not derived from the properties of its subsystem levels · has self-similarity (fractal structure) · capable of adaptive activity (+ useful abilities; -useless abilities) · able to maintain its steady state · able to increase ordering (order) and complexity (complexity)

2.2 STRUCTURAL APPROACH TO THE ANALYSIS OF SMALL URBAN


SYSTEM POTENTIAL METHOD
SMALL TOWN DEGRADATION AL
ABILITY TO ACCUMULATE AND USE USEFUL EXPERIENCE
ABILITY TO MAINTAIN A TEMPORARY EQUILIBRIUM STATE
USEFUL EXPERIENCE
DEVIATION FROM EQUILIBRIUM
GROWTH OF USEFUL EXPERIENCE
BACK TO BALANCE
ADAPTIVE ACTIVITIES
EXTERNAL PROCESSES
SYSTEM CAPACITY
USEFUL EXPERIENCE
CONDITIONS FOR REALIZING THE POTENTIAL
SYSTEM ELEMENTS
DEVICE SYSTEMS
I. CHANGE STATUS/IMPACT ENVIRONMENT
II. A LOSS KEY ENTERPRISES
III. MODERNIZATION ENTERPRISES

2.3 TYPOLOGATION OF SMALL URBAN SYSTEMS

TYPOLOGY OF SMALL TOWNS

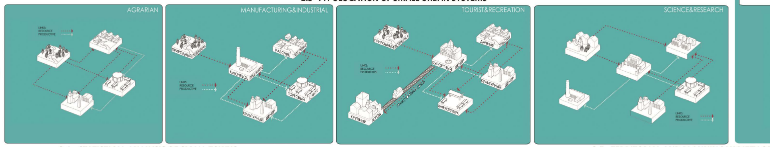
G.M. LAPPO

FORMER RURAL DISTRICT CENTERS
FACTORY VILLAGES

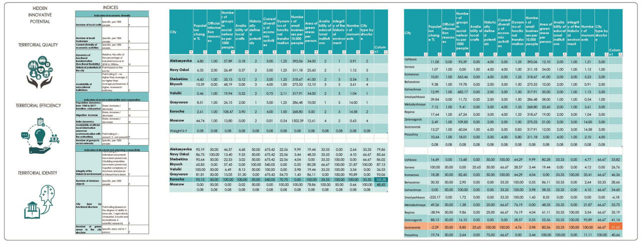
FACTORY CITIES
RAW-MATERIAL PRODUCING CITIES (OIL CITIES, MINING CITIES, MINING)
ENERGY CITIES

STATION CITIES (ASSOCIATED WITH TRANSPORT ROUTES)

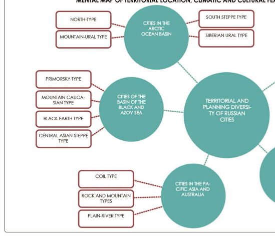
SATELLITES (CENTRIPETAL PROCESSES IN SETTLEMENT AND AGGLOMERATION FACTOR), INCL. SCIENCE CITIES


AGRARIAN
MANUFACTURING&INDUSTRIAL
TOURIST&RECREATION
SCIENCE&RESEARCH
LINKS:
RESOURCE
PRODUCTIVE
ПРИРОДНЫЙ ПОТЕНЦИАЛ
РАБОЧЕЕ ПОСЕЛЕНИЕ

2.4 STATISTICAL ANALYSIS OF SMALL TOWNS


HIDDEN INNOVATIVE POTENTIAL
TERRITORIAL QUALITY
TERRITORIAL EFFICIENCY
TERRITORIAL IDENTITY
INDICES
City type by functional structure
Point rating (based on the degree of ability to innovate. 1-agricultural, 2-industrial, 3-tourist and recreational, 4-scientific research)
Number of green areas in the city structure
Specific area, m2 for 1 person
Molodezhnoye
Repino
Zelenogorsk
Sestroretsk
Pesochny

2.5 TERRITORIAL AND PLANNING VARIETY OF


MENTAL MAP OF TERRITORIAL LOCATION, CLIMATIC AND CULTURAL FEA
NORTH-TYPE
MOUNTAIN-URAL TYPE
CITIES IN THE ARCTIC OCEAN BASIN
SOUTH STEPPE TYPE
SIBERIAN URAL TYPE
PRIMORSKY TYPE
MOUNTAIN CAUCASIAN TYPE
BLACK EARTH TYPE
CENTRAL ASIAN STEPPE TYPE
CITIES OF THE BASIN OF THE BLACK AND AZOV SEA
TERRITORIAL AND PLANNING DIVERSITY OF RUSSIAN CITIES
COIL TYPE
ROCK AND MOUNTAIN TYPES
PLAIN-RIVER TYPE
CITIES IN THE PACIFIC ASIA AND AUSTRALIA

2.6 CLUSTER THEORY AND ITS APPLICATION IN URBAN PLANNING

CLUSTER

an association of several homogeneous elements, which can be considered as an independent unit with certain properties.

class of related elements of the statistical population

a group of computers connected by high-speed communication channels and representing a single hardware resource from the user's point of view

a complex association (group) of several atoms or molecules that stand out from other similar molecules and combine into a stable [separate] formation;

ECONOMIC CLUSTER THEORY

M. PORTER

a group of geographically adjacent interconnected companies and related organizations operating in a specific area and complementing each other.

MAIN GROUPS OF COMPETITIVE ADVANTAGES

factor conditions, resources incl. quality of life factors · domestic demand conditions · related and service industries · strategy and structure of firms, intra-industry competition

- these are regionally limited forms of economic activity within related sectors, tied to scientific institutions

are vertical production chains in which adjacent stages of the production process form the core of the cluster

are industries defined at a high level of aggregation or aggregates of sectors at an even higher level of aggregation

CLUSTER OBJECTIVE AREA

analysis of the competitiveness of the state, region, industry;

the basis of the national industrial policy;

development of regional development programs;

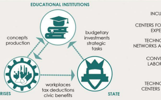
the basis for stimulating innovation;

basis of interaction between large and small businesses.

URBAN PLANNING CLUSTER

an interdisciplinary approach to the creation of a self-sufficient spatial component structured by a system of internal connections of specialized manufacturing enterprises, research and experimental organizations, commercial companies and government institutions, based on the existing urbanized formation and in accordance with its historically defined potential.

LOCAL TERRITORIAL ORIENTATION	IMMUNITY TO SCALE
SPATIAL FLEXIBILITY	VARIOUS FUNCTIONAL COMPOSITION
ABILITY TO USE EFFECTIVELY INTERNAL RESOURCES	IDENTITY


EDUCATIONAL INSTITUTIONS
concepts production
budgetary investments strategic tasks
ENTERPRISES
workplaces tax deductions civic benefits
STATE

INCUBATORS

CENTERS FOR ADVANCED EXPERIENCE

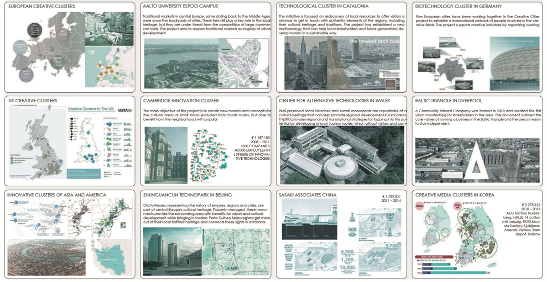
TECHNOLOGICAL NETWORKS AND PLATFORMS

CONVERGENCE LABORATORIES

TECHNOLOGICAL CENTERS AND PARKS

URBAN SCALE

PROJECT EXAMPLES


EUROPEAN CREATIVE CLUSTERS

AALTO UNIVERSITY ESPOO CAMPUS

Traditional markets in central Europe, some dating back to the Middle Ages, were once the backyards of cities. These fairs still play a key role in the local heritage, but they are under threat from the competition of large commercial malls. The project aims to reopen traditional markets as engines of urban development

TECHNOLOGICAL CLUSTER IN CATALONIA

The initiative is focused on rediscovery of local resources to offer visitors a chance to get in touch with authentic elements of the regions, including their cultural heritage and traditions. The project has established a new methodology that can help local stakeholders and future generations develop tourism in a sustainable way.

BIOTECHNOLOGY CLUSTER IN GERMANY

UK CREATIVE CLUSTERS

CAMBRIDGE INNOVATION CLUSTER

CENTER FOR ALTERNATIVE TECHNOLOGIES IN WALES

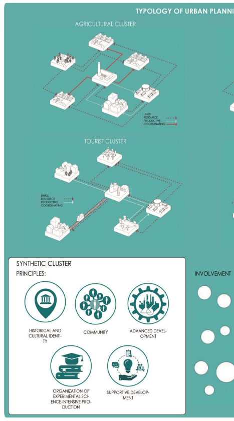
BALTIC TRIANGLE IN LIVERPOOL

INNOVATIVE CLUSTERS OF ASIA AND AMERICA

ZHONGGUANCUN TECHNOPARK IN BEIJING

SASAKI ASSOCIATES CHINA

CREATIVE MEDIA CLUSTERS IN KOREA


TYPOLOGY OF URBAN PLANNI
AGRICULTURAL CLUSTER
TOURIST CLUSTER
SYNTHETIC CLUSTER
PRINCIPLES:
HISTORICAL AND CULTURAL IDENTITY
COMMUNITY
ADVANCED DEVELOPMENT
ORGANIZATION OF EXPERIMENTAL SCIENCE-INTENSIVE PRODUCTION
SUPPORTIVE DEVELOPMENT
INVOLVEMENT

2.7 CLUSTER URBAN PLANNING FORMS IN RUSSIA

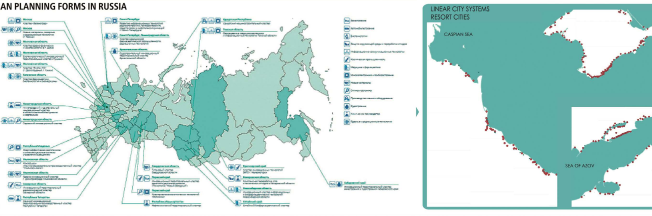
CONCEPTS AND TOOLS OF CLUSTER FORMATION IN RUSSIA

TECHNOPARK	INDUSTRIAL PARK	CLUSTER
an object of innovation infrastructure, functioning, as a rule, in a separate building or on the territory	site for the location of production facilities, usually associated with capital construction projects and the necessary infrastructure	flexible and free association of enterprises according to the territorial-spatial principle

SEZ
SPECIAL ECONOMIC ZONE

TOR
ADVANCED DEVELOPMENT TERRITORY

INVESTMENT PROJECTS

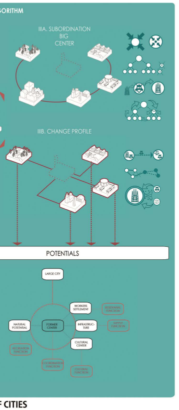

LINEAR CITY SYSTEMS
RESORT CITIES
CASPIAN SEA
SEA OF AZOV

CLUSTER APPROACH TO THE VALORIZATION OF SMALL HISTORICAL TOWNS ON THE EXA

CHAPTER III. ANALYSIS OF THE CITY OF SESTRONETSK IN THE SYSTEM OF THE RESORT DISTRICT OF SAINT PETERSBURG

BAN SYSTEMS

GORITHM


IIIA. SUBORDINATION BIG CENTER
IIIB. CHANGE PROFILE
POTENTIALS
LARGE CITY
WORKERS SETTLEMENT
RESIDENTIAL FUNCTION
NATURAL POTENTIAL
FORMER CENTER
INFRASTRUCTURE
SUPPLY FUNCTION
CULTURAL CENTER
RECREATION FUNCTION
COORDINATION FUNCTION
CULTURAL FUNCTION

SYSTEMS THEORY PROPOSES SIMPLE PRINCIPLES TO EXPLAIN THE BEHAVIOR OF DYNAMIC SYSTEMS THAT ARE SMALL CITIES

DEGRADATION OF THE ENVIRONMENT OF A SMALL CITY IS A CONSEQUENCE OF BOTH IMPACTS OF THE ENVIRONMENT AND INTERNAL UNSTRUCTURED DIFFERENTIATION

IN THE FRAMEWORK OF THE THEORY OF COMPLEX ADAPTIVE SYSTEMS, THE METHOD OF SYSTEM POTENTIAL PROPOSES A SOLUTION TO THE PROBLEM THROUGH FEEDBACK LOOPS

SMALL CITIES GAIN VIABILITY AND INVESTMENT ATTRACTIVENESS WITH OWN POTENTIAL

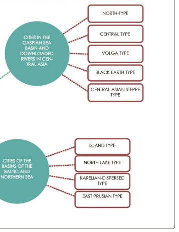
THE PRESENT STRUCTURAL AND FUNCTIONAL SCHEMES OF SMALL CITY SYSTEMS ALLOW TO TRACE THE MAIN RELATIONSHIPS IN EACH OF THE TYPES OF SMALL TOWNS

TAKING INTO ACCOUNT THE MAIN PROPERTIES OF SAS, A NEW APPROACH TO THE ASSESSMENT OF INNOVATIVE POTENTIAL IN WHICH SMALL CITIES PROVE THEIR EFFICIENCY AND ADAPTABILITY

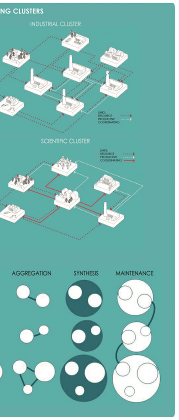
CONSIDERATION OF THE ENTIRE SYSTEM OF SMALL TOWNS SHOWS THE TERRITORIAL ASPECT OF THEIR POTENTIAL AND PROVIDES THE POSSIBILITY OF UNDERSTANDING THE PROBLEMS AND METHODS OF THEIR SOLUTIONS AT THE URBAN PLANNING LEVEL

F CITIES

ATURES OF SMALL TOWNS OF RUSSIA


CITIES IN THE CASPIAN SEA BASIN AND DOWNLOADED RIVERS IN CENTRAL ASIA
NORTH-TYPE
CENTRAL TYPE
VOLGA TYPE
BLACK EARTH TYPE
CENTRAL ASIAN STEPPE TYPE
CITIES OF THE BASINS OF THE BALTIC AND NORTHERN SEA
ISLAND TYPE
NORTH LAKE TYPE
KARELIAN-DISPERSED TYPE
EAST PRUSIAN TYPE

NG CLUSTERS


INDUSTRIAL CLUSTER
LINKS:
RESOURCE
PRODUCTIVE
COORDINATING
SCIENTIFIC CLUSTER
LINKS:
RESOURCE
PRODUCTIVE
COORDINATING
AGGREGATION
SYNTHESIS
MAINTENANCE

BLACK SEA
THE GULF OF FINLAND

URBAN PLANNING CLUSTER IS AN INTERDISCIPLINARY APPROACH TO THE SPATIAL EXPRESSION OR DEVELOPMENT OF A NEW FUNCTIONAL IDEA OF THE CITY

CLUSTER AS A SYSTEM IS A WAY TO RESTORE FEEDBACK LOOPS AND STRUCTURED DEVELOPMENT OF THE SYSTEM, WHICH IS PROVED BY EXAMPLES FROM WORLD EXPERIENCE

OF ALL TYPES OF CLUSTER SYSTEMS, THE MOST COMPLEX AND FULFILLING THE TASK TO WORK WITH THE VULNERABLE ENVIRONMENT OF SMALL HISTORICAL CITIES IS A SYNTHETIC CLUSTER

DESPITE SCALE IMMUNITY, THE CLUSTER HAS A QUANTITATIVE LIMIT IN ACCORDANCE WITH THE PRINCIPLE OF AUTONOMY

NEIGHBOURHOOD	TOWNSHIP
DISTRICT, QUARTER, NEIGHBORHOOD	**VILLAGE, SETTLEMENT**
2 THOUSAND. - 10 TH	20 THOUSAND. - 40 THOUSAND.

CLUSTER UNIT:	CLUSTER UNIT:
CITY / SETTLEMENT	**INTERCITY FUNCTION**
UP TO 15 THOUSAND. ± 5	UP TO 10 THOUSAND. ± 5 THOUSAND.

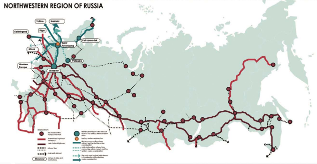
THERE ARE THREE SIMILAR DEFINITIONS OF CREATIVE SPATIAL SYSTEMS IN RUSSIAN PRACTICE, WHICH SHOULD BE DISTINCTED. OF THEM, CLUSTER IS THE MOST FLEXIBLE INSTRUMENT

THE MAP OF LOCATION OF INNOVATIVE ENTERPRISES BY REGIONS OF RUSSIA SHOWS THE EXCLUSION OF COASTAL AREAS OF RECREATION AND RESORT CHARACTER, REPRESENTED MOSTLY SMALL AND HAVE THE POTENTIAL OF DEVELOPMENT OF LINEAR CONNECTIONS

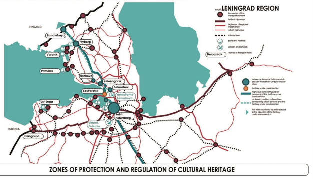
3.1 SAINT PETERSBURG AGGLOMERATION. SYSTEM OF CITIES ON THE NORTHERN COAST OF THE GULF OF FINLAND

SAINT PETERSBURG AGGLOMERATION

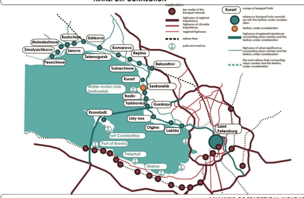
NORTHWESTERN REGION OF RUSSIA


Tallinn
Helsinki
Riga
Kaliningrad
Saint Petersburg
Petrozavodsk
Minsk
Vologda
Western Europe
Moscow
explication:

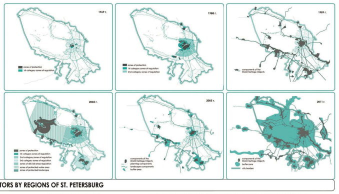
LENINGRAD REGION


FINLAND
Buslovskaya
Vyborg
Vysotsk
Primorsk
Ushkovo
Zelenogorsk
Beloostrov
Sestroretsk
aerodrome Levashovo
Ust-Luga
Saint Petersburg
airport Pulkovo
ESTONIA
Ivangorod
explication:
key nodes of the transport network
federal highways
highways of regional importance
urban highways
railway lines
ports and marinas
airports and airfields
Beloostrov
names of transport hubs

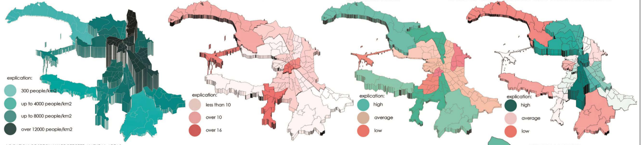
TRANSPORT CONNECTION


explication:
key nodes of the transport network
highways of regional importance
highways of citywide importance
regional highways
railway lines
ports and marinas
Kurort
names of transport hubs
reference transport hubs associated with the territory under consideration
territory under consideration
highways of regional importance connecting urban centers and the territory under consideration
highways of urban significance connecting urban centers and the territory under consideration
the main railway lines connecting urban centers and the territory under consideration
Roshchino
Ushkovo
Molodezhnoe
Smolyachkovo
Serovo
Komarovo
Repino
Zelenogorsk
Pesochnoe
Solnechnoe
Beloostrov
Kurort
Water-motor club Sestroretsk
Sestroretsk
Razliv
Tarkhovka
Gorskaya
Kronstadt.
Lisiy nos
Olgino
Lakhta
Saint Petersburg
Fort Constantine
Port of Bronka
Peterhof
Strelna

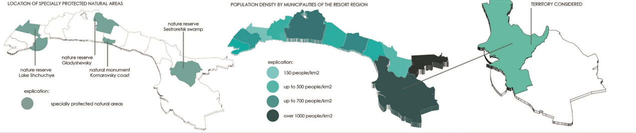
ZONES OF PROTECTION AND REGULATION OF CULTURAL HERITAGE


1969 г.
1988 г.
1989 г.
2003 г.
2005 г.
2011 г.
zones of protection
1st category zones of regulation
2nd category zones of regulation
3rd category zones of regulation
zones of alluvial areas regulation
zones of protected water area
zones of protected landscape
components of the World Heritage Objects
planning components
landscape components
buffer area
buffer zone
city borders

ANALYSIS OF STATISTICAL INDICATORS BY REGIONS OF ST. PETERSBURG

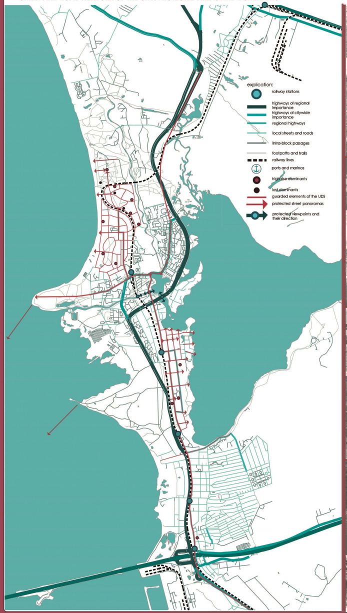

POPULATION DENSITY BY DISTRICTS OF SAINT PETERSBURG
explication:
300 people/km2
up to 4000 people/km2
up to 8000 people/km2
over 12000 people/km2
NUMBER OF CRIMES PER 1000 PEOPLE
explication:
less than 10
over 10
over 16
ENVIRONMENTAL SAFETY
explication:
high
average
low
LEVEL OF PROVISION WITH OBJECTS OF TRADE AND LEISURE INFRASTRUCTURE
explication:
high
average
low

RESORT AREA


LOCATION OF SPECIALLY PROTECTED NATURAL AREAS
nature reserve Sestroretsk swamp
nature reserve Gladyshevsky
nature reserve Lake Shchuchye
natural monument Komarovsky coast
explication:
specially protected natural areas
POPULATION DENSITY BY MUNICIPALITIES OF THE RESORT REGION
explication:
150 people/km2
up to 500 people/km2
up to 700 people/km2
over 1000 people/km2
TERRITORY CONSIDERED

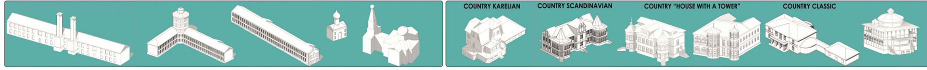
3.2 CULTURAL AND HISTORICAL FRAMEWORK OF SESTRORETSK

STREET AND ROAD NETWORK OF THE CITY. PROTECTED AREAS AND DOMINANTS

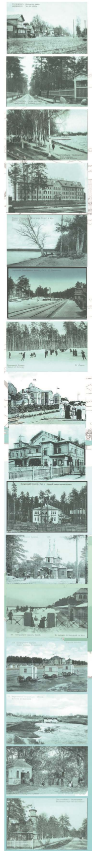

explication:
railway stations
highways of regional importance
highways of citywide importance
regional highways
local streets and roads
intra-block passages
footpaths and trails
railway lines
ports and marinas
high-rise dominants
lost dominants
guarded elements of the UDS
protected street panoramas
protected viewpoints and their direction

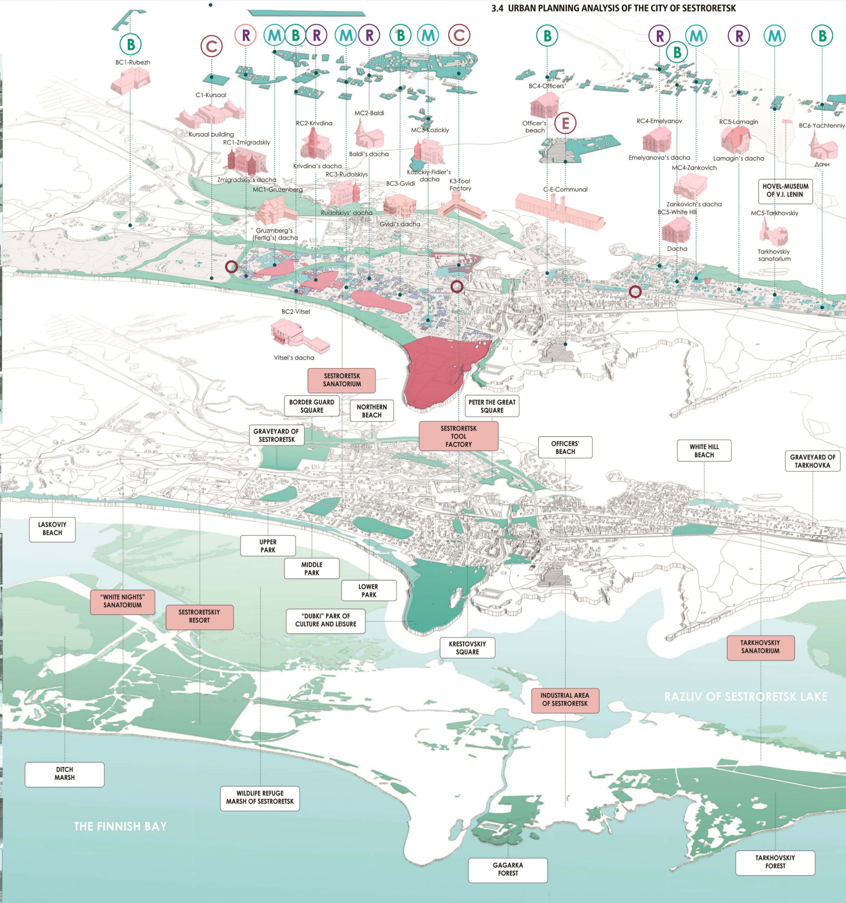
OBJECTS OF CULTURAL HERITAGE

ARCHETYPES OF URBAN DEVELOPMENT


PETROVSKY
LEISURE AND RECREATIONAL
COUNTRY KARELIAN
COUNTRY SCANDINAVIAN
COUNTRY "HOUSE WITH A TOWER"
COUNTRY CLASSIC

3.4 URBAN PLANNING ANALYSIS OF THE CITY OF SESTRORETSK




B
C
R
M
B
R
M
R
B
M
C
B
R
B
M
R
M
B
E
BC1-Rubezh
C1-Kursaal
Kursaal building
RC1-Zmigradskiy
Zmigradskiy's dacha
MC1-Gruzenberg
Gruzmberg's (Fertig's) dacha
RC2-Krivdina
Krivdina's dacha
RC3-Rudolskiys
Rudolskiys' dacha
MC2-Baldi
Baldi's dacha
BC3-Gvidi
Gvidi's dacha
MC3-Kozickiy
Kozickiy-Fidler's dacha
K3-Tool Factory
BC2-Vitsel
Vitsel's dacha
BC4-Officers'
Officer's beach
C-E-Communal
RC4-Emelyanov
Emelyanova's dacha
MC4-Zankovich
Zankovich's dacha
BC5-White Hill
Dacha
RC5-Lamagin
Lamagin's dacha
MC5-Tarkhovskiy
Tarkhovskiy sanatorium
BC6-Yachtenniy
Дачи
HOVEL-MUSEUM OF V.I. LENIN
SESTRORETSK SANATORIUM
BORDER GUARD SQUARE
NORTHERN BEACH
PETER THE GREAT SQUARE
GRAVEYARD OF SESTRORETSK
SESTRORETSK TOOL FACTORY
OFFICERS' BEACH
WHITE HILL BEACH
GRAVEYARD OF TARKHOVKA
LASKOVIY BEACH
UPPER PARK
MIDDLE PARK
LOWER PARK
"WHITE NIGHTS" SANATORIUM
SESTRORETSKIY RESORT
"DUBKI" PARK OF CULTURE AND LEISURE
KRESTOVSKIY SQUARE
TARKHOVSKIY SANATORIUM
INDUSTRIAL AREA OF SESTRORETSK
RAZLIV OF SESTRORETSK LAKE
DITCH MARSH
WILDLIFE REFUGE MARSH OF SESTRORETSK
THE FINNISH BAY
GAGARKA FOREST
TARKHOVSKIY FOREST

BEFORE 1714
pre-industrial stage
the formation of a complex of settlements based on subsistence farming in the interfluve of the Sestra and Chernaya rivers

1714 - 1868
Industrial stage
the orientation of the settlement and activities to maintain the functioning of the plant, the formation of an autonomous production and mining complex due to the need to strengthen the defense capability of the border region

1714 - 1785
Formation of a complex of settlements based on subsistence farming in the interfluve of the Sestra and Chernaya rivers

1786 - 1812
The loss of the center of the royal residence, the development of a settlement at the factory, the construction of churches and the formation of squares

1812 - 1868
Construction of roads and artificial objects of the hydrographic system: dams, dams, canals, landscape changes due to floods, connection with mineral basins

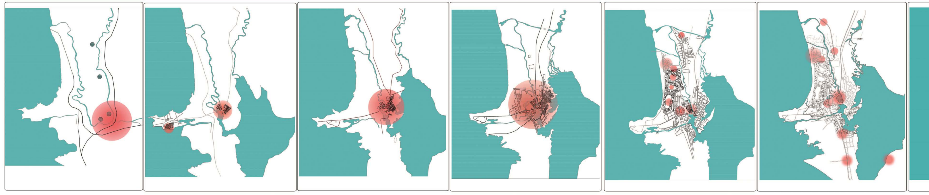
1868 - 1917
Leisure and recreational stage
Formation of the sanatorium-resort infrastructure of the region, development of parks, churches, public institutions around local centers.

1868 - 1898
Post-fire restoration of Sestroretsk; preparation and construction of the Primorskaya branch of the railway.

1898 - 1917
Establishment of the Sestroretsk resort, planning of the suburban area and the city around new centers and local centers of railway stations.

Demo
sion o

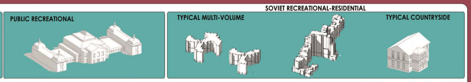
Stage



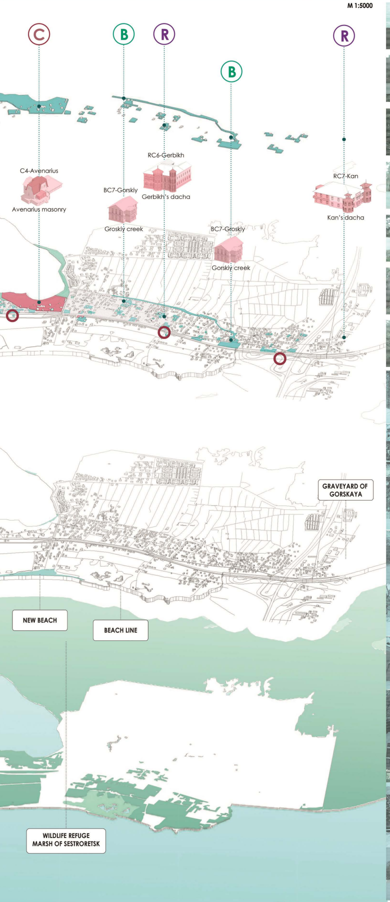
AMPLE OF SESTRORETSK

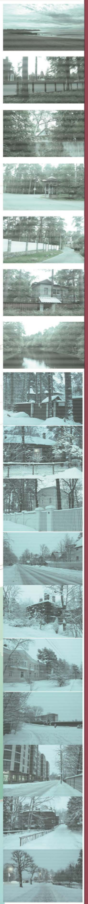
CHAPTER IV. JUSTIFICATION OF THE

SOVIET RECREATIONAL-RESIDENTIAL


PUBLIC RECREATIONAL
TYPICAL MULTI-VOLUME
TYPICAL COUNTRYSIDE

M 1:5000


C
B
R
B
R
C4-Avenarius
Avenarius masonry
RC6-Gerbikh
Gerbikh's dacha
BC7-Gorskiy
Groskiy creek
BC7-Groskiy
Gorskiy creek
RC7-Kan
Kan's dacha
GRAVEYARD OF GORSKAYA
NEW BEACH
BEACH LINE
WILDLIFE REFUGE
MARSH OF SESTRORETSK



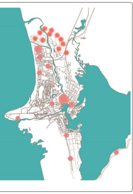
1917 - 1993
Soviet housing and resort
Democratization of sanatorium-and-spa treatment and country rest, multi-storey standard construction

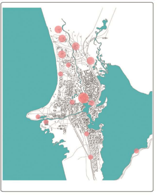
1917 - 1939
rcation and division of summer cottages; expan-
f the presence of sanatorium infrastructure in the territory.

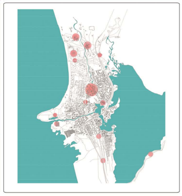
1939 - 1945
of construction of defense structures of the Stalin line

1946- 1993
The expansion of the city to the north, the construction of blocks of high-rise residential buildings, new recreation centers in the Dunes.

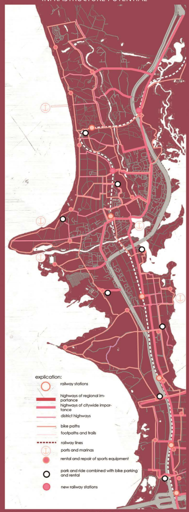
1993 - present
Transitional stage
Plant closure, land privatization, uncontrolled demolition of heritage sites and the construction of cottages and townhouses, the degradation of territorial integrity and cultural identity in favor of the formation of a bedroom suburban area.



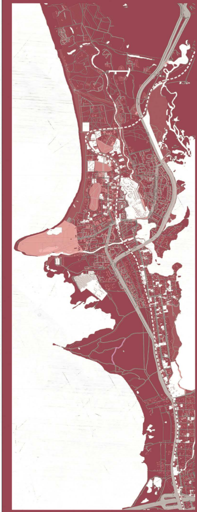




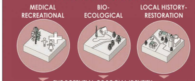
INFRASTRUCTURE POTENTIAL


explication:
railway stations
highways of regional importance
highways of citywide importance
district highways
bike paths
footpaths and trails
railway lines
ports and marinas
rental and repair of sports equipment
park and ride combined with bike parking and rental
new railway stations

HERITAGE POTENTIAL
THE CONCEPT OF CONVERSION OF SECURITY ZONES

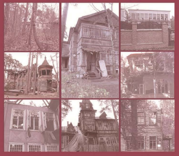


FUNCTIONAL POTENTIALS


MEDICAL RECREATIONAL
BIO-ECOLOGICAL
LOCAL HISTORY-RESTORATION

THE POTENTIAL OF SOCIAL IDENTITY

PROBLEMS AND LIMITATIONS



4.1 SELECTION OF THE STRATEGY
SWOT-ANALYSIS, SWOT-MATRIX

S

- The presence of ensembles of cultural
- Unique Landscape Conditions
- Recreational infrastructure density
- Transport accessibility
- polycentric structure
- Existing multifunctionality and identity
- Community interested in development
- Cheap hydroelectricity
- Potential of alternative energy

THE COMPLEXITY OF THE ARCHITECTURAL HERITAGE

HIGH LAND VALUE

HEALTH NATURAL RESOURCES

CHEAP ENERGY

+

W

- Protected status of historic buildings as a burden
- High-rise building of the city as a sleeping area
- Lack of a city-forming center and planning disunity
- Lack of understanding of the value of cultural heritage by the local community
- Lack of local government
- Instability of energy resources
- Limited use of hydroelectric power

ABANDONED HISTORICAL ENVIRONMENT

LOW INVESTMENT ATTRACTIVENESS

COMMUNITY IGNORANCE OF CULTURAL SIGNIFICANCE

DISPERSION OF URBAN SPACE

+

O

- Unused architectural objects as a resource
- Concessionary rental programs
- Interest and activity of the expert community
- Natural conditions as a resource
- Proximity to the intellectual, technological and financial resources of St. Petersburg
- Medical and resort infrastructure as a resource
- Research potential
- Resources for Participatory Design
- Waste as an energy resource
- Wind and plant energy

LEGACY RESTORATION BENEFITS

PROXIMITY TO A MAJOR CITY

POTENTIAL COMMUNITY COHESION

ALTERNATIVE ENERGY SOURCES

+

T

- Disagreements between the expert community and the local population
- Limited production resources of the area
- Restrictions on the use of natural areas
- High prices for services and land
- Increasing anthropogenic load on the territory
- Privacy of the local population
- Permissible load on the railway network
- Limited water navigation
- The need for energy production

BEARING CAPACITY OKN

HIGH COST AND TECHNICAL COMPLEXITY OF RESTORATION

FLOODS AND STORMS

OPPOSITION FROM COMMUNITY MEMBERS AND EXPERTS

BEARING CAPACITY OF INFRASTRUCTURE*

NETWORK FOR INNOVATION

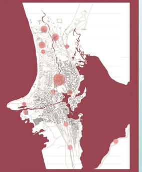
Creation of an urban network based on cultural heritage

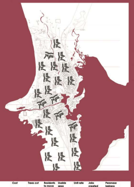
Attracting business and investors

Socially oriented transformation of the environment

Innovative energy production

ANALYSIS OF ALTERNATIVE DEVELOPMENT OPTIONS



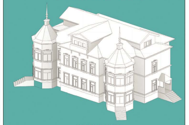


	Cost	Trees cut	Residents to move	Usable area	Unit rate	Jobs created	Perenase laziness	
Status quo	98	83	100	0	0	0	100	54.5
High-rise business area	0	0	0	100	41	100	0	34.5
cluster approach	100	100	93	0.3	100	0.3	99.7	**70.4**
weighting	0.143	0.143	0.143	0.143	0.143	0.143	0.143	1.0

ADJUSTMENT OF ARCHITECTURAL OBJECTS

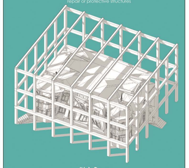
LIFE CYCLE OF A CULTURAL HERITAGE PROPERTY

I. RISE
Care and use according to function, incorporated in the design process and/or effective adaptation to a favorable function

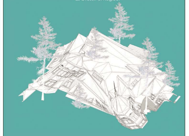


II. DEGRADATION
Loss of function and lack of care, abandonment and dilapidation

III. SARCOPHAGUS
Attempts to maintain material integrity with the help of repair or protective structures



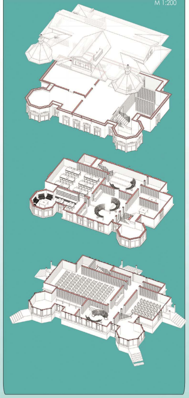
IV-A. Doom
Deliberate destruction of a monument or its destruction as a result of neglect

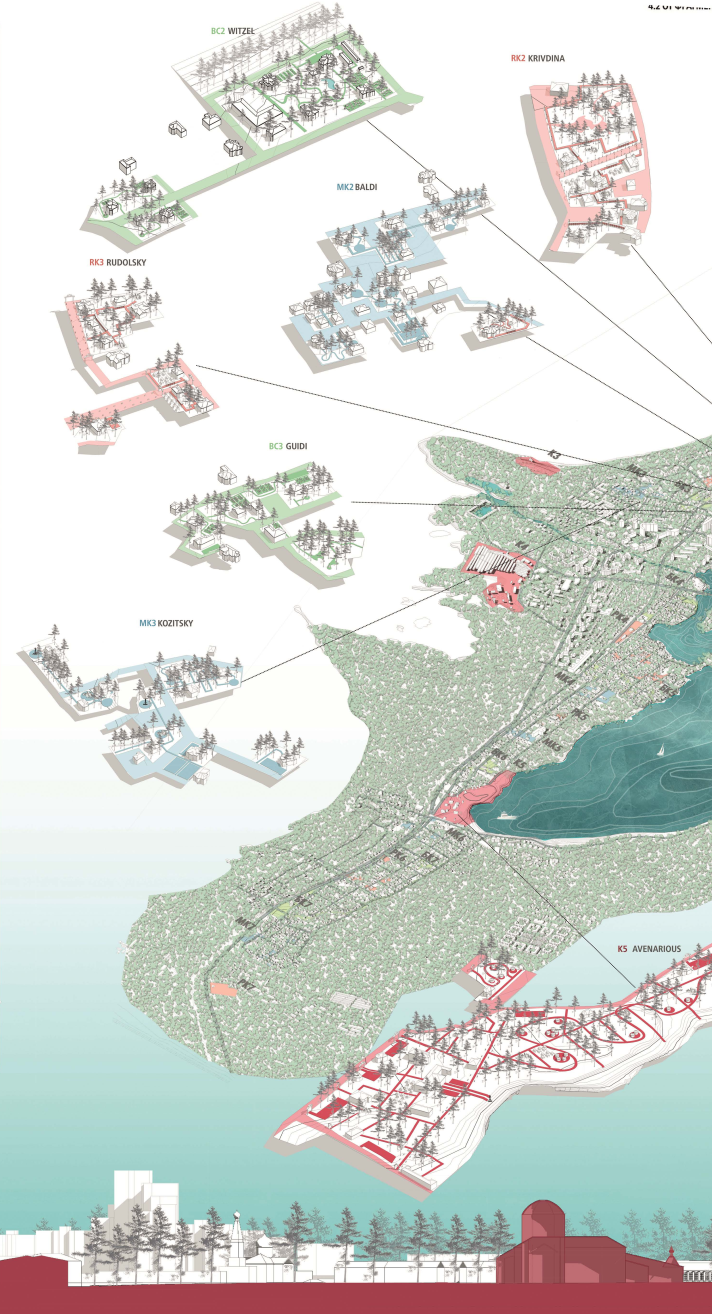


IV-B. Adaptation to the new corresponding function
Unleashing the potential of an object in an actual function

PROJECT OF ADAPTATION OF ZMIGRADSKY'S COTTAGE UNDER THE FUNCTION OF A MEDIA LIBRARY

M 1:200

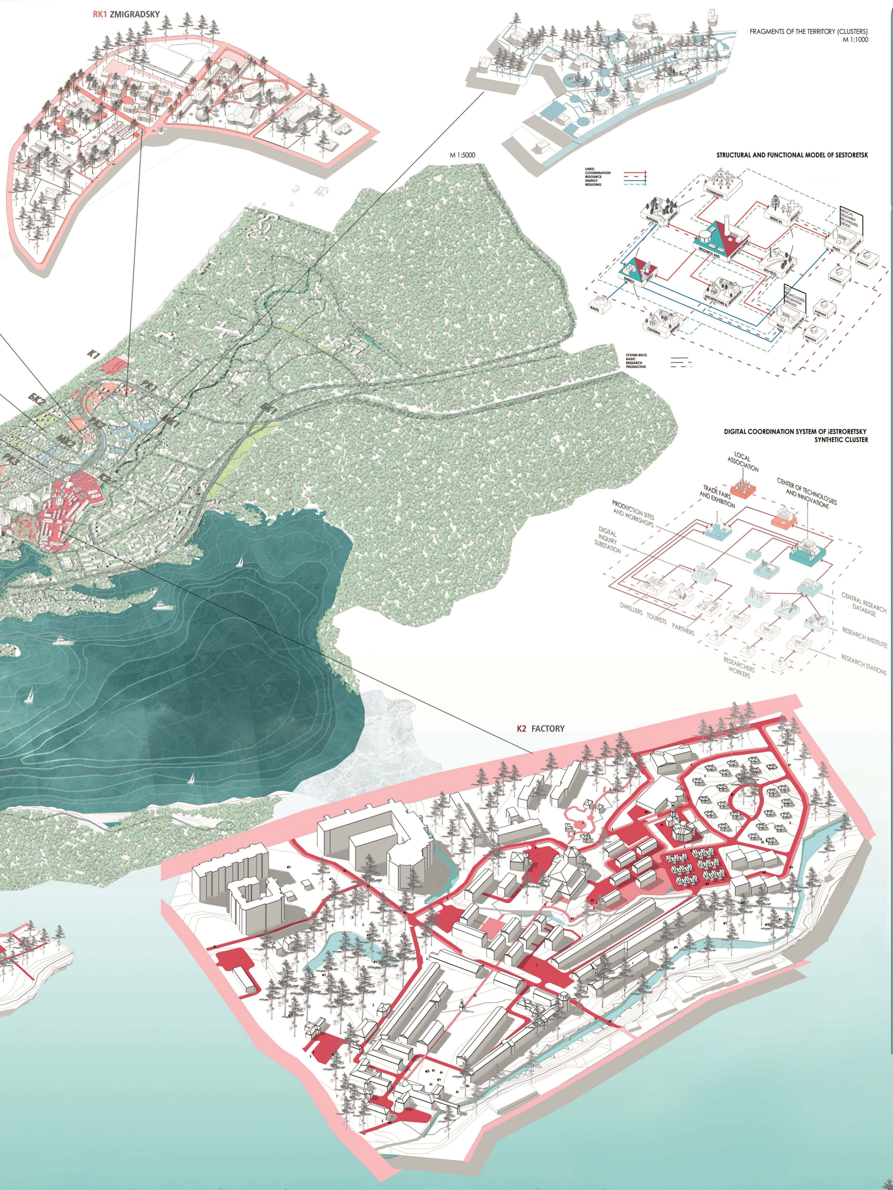



BC2 WITZEL
RK2 KRIVDINA
MK2 BALDI
RK3 RUDOLSKY
BC3 GUIDI
MK3 KOZITSKY
K5 AVENARIOUS

CLUSTER APPROACH TO THE VALORIZATION OF SMALL HISTORICAL TOWNS ON THE EXAMPLE OF SESTRORETSK

CLUSTER APPROACH TO THE VALORIZATION OF SMALL TOWNS

4.2 FROM FRAGMENTS TO SYSTEM


RK1 ZMIGRADSKY
FRAGMENTS OF THE TERRITORY (CLUSTERS)
M 1:1000
M 1:5000
K1
RK1
RK2
K2
K2 FACTORY

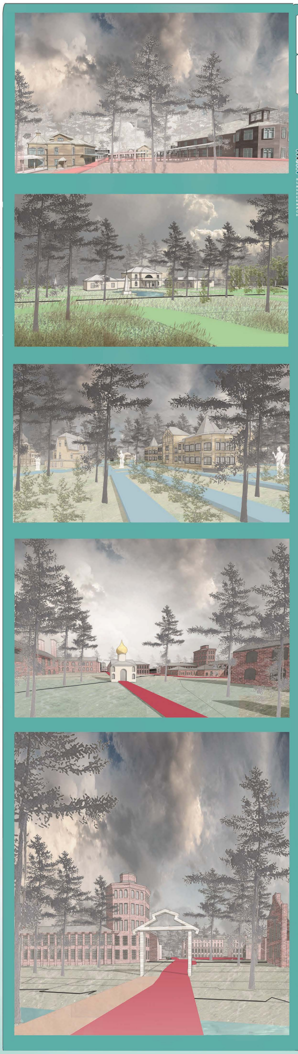
STRUCTURAL AND FUNCTIONAL MODEL OF SESTORETSK

LINKS:
COORDINATION
RESOURCE
ENERGY
RESULTING
COMMUNITY
NATURAL POTENTIAL
MEDICAL RESEARCH
MEDICAL TREATMENT TECHNIQUES; DRUGS
RESOURCE AND EXHIBITION CENTER
PILOT PRODUCTION
WORKSHOP
ENERGY SUPPLY
BIO+ECO RESEARCH
ARCHITECTURE & RESTORATION
ECO TECHNOLOGIES; RESTORATION METHODS
WASTE
CULTURAL HERITAGE
SYSTEM BELTS:
BASIC
RESEARCH
PRODUCTIVE

DIGITAL COORDINATION SYSTEM OF SESTRORETSKY SYNTHETIC CLUSTER

LOCAL ASSOCIATION
TRADE FAIRS AND EXHIBITION
CENTER OF TECHNOLOGIES AND INNOVATIONS
PRODUCTION SITES AND WORKSHOPS
DIGITAL INQUIRY SUBSTATION
CENTRAL RESEARCH DATABASE
RESEARCH INSTITUTES
RESEARCH STATIONS
DWELLERS
TOURISTS
PARTNERS
RESEARCHERS WORKERS

4.3 POST PROJECT MANAGEMENT MODEL



BUSINESS PLAN FOR THE SESTRORETSKY CLUSTER PROJECT

KEY ACTIVITY

TOURISM
RESEARCH
PRODUCTION AND PATENTING
SALE OF GOODS, TECHNOLOGIES, SERVICES
EVENTS

KEY RESOURCES

NATURE
MEDICAL AND SPORTS INFRASTRUCTURE
ENSEMBLES OF CULTURAL HERITAGE
INNOVATIVE RESEARCH
COMMUNITY INVOLVEMENT
UNUSED PROPERTY
TAX INCENTIVES
INTELLECTUAL CAPITAL
LOCAL ENERGY RESOURCES

VALUE PROPOSITIONS

HEALTH-IMPROVING NATURAL CONDITIONS
MEDICAL AND RECREATIONAL INFRASTRUCTURE
ACTIVE AND VARIED LEISURE ACTIVITIES
DEVELOPMENT OF RESEARCH AND BUSINESS ACTIVITIES
ATTRACTIVENESS FOR FOREIGN INVESTMENT
FUNCTIONAL ENRICHMENT AND VALORIZATION OF CULTURAL HERITAGE
PRESERVATION AND DEVELOPMENT OF LOCAL IDENTITY

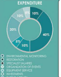
CUSTOMER RELATIONSHIPS

LOCAL BUSINESS AND RESIDENTS - INITIATIVES
PROFESSIONAL COMMUNITY INITIATOR OF RESEARCH DIALOGUE
INVESTORS - BENEFIT FROM TECHNOLOGY, IMPROVE THE QUALITY OF THE ENVIRONMENT
LOCAL AUTHORITIES - FUNDING AND

KEY SOURCES

MASS MEDIA
DIGITAL COORDINATION SYSTEM
PROFESSIONAL COMMUNITIES
SCIENTIFIC PUBLICATIONS
BUSINESS EDITIONS

EXPENDITURE



- ENVIRONMENTAL MONITORING
- RESTORATION
- SPECIALIST SALARIES
- ORGANIZATION OF EVENTS
- EQUIPMENT SERVICE
- INVESTMENTS
- PATENT ACTIVITY

KEY PARTNERS

LARGE CORPORATIONS
PROFESSIONAL COMMUNITY
LOCALS
EDUCATIONAL INSTITUTIONS
LOCAL ADMINISTRATION
FOREIGN COMPANIES

CONSUMER SEGMENTS

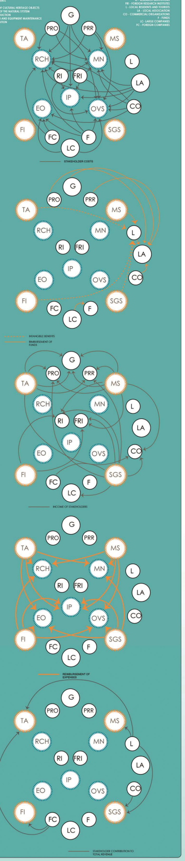
SCIENTISTS, RESEARCHERS, EXPERTS, STUDENTS
RESEARCH AND PRODUCTION COMPANIES
LOCAL RESIDENTS AND WORKERS
LOCAL AND FOREIGN TOURISTS

INCOME ITEMS

- MEDICAL AND RECREATIONAL SERVICES
- SALE OF TECHNOLOGIES, GOODS, DEVELOPMENTS
- DOMESTIC AND FOREIGN INVESTMENTS
- INCOME FROM TOURISM ACTIVITIES

INCOME:
TA - TOURIST ACTIVITIES
MS - MEDICAL AND RECREATIONAL SERVICES
SGS - SALE OF GOODS AND SERVICES
FI - FOREIGN INVESTMENTS
EXPENSES:
RCH - RESTORATION OF CULTURAL HERITAGE OBJECTS
MN - MAINTENANCE OF THE NATURAL SYSTEM
IP - INNOVATIVE PRODUCTION
OVS - VIRTUAL SYSTEM AND EQUIPMENT MAINTENANCE
EO - EVENT ORGANIZATION

PARTIES CONCERNED:
G - GOVERNMENT
PRO - PUBLIC RESORT ORGANIZATIONS
PRR - PRIVATE RESORT ORGANIZATIONS
RI - RESEARCH INSTITUTIONS
FRI - FOREIGN RESEARCH INSTITUTES
L - LOCAL RESIDENTS AND TOURISTS
LA - LOCAL ASSOCIATION
CO - COMMERCIAL ORGANIZATIONS
F - FUNDS
LC - LARGE COMPANIES
FC - FOREIGN COMPANIES


G
PRO
PRR
TA
MS
RCH
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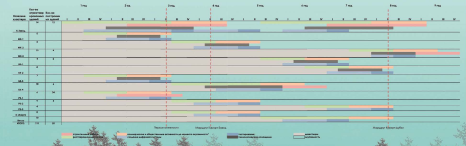
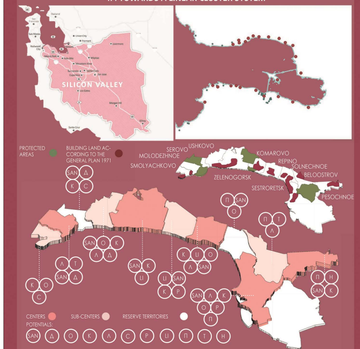
F
LC



4.4 TOWARDS A LINEAR CLUSTER SYSTEM


SILICON VALLEY
PROTECTED AREAS
BUILDING LAND ACCORDING TO THE GENERAL PLAN 1971
USHKOVO
SEROVO
MOLODEZHNOE
SMOLYACHKOVO
KOMAROVO
REPINO
SOLNECHNOE
BELOOSTROV
ZELENOGORSK
SESTRORETSK
PESOCHNOE
CENTERS
SUB-CENTERS
RESERVE TERRITORIES
POTENTIALS:
SAN
Д
О
К
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Т
Н

CONCLUSIONS ON CHAPTER IV

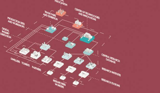
THE EFFECTIVENESS OF VALORIZATION BASED ON A NETWORK OF DESIGNATED CENTERS WHEN WORKING WITH HISTORICAL TERRITORIES IN RELATION TO ALTERNATIVE METHODS WAS REVEALED.

A STRATEGY FOR POST-PROJECT MANAGEMENT OF THE TERRITORY HAS BEEN DEVELOPED, WHICH IS A NECESSARY STAGE OF THE URBAN DEVELOPMENT PROJECT

TA MS SGS FI MN RCH EO OVS IP

A DIGITAL SYSTEM IS PROPOSED WITH THE INCLUSION OF RESIDENTS IN THE MANAGEMENT OF THE CITY ORGANISM, AS AN ADDITIONAL LEVEL OF INFRASTRUCTURE THAT COMPENSATES FOR THE COMPLEXITY OF COORDINATING CLUSTER SYSTEMS.

THE INFLUENCE OF THE CLUSTER ON THE KURORTNY DISTRICT SYSTEM IS CONSIDERED; POINTED OUT THE ADAPTABILITY, SCALABILITY AND UNIVERSALITY OF THE CLUSTER APPROACH TO VALORIZATION AS A METHOD OF WORKING WITH SMALL HISTORICAL CITIES.

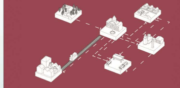


CONCLUSION

IT IS DETERMINED THAT THE EXISTING RUSSIAN DOCUMENTARY AND REGULATORY BASE NEEDS INSTRUMENTS TO ENSURE THE SUSTAINABLE DEVELOPMENT OF SMALL CITIES

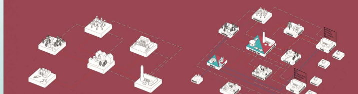
THE METHOD OF VALORIZATION IN RELATION TO URBAN PLANNING SYSTEMS HAS BEEN INTRODUCED INTO DOMESTIC SCIENTIFIC CIRCULATION.

THE FUNCTIONAL STRUCTURE OF SMALL TOWNS IN RUSSIA IS REVEALED, THEIR CREATIVE (INNOVATIVE) POTENTIAL IS IDENTIFIED AND METHODOLOGICALLY SUPPORTED.

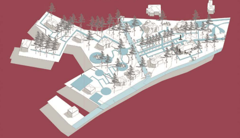


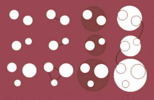
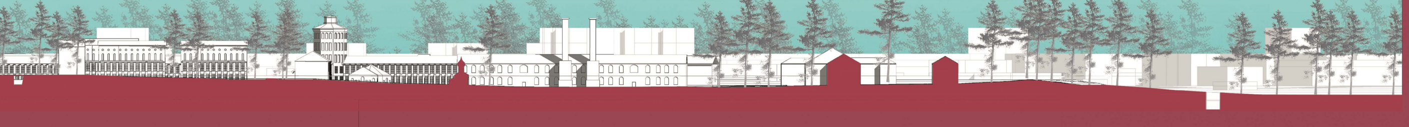
	Cost	Trees cut	Residents to move	Usable area	Unit rate	Jobs created	Perenase laziness	
Status quo	98	83	100	0	0	0	100	54.5
High-rise business area	0	0	0	100	41	100	0	34.5
cluster approach	100	100	93	0.3	100	0.3	99.7	**70.4**
weighting	0.143	0.143	0.143	0.143	0.143	0.143	0.143	1.0

THE CONCEPT OF AN URBAN CLUSTER HAS BEEN DEVELOPED, A SYNTHETIC TYPE HAS BEEN PROPOSED FOR USE IN CONDITIONS OF A SPECIAL LOCAL IDENTITY OF A TANGIBLE AND INTANGIBLE NATURE



A COMPREHENSIVE ANALYSIS OF THE CITY OF SESTRORETSK, A MUNICIPALITY WITHIN ST. PETERSBURG, WAS CARRIED OUT, THE POTENTIAL FOR ITS DEVELOPMENT WAS IDENTIFIED, AND A VALORIZATION PROJECT BASED ON THE FUNCTIONAL ENRICHMENT OF THE TERRITORY WAS PRESENTED.



A METHODOLOGY FOR IDENTIFYING AND REALIZING THE POTENTIALS OF A SMALL TOWN BASED ON LOCAL IDENTITY HAS BEEN DEVELOPED, AND THE ABILITY OF SMALL TOWNS TO TRANSFORM FOR THE PURPOSE OF SUBSEQUENT INTEGRATED DEVELOPMENT HAS BEEN PROVEN.