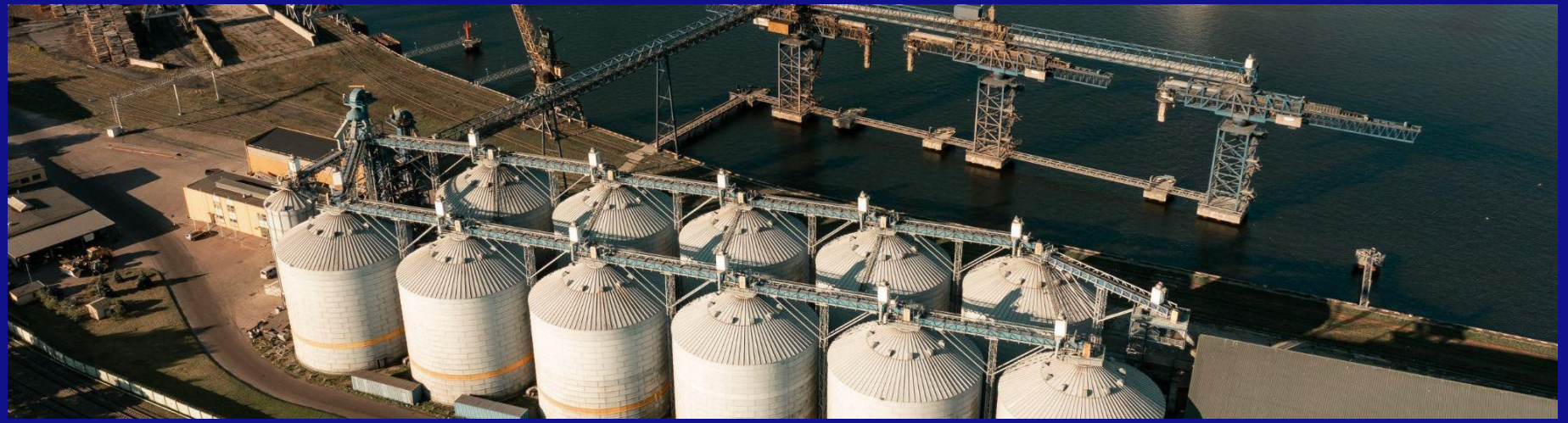

Sadarbības pieredze jūras tehnoloģiju attīstībā Klaipēdā

Ģiedris Janušausks,
Klaipēdas zinātnes un tehnoloģiju parks

OVERVIEW OF ACTIVITIES

ENTREPRENEURSHIP. DRIVE. INNOVATION.

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KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

Established in 2002

Founders and shareholders

MINISTRY OF THE ECONOMY AND INNOVATION OF THE REPUBLIC OF LITHUANIA

Klaipėda Uni

The area of the main **KSTP building** (Vilhelmo Berbomo st. 10) is 3,252 sq. m.
The **Business incubator** (Universiteto al. 19) is 2,528 sq. m.
In total, the floorspace managed by KSTP is 5,780 sq. m, including 3,809.15 sq. m office space occupied by 52 business enterprises.

In the **Maritime Business Center** (Pilies st. 8), 5 enterprises are located in offices with an area of 490 sq. m.

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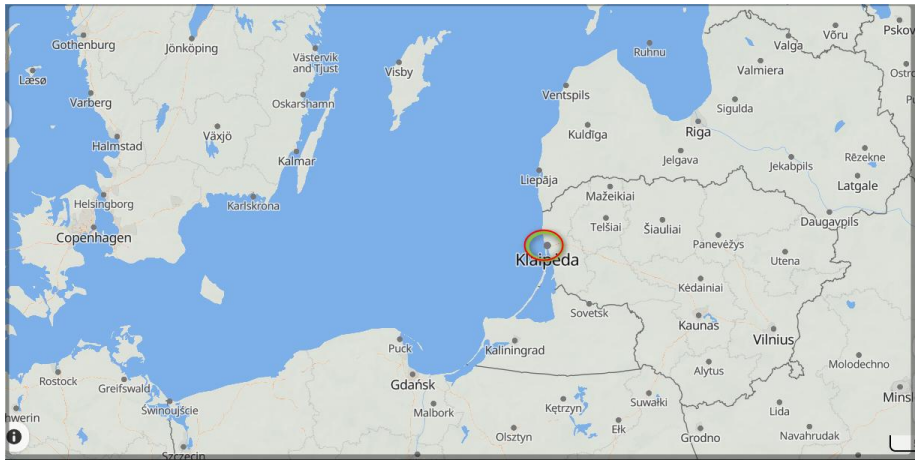
KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

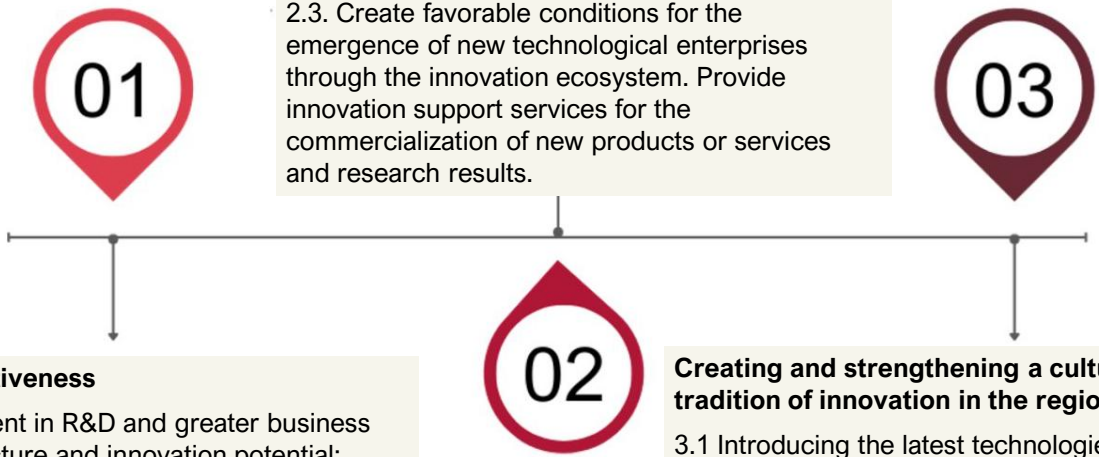
INITIATING STRATEGIC CHANGES FOR MARITIME INNOVATION

Due to its favorable geographical location, activities concentrated in the Klaipėda State Seaport and increasingly strong links with marine science, the Klaipėda region is directly linked to the breakthrough of the **blue economy in Lithuania**.



KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

STRATEGIC GOALS AND OBJECTIVES



Enhancing the integrity of international science and business

2.1 Creating the conditions for the integration of science and business into international value chains, value creation networks (clusters, valleys, international projects, associations, specialized cooperation platforms, centers of excellence);

2.2. Provide specialized services international competences - marine industry, biotechnology, geothermal, aquaculture;

2.3. Create favorable conditions for the emergence of new technological enterprises through the innovation ecosystem. Provide innovation support services for the commercialization of new products or services and research results.

Research and innovation for competitiveness

1.1 Aim for increased business investment in R&D and greater business participation in exploiting R&D infrastructure and innovation potential;

1.2 Develop models of cooperation between science and business in generating knowledge and skills for the creation of high value-added products.

Creating and strengthening a culture and tradition of innovation in the region

3.1 Introducing the latest technologies and competences to the scientific and business community;

3.2 Publicizing and disseminating the potential of science and business in the Klaipėda region;

3.3. Organization of innovation dissemination and community experiences.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

PROJECTS

The KSTP collaborates with international partners to implement projects promoting innovation in the blue and green sectors.

Recirculating aquaculture systems

Regenerative marine farming

Decarbonisation and alternative energy sources

Digitalisation of blue supply chains and ports

Professional competence for innovation in ICT

Paper packaging management

Internationalisation of SMEs in the blue and green sectors

* The size of the circle reflects the volume of projects

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ONGOING PROJECTS

In 2025, KSTP is implementing 9 international projects funded by the Interreg South Baltic, Interreg Baltic Sea Region, Horizon Europe, Green-ERA Hub and Erasmus programmes.

Interreg Baltic Sea Region — Co-funded by the European Union
BLUE ECONOMY TETRAS

cool blue — Co-funded by the European Union

BePacMan — BETTER PAPER PACKAGING MANAGEMENT
Interreg South Baltic — Co-funded by the European Union

Interreg Baltic Sea Region — Co-funded by the European Union
BLUE ECONOMY Blue Supply Chains

investech

SMEBeyond
Interreg South Baltic — Co-funded by the European Union

Interreg South Baltic — Co-funded by the European Union
DigiTechPort2030

Interreg South Baltic — Co-funded by the European Union
DeCoInter

PRORMAS
GREEN ERA-HUB
Co-funded by the European Union

IDEAS IN DEVELOPMENT

Currently, the KSTP is awaiting the decisions of the evaluating authorities on 6 applications submitted for the **Interreg Baltic Sea Region** and **Interreg South Baltic** programs.

Decarbonising the maritime sector

Maritime Innovation Platform

Advanced technology, blockchain

Life sciences innovation

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

MARITIME ISSUES ON THE POLITICAL AGENDA

In cooperation with the Lithuanian Maritime Cluster and other partners, we initiated the **Maritime Business and Policy Forums** in the Parlament of the Republic of Lithuania in 2022-2023.

Our goal was to accelerate the development of Lithuania's maritime strategy.

To strengthen the positions of maritime Lithuania, projects being developed in Klaipėda and the most important topics of the maritime industry were presented: plans for the construction of offshore wind farms and a next-generation warship, maritime study programs, which aim to respond to the existing business needs, the situation of companies planning development, and global trends.

Continuity – the **Commision for Maritime Affairs** has been established at the Parliament of the Republic of Lithuania.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

BIO-LNG AND LNG DEVELOPMENT

Klaipėda LNG Forum

In Klaipėda, we organized 6 international forums focused on a broad overview of LNG industry trends and forging new business cooperation ties (200 participants from 10 countries, 30 expert presentations).

Pilot investments that received the most positive feedback from representatives of the bio-LNG and LNG industries:

- Micro and nano bio-LNG mobile gas station.
- Microgrid with a modern fuel cell.
- Bio-LNG solution for a decentralized energy supply system.
- Adaptation of ship engines for bio-LNG.

Clustering

We were among the founders of the Lithuanian LNG cluster in 2016.

To develop the maritime innovation ecosystem in the country, business and scientific organizations established the Lithuanian Maritime Cluster in 2020. By coordinating the activities of the cluster, we aimed to turn it into a platform for the creation of high-value-added products and services.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

PROMOTING OFFSHORE WIND ENERGY

With plans to build a 700-megawatts offshore wind farm in the Baltic Sea, requiring an investment of over a billion euros, together with the Lithuanian Maritime Cluster, we brought together business and government representatives, Lithuanian and foreign technology experts, representatives of scientific institutions, and stakeholders for **discussions on the opportunities that offshore wind energy presents for coastal cities and regional industry, as well as Lithuania's energy independence**.

3 international forums, attracting more than 300 participants, laid the ground for launching Lithuania's first offshore wind farm developer tender and boosted new forms of **collaborations in the offshore wind energy sector**.

A milestone was the signing of a **partnership agreement** between *RWE Renewables* and four academic institutions, solidifying cooperation with Klaipėda University, the Lithuanian Maritime Academy, KVK, and Klaipėda Paulius Lindenau Training Center.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

KLAIPĖDA STEAM CENTER

As coordinators of the maritime cluster, we collaborated in the development of a STEAM center that promotes the need and potential for **growth of the sustainable blue economy sector in the Baltic Sea region**. By involving our own network of contacts and attracting partners, we helped ensure the implementation of the scientific base of the STEAM center and the installation of laboratories.

Currently, 4 laboratories operate in the Klaipėda STEAM center - a specialized marine, IT-robotics, chemistry-biology, physics-engineering laboratories.

Life Is On Schneider Electric

Klaipėdos universitetas

EMERSON

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

PORTATHON – A PLATFORM FOR MARITIME INNOVATION

Together with our partner Lithuanian Maritime Cluster, we organized 6 **international port technology hackathons, Portathon**, fostering cooperation between science, maritime businesses, and ports, and promoting innovation ecosystem.

Hackathons bring together students, professionals, startups, scientists, representatives of ports, and maritime businesses, creating innovative technological solutions for ports and maritime businesses during a 48-hour marathon.

Since the start in 2019, almost 600 participants, grouped into more than 100 teams, participated. In total, over 100 mentors have already joined the international mentor teams. Solutions were generated for more than 50 challenges presented by maritime sector organizations and businesses.

Geography of participants and mentors covers mostly Lithuania, Norway, Germany, Poland, Romania, Greece, Sweden, Ukraine, UAE, and other countries.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

BLUE BIOTECHNOLOGY ACCELERATOR

We are partners of the **international blue biotechnology accelerator**, which helps innovative ideas from across the Baltic Sea region become tangible products and services.

We invite **innovators, startups, technology developers and companies** to take part in the program and use the accelerator's services when developing a product/service idea:

- To collaborate with some of the best biotechnology experts in the Baltic Sea region, participate in seminars, conferences, B2B meetings organized by them;
- To receive legal expert advice, expert insights, and consultations on business creation and development issues;
- To consult on the preparation and development of innovative projects based on scientific research,
- To receive scientific and technical assistance, use consultations of highly competent specialists, as well as their available infrastructure, laboratory equipment, etc.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

DEVELOPMENT OF AQUACULTURE INNOVATIONS

We established the **Aquaculture Competence Center**, enabling the development of aquaculture innovations and participation in international activities:

We contributed to the initiation of 5 **business and science cooperation projects in the field of innovative aquaculture**:

- Experiment on using geothermal water in RAS (recirculating aquaculture systems).
- Testing feed for marine aquaculture species.
- Development of a technological solution for a large-scale aquaculture system.
- Research on the competitiveness of aquaculture products.
- Production of alternative proteins for feed and food using recirculating multitrophic aquaponic systems with saline geothermal water.

Together with business and scientific partners, we initiated **technology and knowledge transfer** – the multilayer shrimp cultivation tank technology is being further developed by a startup.

In collaboration with Klaipėda University, we organized an **international summer school on innovative aquaculture** for young professionals, along with a separate 6-session training cycle.

We developed a **virtual educational tour programme for aquaculture specialists**.

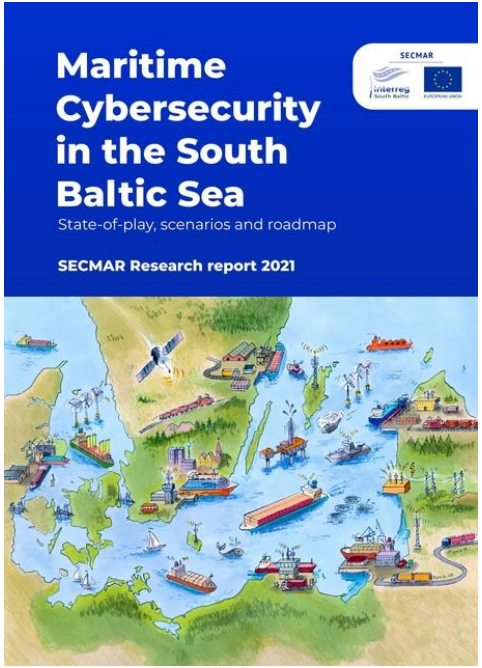
KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

CYBERSECURITY ASSURANCE TOOL

Together with experts from Sweden, Denmark, Norway, Poland and in cooperation with the Lithuanian Naval Forces, we have developed an **international cybersecurity strategy for the maritime industry in the South Baltic region**, which will serve as a basis for preparing legal acts and recommendations to help ports and maritime businesses prevent potential cyberattacks.

As part of this international initiative, we organized practical workshops, during which cybersecurity professionals simulated various situations, identifying the most vulnerable areas of the maritime industry and proposing solutions that would help ensure a reliable shield against cyber, as well as physical, attacks.

This tool is intended for managers of maritime business organizations and decision-makers related to cybersecurity throughout the South Baltic region.



KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

BLOCKCHAIN AND IOT APPLICATIONS

We collaborate intensively with KSTP residents and experts from the Lithuanian branch of the international IT company *Omega 365* to create solutions and projects for the development of advanced technologies.

- we have prepared a **series of trainings** for representatives of the maritime, IT sectors and specialists from other fields interested in **blockchain and IoT technologies**. The course consists of 5 training modules.

- In collaboration, we created a **prototype of a blockchain solution** that opens new opportunities in the transport and logistics sectors.

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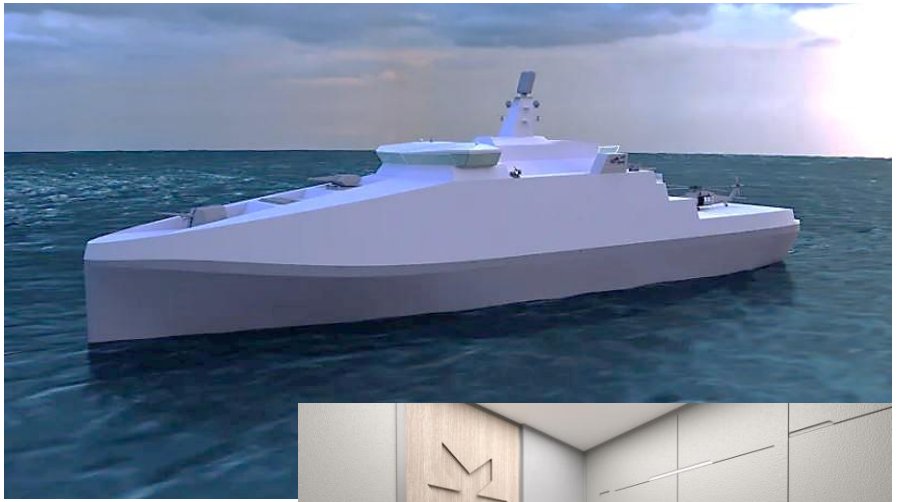
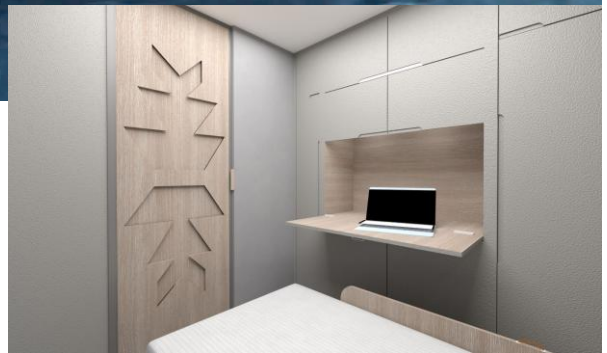
KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

WATER TRANSPORT INNOVATIONS

We contributed to the **development of the design concept for the first warship built in Lithuania.** We signed a cooperation agreement with the Lithuanian Naval Forces on the implementation of an innovative technological project. This was the first time that the country's marine engineering industry, science and military experts have joined forces in a unique consortium.

Within the framework of the formed consortium, *Western Baltic Engineering* and the Danish company *OSK Design* are developing a design solution that meets the requirements of the Lithuanian Navy. The design of the ship also uses ideas proposed during the international port technology hackathon Portathon, one of our major initiatives.





KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

WATER TRANSPORT INNOVATIONS

We included the ship engineering company *Western Baltic Engineering* in the international projects carried out by KSTP, which enabled application of smart technologies in the shipbuilding sector:

- **3D scanning equipment** was purchased, which allows large-scale structures to be connected virtually.
- We organized an international 3D scanning hackathon for the shipbuilding industry, which brought together ship design and engineering specialists from Lithuania, Denmark, Sweden and Finland.
- A solution has been developed to ensure higher quality and maximum precision of the manufactured ship hull blocks, as different produced elements are tested virtually before assembly. This innovative process helps save over 1,000 working hours that would otherwise be spent on making various corrections.
- 3D scanning technology has opened new opportunities in the maritime industry. *WBE* began **developing a virtual twin** – a simulation tool that helps businesses optimize complex production.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

WATER TRANSPORT INNOVATIONS

Klaipėda is becoming an important **hub for the development of green transport technologies**.

The first port technology hackathon we organized, Portathon 2019, gave impetus to a breakthrough in the field of ship design. At the hackathon, partners *Western Baltic Engineering* presented a prototype of an **autonomous electric ferry design**. This innovation opened unique opportunities for Klaipėda to create a hub for the development and testing of autonomous water transport, establish cooperation between businesses, and organize training.

In 2024, the Inland Waterways Directorate (VVKD) announced a tender for the purchase of a **green energy river pusher** adapted for operation on the Nemunas River between Kaunas and Klaipėda. The technical requirements were formulated based on the technical assessment of alternative fuel use for river pushers conducted by KSTP (within the scope of the Interreg project Blue Supply Chains).

WESTERN BALTIC ENGINEERING
BLRT GRUPP

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

DEVELOPMENT OF GREEN TRANSPORT IN THE MARITIME SECTOR

We contributed to the development of Klaipėda shipping company BEGA's innovation – **electrified locomotives** – by getting them involved in our international alternative fuel development projects.

We included the company's representatives in international visits and international specialized conferences, during which the partnerships established helped them implement this innovative solution that allows reducing emissions during terminal loading operations.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

KSTP COMMUNITY

Inobiostar

Klaipėda University spin-off company *Inobiostar* has developed an environmentally friendly sorbent – an aerogel with oil-degrading microorganisms to neutralize oil spills.

The scientific startup, which received a grant of 2.3 million euros from the EU's Horizon 2020 EIC Accelerator last year, is preparing to launch a pilot production line at the KSTP business incubator.

InnoAerogel, compared to existing products for collecting oil spills on the market, is sustainable, twice as light and efficient, and can be reused up to 5 times.

KLAIPĖDA SCIENCE AND TECHNOLOGY PARK

KSTP COMMUNITY

popa boat

The startup *Popa boat* has been developing electric water transport for almost ten years:

- Introduced the first prototypes of easy-to-operate **electric catamarans** in 2016.
- Manufactured and launched innovative **electric water buses**.
- Popa boat water buses operated as public transport on the Danė River in Klaipėda in 2023-2024.
- Vilnius Municipality has also started developing the idea of water buses.

INCREASING THE INTEGRITY OF INTERNATIONAL SCIENCE AND BUSINESS

Participation in international networks is being expanded, creating conditions for science and business to engage in international value chains in the fields of **Green** and Blue technologies.

INTERNATIONAL CLEANTECH NETWORK

SUBMARINER NETWORK

KLAIPĖDA SCIENCE AND
TECHNOLOGY PARK

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