Ministry of Economics
Republic of Latvia

DEVELOPMENT OF NEW PRODUCTS AND TECHNOLOGIES WITHIN COMPETENCE CENTRES

NATIONAL
DEVELOPMENT
PLAN 2020

EUROPEAN UNION
European Regional
Development Fund

INVESTING IN YOUR FUTURE

COMPETENCE CENTERS PROGRAMME

On 5 January 2016, the Ministry of Economics launched the implementation of Measure 1.2.1.1 "Support for the development of new products and technologies within competence centers" of Specific Support Objective 1.2.1 "Increase private sector investment in R&D" of the Operational Programme "Growth and Employment".

THE OBJECTIVE OF THE PROGRAM

is to increase the competitiveness of businesses by promoting cooperation between the research and industry sectors in the implementation of industrial research, new product and technology development projects.

IN TOTAL, 10 COMPETENCE CENTERS RECEIVED SUPPORT UNDER ROUNDS II AND IV:

1. SIA "LEO PĒTĪJUMU CENTRS"
2. SIA "MAŠĪNBŪVES KOMPETENCES CENTRS"
3. SIA "LATVIJAS PĀRTIKAS KOMPETENCES CENTRS"
4. SIA "VIEDO MATERIĀLU UN TEHNOLOĢIJU KOMPETENCES CENTRS"
5. SIA "Farmācijas, biomedicīnas un medicīnas tehnoloģiju Kompetences centrs"
6. SIA "IT KOMPETENCES CENTRS"
7. SIA "Viedo inženiersistēmu, transporta un enerģētikas Kompetences centrs"
8. SIA "Meža nozares kompetences centrs"
9. SIA "ETKC"
10. Sabiedrība ar ierobežotu atbildību "VMKC"

FUNDING AVAILABLE FOR THE SELECTION ROUNDS:

The total available funding under the second and fourth rounds of the measure under the European Regional Development Fund is EUR 6 215 0605.

Round II: ERDF co-financing of competence centers amounting to EUR 24 485 713;

Round IV: ERDF co-financing of 37 664 892 euro for competence centers, including 12 014 892 euro for the implementation of cross-sectoral collaborative research projects.

As of March 2022, a total of 227 research projects have been approved.

As of June 2022, 137 unique collaborators have received support under Round 4. As of 30 September 2022, a total of more than 250 research projects have been supported, resulting in the development of 610 new products and technologies.

€ 36 360 183

Investments by merchants in research and development in the first full financial year, followed by a year in which the implementation of at least one research project has been completed (EUR).

€ 35 845 513

Attracted foreign funding (from international research programs, from foreign partners) for research in the business sector (EUR)

€ 62 518 531

Merchant's turnover after implementation of research results in economic activity or commercialization

€ 29 662 090

Volume of research projects (euro) involving cooperation between commercial operators and research and knowledge dissemination organisations

Merchants who have introduced newly created products or technologies into economic activity 114

Number of supported merchants 167

610 New products and technologies have been developed

657 Employment growth (number) in supported merchants

110 Number of research projects involving collaboration between commercial and research and knowledge dissemination organizations

180 Number of joint publications by researchers of the merchant and the research and knowledge dissemination organization

258 The number of doctoral students and doctors involved in research projects

83 Number of businessmen who cooperate with research institutions

Ministry of Economics Republic of Latvia

Centrālā finanšu un līgumu aģentūra

NATIONAL DEVELOPMENT PLAN 2020

EUROPEAN UNION
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INVESTING IN YOUR FUTURE

COMPETENCE CENTRE OF ELECTRICAL AND OPTICAL EQUIPMENT PRODUCTION SECTOR OF LATVIA

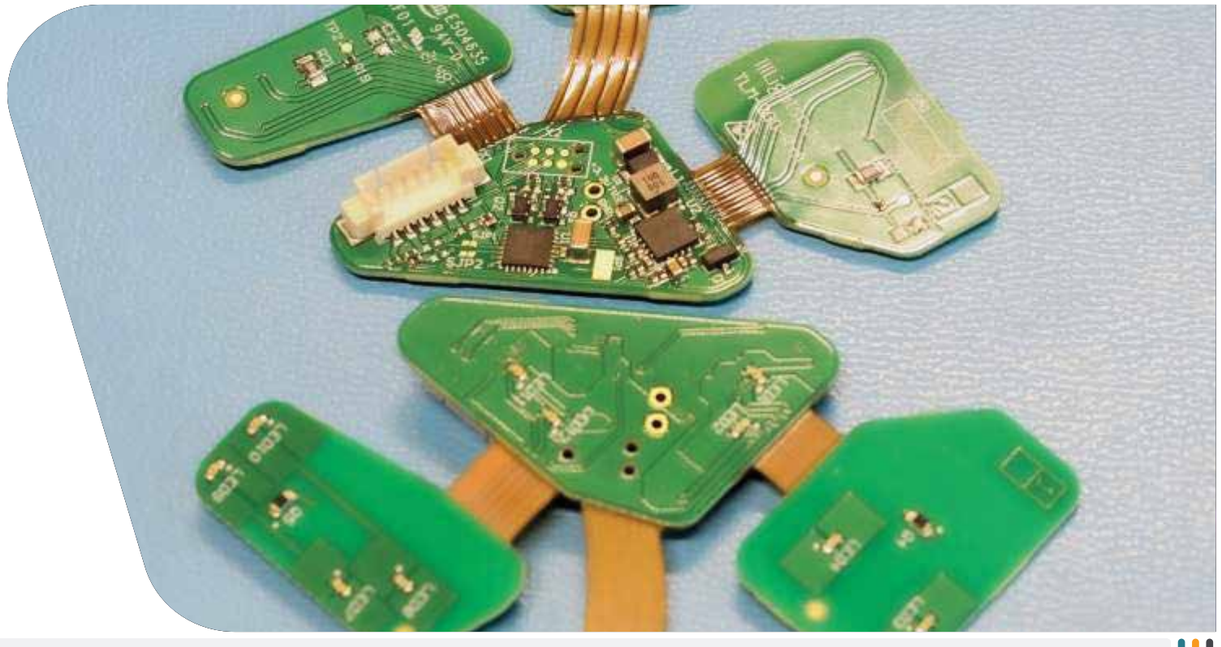
Competence Centre of Electrical and Optical Equipment Production Sector of Latvia unites companies and research institutes with the aim to increase their competitiveness and to advance cooperation between industrial and research sectors in order to develop innovative products and technologies.

From 2016 till 2022

55 partners implemented **46 projects** in the total amount of **EUR 13,4 million** including **EUR 7,9 million** ERDF financing in the following fields:

RESEARCH AND DEVELOPMENT AREAS:

- Electronic, high-frequency radio, optical and physical measurement technologies;
- Research and production of microelectronics, electronics, and optics materials;
- Sensors and sensor systems, big data collection, analysis and modelling, image analysis, virtual reality systems;
- Robots and drones;
- Sound processing and acoustics;
- Communication technologies;
- Energy, energy storage and battery management systems.



LATVIJAS ELEKTRISKO UN OPTISKO IEKĀRTU RAŽOŠANAS NOZARES KOMPETENCES CENTRS

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SIA “Hansamatrix Innovation” in cooperation with SIA “Lightspace Technologies”

Title of the research project: Development of an integrated electronics solution for determining the position of the head-up display in the area and providing remote assistance functionality.

Purpose of the project: evelopment of algorithms for spatial orientation and remote assistance functionality and a compact (dimensions not exceeding 5 cm x 15 cm) and lightweight (up to 150 grams) electronic board solution to be integrated into the head-up display, which implements augmented reality head-up display absolute positioning in space with minimal drift, as well as augmented reality remote assistance functionality.

Result of the project: the research included the development of an electronics board, algorithms, and electronic sensors that enable precise localisation of the head-up display in space, audiovisual two-way communication, gesture control, and expand the possibilities for displaying and positioning virtual content in space.

SIA “Edge Autonomy Riga“

Title of the research project: Significant improvements of electro-optical, gyroscopically stabilized aircraft cameras.

Purpose of the project: to develop 2 new types of gimbals with improved parameters for use in unmanned and manned aircraft due to interdisciplinary research.

Result of the project: improvement in stabilization level; improvement of image parameters and sensitivity of infrared (Long-Wave-Infra-Red or LWIR and Mid-Wave-Infra-Red or MWIR) cameras. Improving video processor consumption; optimizing the processing power of the video processor; increasing the natural frequency of the structure.

VAS "Elektroniskie sakari" in cooperation with AS "SAF Tehnika"

Title of the research project: Measurement of radio spectrum parameters using an unmanned aerial vehicle

Purpose of the project: to develop a device for measuring radio transmitter parameters with a device mounted on an unmanned aerial vehicle. To develop software for automatic in-flight measurements and subsequent storage and processing of the acquired data.

Result of the project: developed prototype which will be used for the further development of a commercial product to be offered to national radio frequency regulators and radio operators to optimise their functions.

MECHANICAL ENGINEERING COMPETENCE CENTRE

Mechanical Engineering Competence Centre (MKC) is a project initiated by MASOC, within which the companies implement industrial research and develop new products and technologies in close cooperation with the research organizations.

From 2016 till 2022

53 industry studies were supported, **EUR 15,45 million** have been invested (of which EUR **7.9 million** are co-funding of the **ERDF**)

Within the project successful products have been created in three research areas of smart specialization:

- **production technologies of automated engineering systems**
- **material production technologies**
- **transport technologies**

MASOC

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SIA “Peruza”

Title of the research project: To improve the economic efficiency of the production process of high quality fish products with a comprehensive IT solution for raw material, product and process control and management.

Purpose of the project: to develop a solution for commercially valuable fish processing companies that process at least 10-20 tons of commercially valuable raw material per day with an average value of 3,5 to 4 €/kg.

Result of the project: a solution for the evaluation and processing line with a fish fillet trimming solution allowing sequential evaluation of both sides of one fillet, which required two computer vision stations and double information processing and linking capacity. To process the information obtained, an IT solution i-Fish was developed to store, process and display the quantitative data received from the fish fillet quality control station at different cross-sections.

SIA “Peruza”

Title of the research project: The technology for computer-aided recognition and robotic sorting of crumpled parcels.

Purpose of the project: to develop a virtual parcel sorting conveyor platform with artificial intelligence software that can generate a synthetic dataset of parcels in different sizes, positions, and coatings.

Result of the project: a virtual parcel sorting conveyor platform with artificial intelligence software has been developed which allows the system to locate parcels in different sizes, positions, and coatings. The resulting computer vision system can estimate the contours of the packets, their spatial evaluation, and the optimal removal sequence, as well as to recognise whether a packet barcode is placed face down.

SIA “ROBOEATZ”

Title of the research project: To develop of a robotic food preparation machine.

Purpose of the project: to develop a prototype for a robotic catering machine, including technological schemes and process flows, using a completely new food preparation mechanism where no human is involved in the creation of the result.

Result of the project: a prototype of a robotic food preparation machine with a control system. The product, developed by RoboEatz and research partner MAK IT, has attracted great interest from the world's leading food service providers as it not only addresses existential challenges such as labour shortages, but also joins leading global consumer demands in product personalisation and traceability and addresses sustainability issues within the strategic objectives of the Farm to fork Green Deal.

SIA “DINEX LATVIA”

Title of the research project: Development of collapsible type conductors.

Purpose of the project: to develop a prefabricated type of conductor that can be made from universal components without welding, that is, using individual parts as a constructor.

Result of the project: developed a new product, a component used in the exhaust system of commercial vehicles to compensate for vibrations during engine operation. The new product will allow the company to occupy a certain market share in the segment of leak-free flexible elements, as well as to use this product in the design of EURO7 exhaust systems.

FOOD INDUSTRY COMPETENCE CENTRE OF LATVIA

The Latvian Food Sector Competence Centre's (LFSC) area of Smart Specialisation is knowledge-intensive bioeconomy - innovative solutions in agriculture and food production. The aim of the LPKC is to support research that seeks solutions to the challenges of the sector.

Food Industry Competence Centre of Latvia (FICCL) has two scientific directions:

1. To increase the market for products of Latvian producers, inculding:

- **research on packaging**
- **research of new technologies that increase product' shelf life and storage conditions**
- **development of new products for wider market preferences**

2. Increasing the added value and competitiveness of production, including:

- improving the use of food by-products in higher value-added products;
- research in agriculture and pomiculture to improve the efficiency of resources - suitable varieties and breeding technologies;
- development of new, innovative high value-added products, making maximal use of existing markets, technologies and production factors.

From 2016 till 2022

65 supported projects; developed **new technologies – 73**; developed **new products – 514**; private co-funding **EUR 5,1 million.**, including ERDF funding of **EUR 7,4 million**.

LPKC
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SIA "MILZU!"

Title of the research project: Study of product formulations and production technologies for the introduction of MILZU! products in the beverages and creams segment.

Purpose of the project: the aim is to expand the **Milzu!** product range by researching new product segments. This project will develop new product formulations and technologies for dairy alternatives and vegan creams. The project will include both industrial research and experimental development activities, as well as publication of the results.

Result of the project: using local raw materials, Latvian grey peas and pea proetein, as well as hemp protein, a number of new products have been developed, commercialised and internationally recognised as innovative products. Totaly 12 products have been developed. The products developed by the project have gotten international recognition (SIAL Paris 2022 Award)

SIA "KRONIS"

Title of the research project: Development of innovative products in soft packaging and their introduction into the production process.

Purpose of the project: the aim of the project is to explore the possibility of developing and producing new product groups in packaging: soup concentrates, ready-to-serve soups, hot sauces, ready-to-eat meals with or without added animal products. This requires scientifically sound research on the technological and microbiological aspects of product production and storage.

Result of the project: the project resulted in the introduction of 36 new product units that are currently available on the market. The project has created new technologies for the production of ready meals in soft packets, as well as a new technology for animal products.

SIA “Roboeatz” in cooperation with SIA “Mak IT”

Title of the research project: Development of robotic food preparation equipment.

Purpose of the project: the scope of the project was to develop the principles of recipe construction for a robotic food service system, including capabilities of dosing and collecting various ingredients as well as cooking them in a specific cooking unit.

Result of the project: based on research there were developed several feeder types for solid and liquid ingredients, including the motion preferences for various physical properties of the ingredients and thermal porcessing of the ingredients involving embedded tools for stiring and mixing. These actions resulted in hardware and software developements to reach the target - a digital recipe constuctor and robotic system's ability to cook meals.

COMPETENCE CENTRE FOR INTELLIGENT MATERIALS AND TECHNOLOGIES

The Smart Materials and Technologies Competence Centre (VMKC) serves as a platform for the biotechnology and smart materials industries, including business, research organisations and higher education institutions.

The Competence Centre for Smart Materials and Technologies (VMTKC) has already proven its sustainability as a cooperation platform, as the Competence Centre is the direct successor of the Competence Centre for Environment, Bioenergy and Biotechnology Ltd (VBBKC) and the Competence Centre for Smart Materials and Technologies Ltd (VMTKC). The Competence Centre ensures continuity and the transfer of knowledge and competences from previous periods

Research and development areas: smart materials that change their properties in response to external environmental stimuli; biotechnology, a branch of biology and engineering that uses natural biological systems (such as micro-organisms) to produce biologically relevant substances; a field that includes areas facing the reduction of environmental pollution and the sustainable use of natural resources.

From 2016 till 2022

76 The VBBKC has 76 studies carried out by 25 companies

24 The VMTKC by 24 companies with 31 studies

23 The VMKC by 23 companies with 33 studies

360 More than 360 new jobs were created as a result of the studies.

VIEDO MATERIĀLU UN TEHNOLOĢIJU KOMPETENCES CENTRS

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SIA "Kinetics Nail Systems"

Title of the research project: Optimization of compositions of pigmented and clear UV-curing nail coatings, reducing the risks of skin irritation: prevention of the oxygen oxidation layer and reduction of the maximum amount of monomer in composite systems.

Purpose of the project: to conduct research to optimize the compositions of UV-curable pigmented and clear coatings to obtain coatings with a reduced risk of skin irritation.

Result of the project: three new technologies have been developed and implemented in the company and 3 new products have been developed and validated: HEMA-free base, HEMA-free pigmented layer, HEMA-free top layer. The research results and key insights have allowed both to optimize the work of the research and development at the laboratory, creating new coatings in a much shorter period of time, and have allowed gaining in-depth knowledge about acrylate monomers.

SIA "Vianova"

Title of the research project: Development of production process of high-modulus asphalt concrete reinforced with glass fiber.

Purpose of the project: goal of the project was develop asphalt production in Latvia using local mineral materials, local recycled modifiers (fiber glass, crumb rubber) and recycled asphalt to produce high-modulus asphalt mix, which will meet requirements according to local Latvian road construction specifications and will be economically, environmentally and technically more attractive.

Result of the project: then mixtures with best test results were used for test section for high intensity local road P2 (Juglas papīrfabrikas ciemats – Upesciems) . Samples of paved test section asphalt layers have been taken and tested as well. Two asphalt mixes were designed according to local Latvian road building specifications.

SIA "Baltic 3D.eu"

Title of the research project: Development of 3D printable aircraft interior parts that meet EASA safety standards.

Purpose of the project: the aim of SIA Baltic3d.EU research project was to develop 3D printable drawings of aircraft interior parts that would be ready for certification according to EASA (European Union Aviation Safety Agency) requirements.

Result of the project: as part of the research, 10 aircraft interior parts were developed, including 3D designs of the parts and their prototypes were made. In order to ensure the certification requirements of aircraft interior parts in accordance with the EASA guidelines, the combustion and mechanical properties of the materials were also laboratory tested as part of the study, as well as the mechanical tests of the parts themselves were performed.

COMPETENCE CENTRE OF PHARMACEUTICALS, BIOMEDICINE AND MEDICINAL TECHNOLOGIES

Biopharmaceuticals, biomedicine, medicinal technologies, biotechnology – development of diagnostic and medical treatment technologies, application of artificial intellegence solutions in research and developemnt of medicinal technologies, including studying of cell and gene activation processes suitable for new medical products, re-purposing of existing drug molecules by using biotech and in vitro testing methods, telemedicine solutions.

From 2016 till 2022

43 projects supported; private co-funding **of EUR 8.8 million**, including ERDF funding **of EUR 7 million**, number of new products and technologies created in the supported enterprises after **receiving support 93**, number of entrepreneurs **supported 23**

Research and development areas:

- Pharmaceuticals, originator and generic medicines - research on active pharmaceutical ingredients and development of finished dosage forms in the niche of new generics and radiopharmaceuticals, as well as pre-clinical studies on originator molecules for synthetic medicines;
- Natural substance medicines, dietary supplements, functional cosmetics - to develop new dietary supplements and cosmetic products using extracts of active substances from Northern European plants and their biotechnological (fermentation) modification technologies, in line with the trends of the functional cosmetics industry in different regions of the world, as well as the development trend of dietary supplements to become a part of disease prevention programmes.

FARMĀCIJAS, BIOMEDICĪNAS UN MEDICĪNAS TEHNOLOĢIJU KOMPETENCES CENTRS

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AS "MADARA Cosmetics"

Title of the research project: Development of new cosmetic products with vitamin C as well as development of production technology.

Purpose of the project: investigate vitamin C derivatives and other plant substances to be incorporated into a stable cosmetic product with pronounced collagen stimulation, pigmentation mark reduction and skin tone improving functions, visual properties and low risk of irritation. In addition, develop technological process schemes for resource-efficient introduction of products in commercial production.

Result of the project: ECOCERT certified vitamin C stabilised face cream and serum developed and launched for sale.

SIA "Access AV" in cooperation with SIA "Apply"

Title of the research project: Radiological evaluation of native computed tomography images in patients with acute ischemic stroke in the anterior cerebral circulation - technology development and integration in the image evaluation process using a neural network.

Purpose of the project: to clarify the technological possibilities of neural networks in the identification of acute ischemic cerebral stroke in native computed tomography images.

Result of the project: the proposed assumption was practically tested and confirmed - with the help of trained neural networks, it is possible to differentiate a patient's examination between normal, pathology (non-acute cerebral ischemic stroke, hematoma or other trauma, tumors) and acute cerebral ischemic stroke. 300 patients were used for training and another 150 for practical validation. The accuracy of neural networks in diagnosis reaches 70%. Several directions were determined for further development of the technology and improvement of accuracy - detection of hyperdense artery, introduction of age groups as an additional parameter for the creation of neural networks, as well as additional diagnoses (various types of hematomas) were identified with which it would be possible to supplement the diagnostic functionality of this technology relatively quickly.

SIA "PharmIdea"

Title of the research project: Investigations of the technology of local application long-acting injection dosage form developed on the basis of Ca++ salts for the production of anti-cancer immunological preparation (TLR9 agonist) agatolimod.

Purpose of the project:

- to gain knowledge about the development of a local, Ca2+ salt-based, long-acting GZF production technology using agatolimod (AGAT) as an active substance;
- to develop a GZF platform of Ca2+ group biomaterials, in which either chemotherapeutic, or immunomodulatory, or adjuvant therapy molecules could be integrated in the future.

Result of the project:

- gained knowledge about the possibilities of developing the production technology of a local long-acting injection drug delivery system based on Ca ++ salts using agatolimod as one of the immune system receptor stimulating agonists as an active substance;
- developed the laboratory-scale technology for the production of the long-acting injection dosage form of agatolimod and produced the experimental series.

IT COMPETENCE CENTRE

IT competence Centre was founded in 2010 and its participants are ICT industry merchants and leading Latvian universities - the University of Latvia, Riga Technical University and Ventspils University of applied sciences.

From 2011, the IT competence Centre implements projects with co-financing from European Union funds, where support is available for sectoral and cross-sectoral.

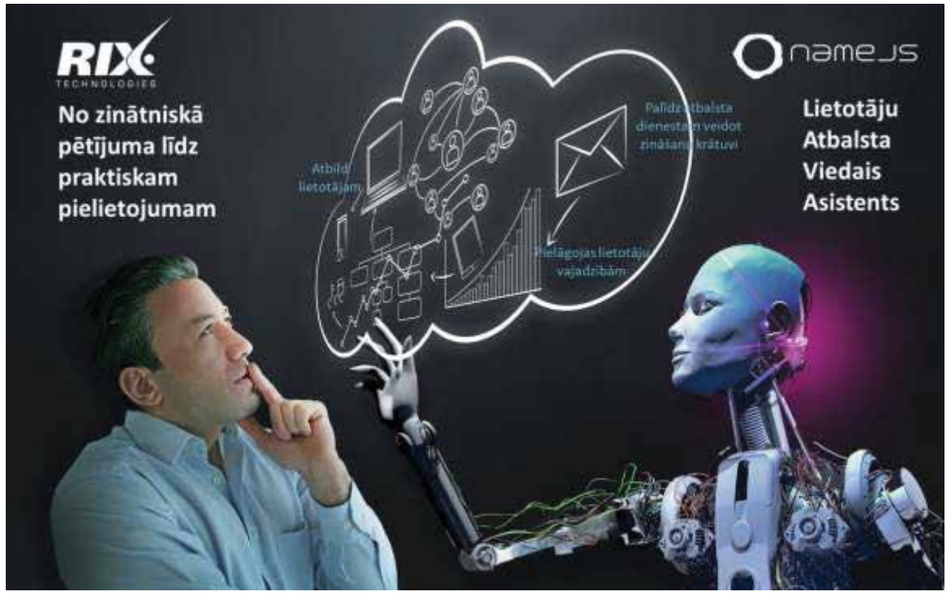
From 2016 till 2022

42 projects supported; private co-funding of **EUR 5.2 million**, including ERDF funding of **EUR 7.1 million**, number of new products and technologies created in the supported enterprises after **receiving support 19**, number of entrepreneurs **supported 37**

RESEARCH AND DEVELOPMENT AREAS:

business process analysis technologies

natural language technologies



IT KOMPETENCES CENTRS

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SIA "Tilde"

Title of the research project: Automated creation of multilingual subtitles.

Purpose of the project: the aim of the project was to develop a solution that would allow the costs and time contribution related to preparation, translation, and insertion of video content subtitles to be significantly reduced, as well as to significantly expand the possibilities for export of original video content created in Latvia, ensuring automated preparation of subtitles of videos created in Latvian in English and Russian languages. Moreover, such a solution ensures the availability of original content to various groups of society – people with hearing impairments, arrivals and residents of the country who have poor command of Latvian, as well as to any consumer of video content who chooses to read text instead of listening to audio.

Result of the project: the project has resulted in prototype – cloud service for automated subtitling and translation, as well as a multi-lingual video content subtitling process developed and tested by partner organizations. After the end of the project, the experimental prototype will be developed further by creating a universal, wide-use cloud service.

SIA "WeAreDots" in cooperation with SIA scientific technical firm "LĀSMA" with the support of SIA "Altas IT"

Title of the research project: Multiobsite detection and tracking for vehicle traffic monitoring: 3D-LiDAR and camera data pooling.

Purpose of the project: the project aimed to develop real-time technology simultaneously for detecting and tracking multiple vehicles, fixing their motion events, and planning transportation movements through a combination of 3D laser scanning and camera data.

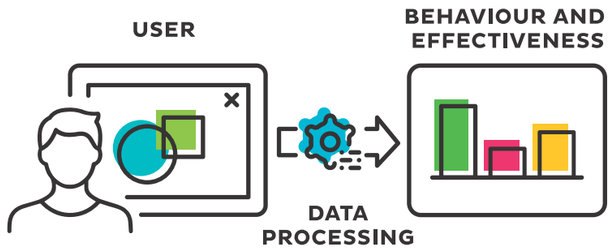
Result of the project: the industrial study resulted in the creation of a 3D laser scan and video camera system model to overcome light changes, shadow interference and object occlusion (overlap) problems in real-time detection and tracking of multiple vehicles. A prototype for real-time validation of multi-vehicle detection and tracking technology using LIDAR and camera combined data has been developed during experimental development.

SIA "ABC Software"

Title of the research project: Development of a common behaviour model for users of specialised IT systems in the engineering design sector using AI/ML algorithms.

Purpose of the project: the objective of the project is to develop a method of constructing a typical behaviour model for users of the widely used IT systems (AutoCAD and Lotsia PDM) in the engineering design sector, drawing on experience of simultaneous use.

Result of the project: the study led to the creation of a new method that, through a machine learning approach, is capable of dynamically analyzing the actions of IT system users in a multi-system environment, creating user-type behavioral profiles, monitoring behavior for each user and identifying its outliers.

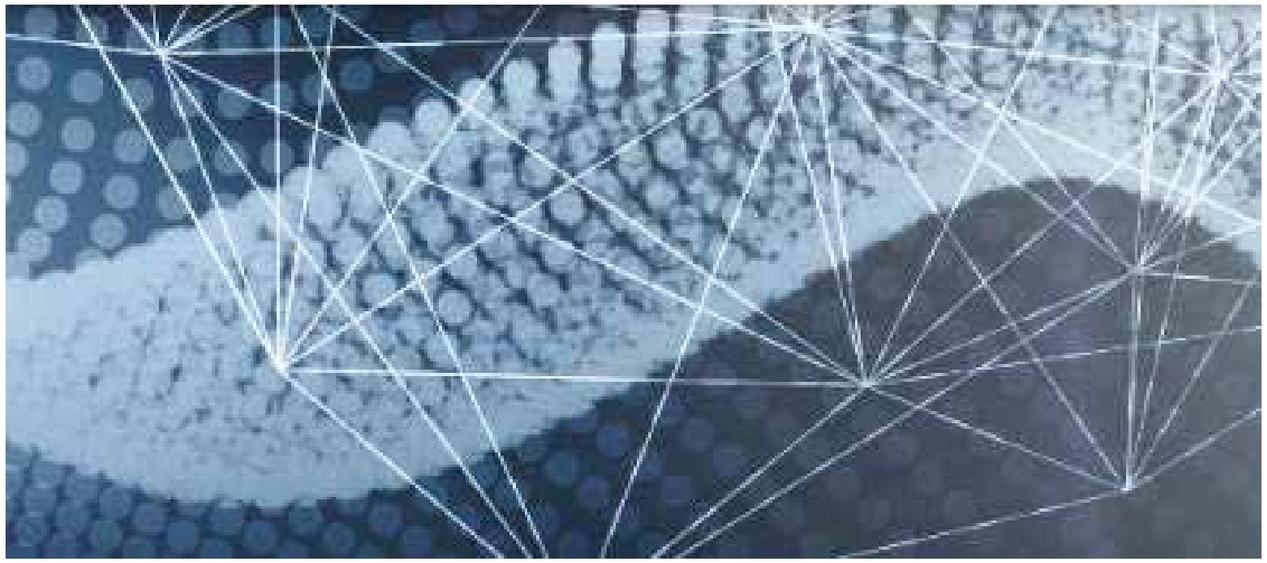


ENERGY AND TRANSPORT COMPETENCE CENTRE

The objective of the ETKC Competence Centre is to support at least 10 research activities in line with the defined research orientations, developing new products and technologies in the sector and introducing them into production, thus promoting cooperation between research and industry and increasing the competitiveness of traders in the sector.

From 2016 till 2022

ETKC - **19 studies carried** out by **16 companies**, private co-funding of **EUR 3.1 million**, ERDF funding of **EUR 4.6 million**; VITEKC - private co-funding of **EUR 1.7 million**, including ERDF funding of **EUR 3.1 million**, 1**8 companies carried out 11 studies**, Number of newly created products and technologies in supported companies after receiving support **23**



The chosen smart specialisation area of the Energy and Transport Competence Centre (ETCC) is smart energy, which comprises three research sub-areas:

- **smart energy general questions**
- **intelligent engineering systems and energy production solutions**
- **smart energy and transportation**

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SIA "Baltic Scientific Instruments"

Title of the research project: Development of a free-release radioactive pollution monitor for nuclear power companies.

Purpose of the project: the aim of the project is to develop a Free Release Monitor for nuclear power companies, which could determine: gamma and beta radiation intensity of the measured object; the total activity of the object in a wide range of radionuclide activity (low and medium activities); the radionuclides present in the measured object and the activity of each radionuclide; weight of the object.

Result of the project: Experimental sample of the construction system.
Research report on radiometers for total radiation dose rate measurements.
Research report on design development.
Experimental sample of the automation electronic unit.
Research report on the development of testing and calibration methodology.
Prototype of a free-release radioactive pollution monitor.
Prototype performance test protocol of the free-release radioactive pollution monitor.

SIA "Edge Autonomy"

Title of the research project: Development of a vertical take-off and landing aircraft.

Purpose of the project: the aim of the research is to develop a new generation aircraft with vertical take-off and landing. The company plans to apply the knowledge gained from the previous study to integrate it into a new product - the Penguin VTOL. The new product will give the company the opportunity to compete in a new category of aircraft and potential additional income.

Result of the project: 1 prototype aircraft.

SIA "Lesla Latvia"

Title of the research project: A study for the establishment of a shared infrastructure system for charging electric scooters.

Purpose of the project: the research will include an analysis of the use of existing shared scooter systems based on empirical data and the development of a model for optimal infrastructure creation. In addition, the project envisages conducting a study on providing wireless energy transmission in a strong external magnetic field in order to develop a mechanism for connecting scooters without using moving parts, while providing wireless charging of scooters. At the end of the project, an experimental prototype of the system is expected to be demonstrated.

Result of the project:
1. Activity: Completed a study on the development of an optimization model for electric scooter charging infrastructure and prepared a scientific article for publication.
3. Activity: Based on the results of activity 2, a prototype of the electromagnetic closing system of the electric scooter was developed
4. Activity: developed a general prototype of a publicly available charging system for an electric scooter.

FOREST SECTOR
COMPETENCE CENTRE

MEŽA NOZARES KOMPETENCES CENTRS support at least 23 research projects according to the defined research directions by developing new products and technology and make direct input into the production, thereby promoting cooperation between researchers and industry, and increasing the competitiveness of industry developers.

The Forest Industry Competence Centre covers two scientific research directions:

Increasing forest capital and forestry

New wood materials and technologies

From 2016 till 2022

Number of new products and technologies created in the supported enterprises after receiving **support 25**, number of entrepreneurs **supported 28**. Total project amount: **12,987 milj.EUR**, t.sk. **ERAF 7,489 milj.EUR**, private investments **5,498 milj. EUR**

Meža nozares kompetences centrs
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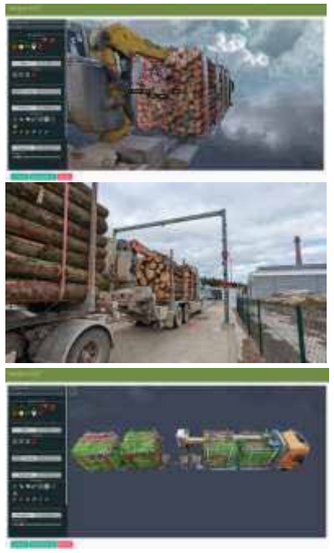
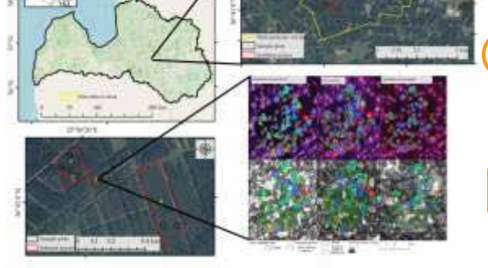
SIA "Koksnes plūsmas datu centrs"

Title of the research project: Group survey automation capabilities.

Purpose of the project: develop a technical solution, including the functionality of the information system, for the automated determination of the parameters for the group survey of round timber, thereby increasing the efficiency of the group survey and reducing the likelihood of human error.

Result of the project: the company has both acquired additional knowledge through this project and developed an IS solution that enables processing of timber measurement data from automated surveying equipment. Technical specifications for construction and equipment have been developed. A measuring device actually built in nature. Data circulation is ensured, planned system interface solutions for data processing have been achieved. The accuracy of the measurements tested and calibrated. A solution for remotely measuring the quantities used for the grouping of round timber gives the results of adequate accuracy and procedures have been developed to make the product fully available on the market.





LVMI "Silava"

Title of the research project: Technology for early diagnosis of the genetic determination part of resistance-related features for common spruce.

Purpose of the project: the aim is to develop technology for the early effective diagnosis of the part of the genetic determination of resistance-related traits in breeding plantations, using remote sensing methods, and thus to provide the possibility of increasing the resistance of forest stands in the future expected climate.

Result of the project: the technology developed as part of the study includes the selection of reference trees (by measuring their juice flow as a direct measure of moisture adequacy and photosynthetic activity index as an indirect indicator) in different vitality classes, the extraction of remote sensing data and the use of the developed algorithm to process them using the chlorophyll index as the most significant determinant factor. Remote sensing data (images) shall be acquired when spruce flourishing and flowering has ended, eliminating the impact of these processes on the signal and thus reducing the proportion of misclassified objects (trees). This method enables early diagnosis of stress-less persistent genotypes, reducing the probability of secondary damage occurring.

SIA "Funduss"

Title of the research project: Recycling of glued wood structural residues into useful large-scale wood construction materials.

Purpose of the project: to explore the possibility of recycling residues resulting from the manufacture of glued timber structures into materials suitable for the manufacture of construction structures. Formatting leftovers and growing dimensions using large-scale wedge pin connections and construction grade adhesives are a potential solution to achieving the goal.

Result of the project: development and testing of technology for the growing of residual dimensions of glued wood structures, which would allow the recycling of residues resulting from the manufacture of glued wood structures into large-scale raw materials suitable for the manufacture of building structures. Definition, verification of the technology, issues identified during the inspection and necessary improvements in ensuring the conformity of the technology with the principles of laws and regulations and industrial technology have been performed.

Completed/Approved research projects for the 2nd round

Latvijas Elektrisko un optisko iekārtu ražošanas nozares kompetences centrs

SAF Tehnika - Wideband Dual polarization radio / ALFA RPAR, LU CFI - Study of high resistance resistive layers / EuroLCDs - Industrial Research and Experimental Development of Improvement of Functional Properties of Liquid Crystal Display / HansaMatrix, Hansamatrix Innovation, Lightspace Technologies, EuroLCDs - Real-time 3D volumetric imaging technology development research / Volburg - Development of „Smart" bus audio amplifier / Intelligent Systems, RTU - Plug & Play Distance measurement, driver driving behavior analysis and warning system telemetry device research and development based on OBD and GPS/GPRS technologies / Aerones, RTU - Aerones - Development of solution for heavy-lift multirotor aircraft with carrying capacity up to 100 kg that is remotely controllable, with autonomous airworthiness and automated safety system or electronic sensor array solution development. / Advangrid, RTU - Aerones - Development of solution for heavy-lift multirotor aircraft with carrying capacity up to 100 kg that is remotely controllable, with autonomous airworthiness and automated safety system or electronic sensor array solution development. / Robotic Solutions, RTU - Research and development of measuring devices and control solution for power grid and electrical consumers. / LEITC - Multi-robot systems for applications in agriculture / EDI - Small size, volume and high insertion loss electromagnetic compatibility conducted emission filter investigation and development in frequency range 150kHz-100MHz / Baltic3d.EU, Paula Stradiņa klīniskā universitātes slimnīca, Zinātniskais institūts, Šūnu transplantācijas centrs - Research on the development of computer vision techniques for automation of industrial processes 3D printer for biotechnologically produced tissue / RD Alfa mikroelektronikas departaments - Research and development of the photo diode construction and production technology, and development of the photo spectrometer / Erica Synths - Digital signal processing (DSP) based audio effect platform development for use in electronic musical instruments.

Mašīnbūves kompetences centrs

Sabiedrība ar ierobežotu atbildību "PERUZA" - Development of the food production machinery platform with "intelligent" self-conductivity built in the actuator mechanisms based on mathematical image processing and sensor technologies / Sabiedrība ar ierobežotu atbildību "Agrozona" Rēzeknes Tehnoloģiju Akadēmija - Development of energy efficient wood chip dryer / SIA "Forta Medical"- Development of new unified metal modular structures for use in the construction industry / Sabiedrība ar ierobežotu atbildību "Agrozona" Rēzeknes Tehnoloģiju Akadēmija - Development of highly efficient wood chip gasifier / Sabiedrība ar ierobežotu atbildību "TransfoElectric", Sabiedrība ar ierobežotu atbildību "Lesla Latvia" - Study of the development of wireless charging system and management of industrial and service robots / Sabiedrība ar ierobežotu atbildību "Vibroakustikas laboratorija" - Development and research of experimental monitoring technology for the technical condition of industrial constructions / SIA "ASG1" - Development of two-glue automated plywood laying machine / Sabiedrība ar ierobežotu atbildību "GRANĪTS" - Development and testing of prototype automated wooden pallet board production equipment in an artificial environment / Sabiedrība ar ierobežotu atbildību "Preco" - Functionality improvement of pre-treatment technological equipment for grains at SIA "Preco" / SIA "CENTRE COMPOSITE" - Durability improvement of high-performance shaft type parts by strengthening the surface with rabbet method / SIA "ROBOEATZ" - Functionality development of automated food preparation device / SIA "Olstra" - Development of new firewood packing equipment for SIA "Olstra" / SIA "Stonex" - Development of active agent for reducing friction / Sabiedrība ar ierobežotu atbildību "Eko Air" - Increasing the durability of heat exchanger solder joints / SIA "KEPP EU", Latvijas Universitāte, Sabiedrība ar ierobežotu atbildību "Procesu analīzes un izpētes centrs" - Modelling of electron beam heater plasma shell shape and optimisation of its shape for improving the crystal growth process / Akciju sabiedrība "Baltijas Gumijas Fabrika" - Development of improved sleeper rubber spacers/ SIA "RA kokšķiedru serviss" - Development of new water filtration and purification technology by using carbon variety minerals as the filtering material / SIA "MHD Research Centre" - Development of electromagnetic crystalliser for the extraction of special alloys with fine-grained structures using metallurgical methods / SIA "KEPP EU", Latvijas Universitāte, Sabiedrība ar ierobežotu atbildību "Procesu analīzes un izpētes centrs" - Study of dislocation-free silicon single-crystal growth from base / Sabiedrība ar ierobežotu atbildību "COMPOR" - Improving the physical properties of fibreglass composite material / SIA "SKONTO Concrete Cladding" - Research on the development of metal frame reinforced concrete cladding panels / Sabiedrība ar ierobežotu atbildību "Pelegrin" - Development of ultra-light aircraft prototype "TARRAGON" in accordance with regulations and standards issued by the European Aviation Safety Agency / Sabiedrība ar ierobežotu atbildību "DiGas" - Development of a duel fuel system for diesel locomotives / SIA "UAVFACTORY" - Improving and testing the functionality of "Penguin C" unmanned aerial system / SIA "VALPRO" - Technology for manufacturing pressure vessel shells of seamless aluminium fusions of various thickness, high heat conductivity and low weight for precision automated assembly and welding lines / Sabiedrība ar ierobežotu atbildību "Glinar" - Development of a new generation turbocharger bearing / Sabiedrība ar ierobežotu atbildību "APP Grupp" - Development of new metalworking technologies in the company that produces bearings of SIA "APP Grupp".

Latvijas pārtikas kompetences centrs

LPKS "Augļu nams" - New storage technologies for fruit crops / SIA " Kronis" - Ready meals and condiments in innovative packaging for world markets / SIA " Milzu!" - Research and development of children's toy ecosystem in MILZU! cereal flakes packaging to increase the value added of food products / SIA " Milzu!" - "MILZU! development of new cereal product recipes / SIA "Piejūra" - Co-extrusion method application in food processing / SIA "Piejūra" - The processing of by-products into other foods (pâtés, pastes, etc.) with a specified shelf life./ SIA "Skai Baltija" - Development of pumpkin additive and powder from by-products / SIA "Karavela" - Processing of by-product from canned mackerel production line / SIA "Karavela" - Development of new, high-value canned fish products using Baltic Sea fish: Baltic herring and sprats / SIA "Auravia Latvia" - Recalcitrant organic chemical degradation in food production waste water using biotechnological methods / SIA "Baltic Dairy Board" - The enzymatic bioconversion of lactose containing milk and whey permeate to products with added value / SIA "Conelum", SIA "Apply" - EloSCOPE C / SIA "Compaqpeat" - Creating a new product from already registered new products AdMina® and MiCo® (gaidu apstiprinājumu tulkojumam no projekta īstenotāja) / SIA "Kronis" - An innovative approach to product research and adaptation to new manufacturing processes dependent on target markets / AS "Dobeles dzirnavnieks" - Development of parameters for pasta production line to introduce new products in production / SIA "SQUALIO Cloud Consulting", AS "Balticovo", SIA "ABC software" - Assessing and laying the technical foundation for a system to monitor laying hens, forecast the productivity of egg production and discover changes early / SIA "Felici" - Technology development for a new muesli GRACI product with improved structure, consistency, nutritional value and storage properties / SIA "RicBerry", ZS "Strēlnieki" - The creation of innovative energy-boosting product group (with a high energetic value and content of important biologically active substances) / SIA "Zippy Vision", SIA "Mak IT", AS "Dobeles dzirnavnieks" - Computer vision and data science based quality control and management solution for food manufacturing industry / AS "Sistēmu inovācijas" - Elaboration of methodology of Sea Buckthorn berry residue free processing / AS "Dobeles dzirnavnieks" - New products development in JSC "Dobeles dzirnavnieks" / AS "Rīgas Piena kombināts" - Usage of alternative raw materials in dairy production / AS "Sistēmu inovācijas" - Development of production of controlled rate eluation of food supplements / SIA "Orkla Confectionery & Snacks Latvija" - Healthier snacks and sweet pastry product development /SIA "Staburadzes konditoreja" - Sweet pastry and convenience food storing solutions / SIA "HansaMatrix Innovation", SIA "Lightspace Technologies", AS "HansaMatrix" - - Structured light projection engine for 3D machine vision with use in (food) industry automatization / SIA "Lat Eko Food" - - New, high value added, product group development at Lat Eko Food Ltd / SIA "Baldones lauki" - Development of red beetroot and apple complex processing technology to innovative health food manufacturing / SIA "SQUALIO Cloud Consulting", AS "Balticovo" - Evaluation and optimisation of the system for measuring the productivity of egg production / SIA "Chocolette Confectionary" - Reduced calority chocolate mass technology.

Viedo materiālu un tehnoloģiju kompetences centra

SIA "Baltic Dairy Board", AS "Biotehniskais Centrs" - An improvement of controlled enzymatic hydrolysis process for the production of highly valuable whey and milk protein hydrolysates / SIA "Biosan", AS "Biotehniskais Centrs" - Study of the microorganism cultivation possibilities based on the personal bioreactor utilized reverse spinning technology. / AS "Biotehniskais centrs" - The investigation of laboratory and pilot scale bioreactors sterility and heat transfer conditions taking into account the principles of good manufacturing practice / SIA "Chromsword" - Development of mathematical models for automated HPLC development and description for monoclonal antibodies. / SIA "Eko osta" - Research of properties of used tyre materials obtained in solvation process and predictable management of obtaining necessary products / SIA "GroGlass" - Control of outgasing during the vacuum sputtering processes in order to obtain high quality anti-reflective coatings on flat plastic substrate / SIA "GroGlass" - Research on chemical synthesis of optically neutral, scratch and wear resistant protective coating for organic glass. / SIA "GroGlass" - Reduction of coating adjustment time and improvement of automatization processes in order to obtain high quality anti-reflective coatings / SIA "Gumimix Group" - New product development, certification, and production learning used in Upper Railway construction, including Rail Baltic project, that uses recycled products. / SIA "Kinetics Nail Systems" - Effect of Silicate rheology modifiers on solvent based nail coating syneresis and sedimentation Effect of Silicate rheology modifiers on solvent based nail coating syneresis and sedimentation / SIA "Kinetics Nail Systems" - Development and production of water based nail coatings polymerizing in air and in UV light / SIA "Primekss" - Development and implementation in practice of an innovative reinforced concrete semi-precast elevated slab system / SIA "Primekss" - Development of ultra-thin concrete whitetopping overlay / SIA "Primekss" - Development of new type of steel fiber / SIA "Rovests" - The application of cereal straws and other production process wastes for manufacturing of exportable products using smart technology based processing / SIA "Rubber Products" - The improvement of devulcaniser NDG composition using nanotechnology based novel active components / SIA "Sidabe Vacuum" - Research of options to detect, optimize and control the effects of components of magnetron sputtering processes and development of an automated coating process control technology utilizing feedback from the properties of the plasma and the coating / AS "Biolat"; SIA "Silv EXPO" - Technology development for the incorporation of biologically active substances into phospholipid liposomes / SIA "Tenachem" - Development of industrially suitable insulating glass edge sealant composition with high performance adhesion properties in UV, hydrolytic and thermal ageing climatic conditions / SIA "Tenapors" - Polyisocyanurate (PIR) thermal insulation products made from advanced constituent compositions for improved energy performance of buildings. / SIA "Virsma" - Investigation into impact of a nozzle material and form of the inlet on the spurt at different distances from the object for medical and technical applications. / SIA "Sensotech" - Operational research on spinning and rotating wave energy converters / SIA "SilvEXPO" - Physico-chemical characteristics of coniferous polyprenol phospholipid liposomes and their soft gelatin capsules. / SIA "Baltic 3D.EU"; SIA "Custom3D Tech"; Ventspils augstskola - An experimental 3D printer with integrated software designed for prosthetic printing / SIA "ALINA" - Protection of wood surfaces using environmentally friendly materials / AS "BIOLAT" - The active conifer substance fraction, i.e., provitamin paste, Silbiol and Polyprenol microemulsion incorporation into cosmetic formulations / SIA "Sidabe Vacuum", LU Cietvielu fizikas institūts - Research of technological process parameters necessary to ensure quality lithium coatings and creation of a prototype lithium coating material. / AS MB Betons - Development of thin pigmented concrete layer for prefabricated sandwich wall elements. / SIA "Sidabe Vacuum" - Research of technological process parameters of thin-film coatings on powder materials and development of technical solutions to ensure creation of encapsulating and uniform coatings.

Farmācijas, biomedicīnas un medicīnas tehnoloģiju kompetences centrs

AD Smart, SIA, Sikamor, SIA - Selection of active natural substances, investigation and evaluation of their effects in patients with major risk factors for metabolic syndrome / Olainfarm, AS - Research of natural substances for development of new cosmetic product line / Olainfarm, AS - Drug safety and toxicokinetic study / Silvanols, SIA - Development of a medical device based on natural substances. / Pharmidea, SIA - STUDIES ON CRITICAL PARAMETERS AND DEVELOPMENT OF VALIDATION SERIES FOR SEMI-SYNTHETIC LIPOPEPTIDES STERILE DOSAGE FORMS / Pharmidea, SIA - Research and development of validation series for the development of a sterile liquid dosage form technology of CARBETOCIN for SE Asia market / MADARA Cosmetics, SIA - Research of herbal and natural ingredients in technological processes and application on skin and hair for assessment of irritation and efficacy. / Grindeks, AS - Pharmacological studies / Grindeks, AS - Efficacy, safety and pharmacokinetic studies / Grindeks, AS - Development of new technologies for the production of generic active pharmaceutical ingredients and polymorphic forms / Rīgas Farmaceitiskā fabrika, AS - Research on herbal drug extracts and active pharmaceutical ingredients for the development of new products and the development of existing products. / Grindeks, AS - Toxicity study of the product of GX-EG group / Toxicity study / LabochemLV; PharmIdea SIA - Levosimendan Synthesis Technology Development Studies / Latvijas Universitāte - Development and standardisation of new diagnostic technologies for tumour mutations, enabling high quality tumour biomarker research, diagnostics and personalised treatment / Olainfarm, AS - Development of a new anti-tuberculosis final dosage form / Pharmidea, SIA - Research on the development of carbetocin API with a reduced impurity profile and the development of a new, more stable sterile injectable dosage form technology / MADARA Cosmetics, SIA - Effects of concentrated active ingredients on the skin / Olainfarm, AS - Development of new manufacturing technology for the racemic derivative of the Quinuclidine / Grindeks, AS - Development of a new method for the production of patent-free AFV / Grindeks, AS - Development and validation of a new API extraction technology in laboratory conditions / LabochemLV, SIA un RSU - Development of analytical methods and manufacturing technologies of 177Lu-PSMA, 68Ga-PSMA, 18F-PSMA / Grindeks, AS - Bioavailability study of two doses of immunomodulatory group drug product / LabochemLV, SIA un PharmIdea, SIA - Development of LEVOSIMENDAN sterile dosage form laboratory technology / MADARA Cosmetics, SIA - Research on herbal and natural ingredients for efficacy and functional evaluation.

Informācijas un komunikācijas tehnoloģiju kompetences centrs

AS "RIX Technologies" - Defining a dynamic user access rights NoSQL data model and building and analysing an efficient and secure full-text search algorithm based on it / AS "RIX Technologies" - Analysis of the possibilities of using a hybrid model of relational NoSQL data processing for providing efficient and flexible access to current and historical data / SIA "Datorzinību centrs" - The use of the capability paradigm in the management of business support processes of small and medium enterprises / Sabiedrība ar ierobežotu atbildību "Mobilly" - Development of a management model of personal transaction objects / Sabiedrība ar ierobežotu atbildību "ABC software" - Adoption of the method of identification of suspicious activities of users of information systems for conditions approximated to the real environment / Sabiedrība ar ierobežotu atbildību "ZZ Dats" - Creation of software adaptation algorithms and module according to the context information of user activities audit. / Sabiedrība ar ierobežotu atbildību "CUBE Systems" - Determining the position of an object on a known trajectory where a reliable GPS signal is not available / SIA "DIVI grupa" - Data quality management with executable business process models / SIA "BITI" - Support of multi-criteria company transport route planning / SIA "DIVI grupa" - Non-relational data warehouse development technology / Sabiedrība ar ierobežotu atbildību "DPA" - A method of deep neural networks for improving the accuracy of localization and classification of automobile license plates / SIA "Komerccentrs DATI grupa" - A method for scaling an adaptive cloud computing platform according to a configurable set of parameters / Sabiedrība ar ierobežotu atbildību "Lattelecom" - Creation of a data collection, analysis, and data aggregation model for the energy management system of industrial facilities and related equipment / SIA "Lursoft IT" - Development of a flow optimization model of data processing algorithms for the identification of politically important persons / SIA "Datorzinību centrs" - Semantic annotation of textual data in the case of application of linked data sets in the web environment / Sabiedrība ar ierobežotu atbildību "TILDE" - Software and hardware platform prototype for integrating machine translation into corporate infrastructure / Sabiedrība ar ierobežotu atbildību "TILDE" - Professional applications of automatic speech recognition and synthesis technologies / Sabiedrība ar ierobežotu atbildību "TILDE" - Multimodal Human-Computer Communication in a Multilingual Environment / Sabiedrība ar ierobežotu atbildību "LETA" - Automated system for recognition and annotation of visual materials for the needs of the Leta archive.

Viedo inženiersistēmu, transporta un enerģētikas kompetences centrs

SIA Aviācijas pētniecības centrs un SIA D un D Centrs - Aviācijas dzinēju agregatu dinamiskas ipašības pētijums aviācijas dzinēju vibrodiagnostikas tehnoloģiju izpētei un kompleksā demonstrātora izveidei / SIA Baltic Research Center - LED gaismekļu optikisko materiālu izpēte un analīze un lielas jaudas augsto mastu gaismekļu sekundārās optikas izstrāde un optimizēšana / SIA Baltic Scientific Instruments - Automatizēta radioaktīvo atkritumu monitora atomenerģētikas uzņēmumiem izstrāde / SIA Citintelly un SIA Vizulo - Rūpnieciskais pētījums jaunu zināšanu ieguvei par viedās pilsētas kustības sensoru pielietojumu, izmantojot apgaismojuma tīkla infrastruktūru – LED gaismekļi un balsti. Eksperimentālā izstrāde – viedās pilsētas adaptīvās gaismas regulācijas sensoru izstrāde. / SIA EMI Electronics - Pētījums par elektromobīļu uzlādes staciju ietekmi uz elektrosadales tīkliem un iespējām tās izmantot elektrosadales tīklu kvalitātes uzlabošanai un slodžu pārdalei / AS Jauda - Elektrosadaļņu gabarītu un tehnisko parametru izpēte / SIA O Yachts - SPINE (mugurkaula) koncepcija / SIA RTU Enerģija - BIOGĀZES UN FOSFORA ATGŪŠANAS TEHNOLOĢIJA ANAEROBĀ APSTRĀDES PROCESĀ NO SAIMNIECISKAJIEM NOTEKŪDEŅIEM / SIA Transfoelectric - Pētījums par elektroauto bezvadu uzlādes raidošā moduļa (TX) pirms-ražošanas modeļa izstrāde (Daļa no pilnīgas bezvadu uzlādes sistēmas) / SIA UAV Factory - Bezpilota lidaparātu lietderīgo kravu izstrāde un testēšana / SIA Vizulo un SIA Citintelly - Rūpnieciskais pētījums jaunu zināšanu ieguvei par viedo LED gaismekļu optimālu materiālu, formas, kopējās konstrukcijas un iekšejo elektronikas un mehānisko elementu pielietojumu - ar mērķi noteikt piemērotāko iepriekšminēto punktu salikumu viedās pilsētas apgaismojuma nodrošināšanai. Eksperimentālā izstrāde – viedās pilsētas centrālo vadības sistēmu un tās ierīces atbalstošu LED gaismekļu izstrāde. / SIA SCM Latvia - Kokogles ražošanas procesa optimizēšanas inovācija koksnes kaltēšanas tehnoloģijas attīstībai / SIA Termolat - Jumta monitoringa sistēma / SIA Elgoo Tech - Uz mikromontāžas principiem balstītas augstfrekvences jaudas pārveides moduļu hibrīdshēmu tehnoloģijas izstrāde / Lafivents,SIA - Ēkas energoefektivitātes paaugstināšana, vadības automatizācijas sistēmas māksīīgo intelektu papildinot ar reāllaika simulācijas vidi un pašmācošiem algoritmiem / RIC Technology SIA - Universāla bezvadu uzlādes sistēma mobilo ierīču uzlādei / SIA Baltic Scientific Instruments - Gaisa radioaktīvo aerosolu monitora izstrāde un izpēte atmosfēras piesārņojuma kontrolei / SIA D un D Centrs - Planetārā reduktoru dinamisko īpašību pētījums vibrodiagnostikas tehnoloģiju attīstībai un demonstratora izveidei / SIA Vizulo - Rūpnieciskais pētījums par LED ielas gaismekļu gabarītu samazināšanas tehnoloģiskajiem risinājumiem, nemazinot gaismekļa funkcionālās īpašības. Eksperimentālā izstrāde - pilnas funkcionalitātes mazgabarīta ekonomiskā ielu gaismekļa eksperimentālā izstrāde / SIA Transfoelectric un Baltex Group SIA - Pētījums par enerģijas plūsmu kontroles un vadības algoritumu un sistēmas prototipa izstrādi neatkarīgas uz atjaunojamajiem energoresursiem balstītas energosistēmas pielietojumam.

Meža nozares kompetences centrs

LSFRI Silava - Methods for tree growth condition improvement measure planning and quality control / LSFRI Silava - Methods for effective practical use of breeding results and adaptation tests for deciduous trees / JSC Latvijas Finieris - Industrial betulin production potential from birch processing residues / JSC Latvijas Finieris - Wood composite materials with improved properties / JSC Latvijas Finieris - Development of improved quality impregnation resin, to use the resin to produce impregnated film coatings. / Troja Ltd. - Increased flow-rate polyolefin-wood composite / Amber Wood Ltd., Marko KEA Ltd. 4 PLUS Ltd. Jaunzeltiņi Ltd. - Technology validation of the latest bonding and decorative, protective treatment for high value-added wood products production / LSFRI Silava - Limiting a root rot-caused spore infection in conifer groves / WWL Houses Ltd. , Arccon Ltd. - Research of multi-storey wooden modular houses production feasibility and prototyping of extra size solid wood and wood based material modular houses / FSCS L.V.Mežs - Appropriation of a complex forestry service system / Tilde Company - Forest Sector Communication Technologies / EKJU Ltd. - Research of linoleic paints and development of conditions for establishing an experimental application system in "EKJU" Ltd. / Troja Ltd. - Polyolefin matrix of different types - wood compositions / VMF Latvia Ltd. - VMF Latvia Round timber automated survey data management system /

Completed/Approved research projects for the 4nd round

Latvijas Elektrisko un optisko iekārtu ražošanas nozares kompetences centrs

LEITC SIA - IoT electromagnetic compatibility testing system research and development in frequency range 1MHz-6GHz / HansaMatrix Innovation SIA, HansaMatrix Ventspils SIA - Development of electronics for multifocal augmented and virtual reality displays / RD Alfa mikroelektronikas departaments AS - Research of the New Generation Spectrometry: Development of Design and Technologies for the Manufacturing of Innovative Diode Detectors / Intelligent Systems SIA - Internal combustion engine anomaly identification based on vibration analyzes and telemetry device hardware and firmware development / Mondot SIA - An effective module for automatic people and vehiche detection by using videosurveillance cameras / ALFA RPAR AS, RTU - Analogue semiconductor component design for audio Hi-End application /Smart Meter SIA - Application of air ionization technology in ventilation systems / Eventech SIA - EET – 2 (Eventech Event Timer - 2) / Robotic Solutions SIA, RTU - Indoor navigation tool for different function autonomous robots / Sonarworks SIA - New sound personalization technology research and development / STROPS Technologies SIA - Development of a scalable complex multiple power source solution for mobile video surveillance / Light Guide Optics International SIA - Hollow core fiber" products: Development of production technology, research of properties, manufacturing of prototypes, and qualification for use in medical applications / UAVFACTORY SIA - Development of a new generation gimbal / Sonarworks SIA - Semi-automated acoustic measurement and correction technology product level realization / HansaMatrix Innovation SIA, Lightspace Technologies SIA - Development of integrated electronics for head position tracking and remote assistance functionality / RD Alfa mikroelektronikas departaments AS - Research and Development of Low Voltage and Low Noise Level Four-level Rail-to-Rail Operational Amplifier Technology and Microchip Prototype/ Intelligent Systems SIA - Telemetry device hardware and firmware development to monitor medium voltage transmission line quality and how disturbances in medium voltage lines effects low voltage transmission lines / UAVFACTORY SIA - Development of a micro-class gyroscopic stabilized camera for 3-8kg UAVs / SAF Tehnika AS - Research of the structure and element base of the real-time spectrum analyzer / APPLY SIA - Analysis of transparent glass containers and their elements and research of detection methods for universal defectology analysis / Lightspace Technologies SIA - Precise positioning of the head-mounted display in industrial applications / SAF Tehnika AS, RIMI Latvia SIA - Processing of large volume (big data) electronic wireless sensor measurements using a Cloud solution and its application to food retail companies / Conelum SIA, Apply SIA - Conelum EloVIEW / Aerones SIA, Intelitech SIA - High power high voltage intelligent power supply solution with remote control interface and development of load and battery balancing system / PVStream SIA, Think Mobile SIA - GEFEST-1 (PVS-SH) / Smart Meter SIA, SAF Tehnika AS, Bauskas Ūdens SIA - Research about technology to reduce usage of electric energy in wastewater treatment plantsResearch about technology to reduce usage of electric energy in wastewater treatment plants / UAVFACTORY SIA - Significant improvements of electro-optical, gyroscopically stabilized aircraft cameras / Mobilly SIA - Research and development of control terminal modification and integration with payment infrastructure / Cryogenic and vacuum systems, Ventspils Augstskola, LVKĶI - Cryogenic Insulation Thermal Conductivity Testing System / SAF Tehnika AS, Balticovo AS - Wireless monitoring solution for feed residue in the grain silos and air quality assessment in chicken barns / Elektroniskie sakari VAS, SAF Tehnika AS - Measurement of radio spectrum parameters using an unmanned aerial vehicle / Apply SIA, Valmiermuižas alus SIA - The Quality Control of Glass Containers.

Mašīnbūves kompetences centrs

Sabiedrība ar ierobežotu atbildību "PERUZA" - Research of the process and creation of a prototype of a container station with the application of locally and remotely controlled robot manipulators for immediate separate sorting of household waste, located in the courtyards of apartment buildings / SIA "DINEX LATVIA" - Development of modular type jig (conductor) / Sabiedrība ar ierobežotu atbildību "GRANĪTS" - Development and testing of prototypes of automatic wooden pallet board production equipment in relevant operating environment in Ltd "GRANITS" / Sabiedrība ar ierobežotu atbildību "Preco" - Development of high-performance, closed-type belt conveyor with aspiration system by SIA Preco / Sabiedrība ar ierobežotu atbildību "Preco" - Improvement of moisture sensor measurements accuracy for automation of grain dryers performance / SIA "RNA Technology" - Determination of optimal parameters for a radio-wave method's device for oil pollution detection and contouring / Sabiedrība ar ierobežotu atbildību "ZIPPY VISION", SIA "PCC" - Development of a complex wood scanning system, creation of an artifact data set and preparation of deep learning scales / Akciju sabiedrība "KEPP EU", Sabiedrība ar ierobežotu atbildību "Procesu analīzes un izpētes centrs" - Process research and optimized development of electron beam heater for production of high purity materials / SIA "SKONTO Concrete Cladding" - Development of metal frame for strengthening concrete cladding panels / SIA „HYGEN" - Additional research and integration of the technology of hydraulic piston, aiming to develop and demonstrate economically efficient compressed natural gas smart commercial vehicle fuelling appliance / SIA "UAVFACTORY" - Penguin C UAV product development optimization / SIA "RAIL SYSTEMS" - Development of a technological process and prototype for the construction of a new railway platform for the loading/unloading of semi-trailers and containers / SIA "UAVFACTORY" - In-Market competitiveness increase of the Penguin C UAV / SIA "DINEX LATVIA" - Development of exhaust gas leak-proof, thermally insulated flexible element for exhaust systems of commercial vehicles / SIA "DINEX LATVIA" - Development of vacuum technology for reduction of exhaust gas temperature drop in commercial vehicle gas treatment systems / SIA "ROBOEATZ", SIA "MAK IT" - Robotic food service system prototype / Sabiedrība ar ierobežotu atbildību PERUZA, SIA "WeAreDots" - Development of compact container cells of robotic manipulators for handling heterogeneous objects / SIA "AB METAL", Sabiedrība ar ierobežotu atbildību "Astra prima" - Development of innovative spinal intervertebral disk implant, tools intended for it, as well as retractor system for retroperitoneal route in spine surgery/ SIA "AB METAL", SIA "MarTo" - Development of modular skeleton sledges / Akciju sabiedrība "KEPP EU", Latvijas Universitāte , AS "ALFA RPAR" - Technological research and silicon crystal production with diameters up to 100 mm for the use in low-current and high-power microelectronic solid state devices / SIA "ROBOEATZ", SIA "MAK IT" - Induction suvide machine with telemetric controls / Sabiedrība ar ierobežotu atbildību PERUZA, SIA "WeAreDots" - Improvement of the economic efficiency of the production process of high-value fish products with a comprehensive IT solution for the control and management of raw material, final products, and the production process / SIA "Steel PROFI", SIA "Latelectrics" - Process research and prototype development of small and medium-sized self-cleaning flue gases electrostatic purification filter / SIA "RNA Technology" , SIA "CRYOGENIC AND VACUUM SYSTEMS" - Creation and testing of a prototype model of a radio-wave device for oil pollution detection and contouring / Sabiedrība ar ierobežotu atbildību "PERUZA", SIA "WeAreDots" - Technology for recognition of small parcels with computer vision and robotic sorting of those parcels / SIA "ROBOEATZ", SIA "MAK IT" - Automated deep fryer module developement.

Latvijas pārtikas kompetences centrs

SIA "Orkla Confectionery & Snacks Latvija" - Development of healthier snack products with responsibly sourced raw materials / AS "SISTĒMU INOVĀCIJAS" - Development of a technology for extraction of fatty acids, lipids and fat-soluble vitamins from sea buckthorn seeds and berry pulp by supercritical CO2 extraction / SIA "Kronis" - Development of innovative products in soft packaging and their introduction into the production process / SIA "Milzu!" - Research into products recipes and production technologies for Milzu! new product launches / SIA "Gaļas pārstrādes uzņēmums Nākotne", Latvijas Lauksaimniecības universitāte - -Diversifying and developing the products of the Gaļas pārstrādes uzņēmums Nākotne. / Latvijas Lauksaimniecības universitāte -SIA "Lat Eko Food" - Development of a new, innovative and high added value product group in the company "Lat Eko Food" / SIA "Zippy Vision" - Development of a computer vision and data science based quality control and management solution for the food industry / SIA "Ādažu desu darbnīca" - Development of production technology for cold smoked sausages and cold smoked beef in the company "Ādažu desu darbnīca" / SIA "Nature Foods" - Development of new, innovative products in the company "Nature Foods" / SIA "Armiks" - Development and production of a new mobile milking machine equipped with a mastometer sensor and milk flow meters / AS "Rīgas piena kombināts" - Development of ice cream and sour - milk products / SIA "Lat Eko Food" - Innovative, nutritious foods for seniors / AS "Balticovo" - Development and adaptation of the solution for recording poultry flocks and egg production / SIA "Rāmkalni Nordeco" -, SIA "Peruza" - Collaborative project for the development of a new quince and rhubarb processing technology and prototype equipment between SIA Rāmkalni Nordeco and SIA Peruza / SIA "CELLARTE" - Extraction of the bioflavonoid apigenin from medicinal chamomile (Matricaria recutita) for the development of a functional food / SIA "Karavela" - Development of a new group of canned fish products from Atlantic mackerel (Scomber scombrus) fillets for the Norwegian market / SIA "Pharmeko Lettland" - Research and development of an efficient technology for extraction of antioxidant raw material from Latvian berries at SIA "Pharmeko Lettland" / SIA "Felici" - Development of new Graci products - preventive foods for health purposes to prevent "diseases of civilisation" / AS "LIDO" - System "Cashier's Assistant" / SIA "Kronis" - Measures to improve food safety for export / SIA "Roboeatz", SIA "MAK IT" - Robotic food preparation machine recipe development / SIA "Vplab" - Development and production of innovative functional foods enriched with collagen or curcumin / SIA "Milzu!" - Microbial processing and scale-up studies for biopolymer production / SIA "Armiks" – Adaptation of equipment measuring mastitis, milk flow and temperature to conventional milking equipment / AS "Rīgas piena kombināts" - Development of new ice creams and fermented milk products / SIA "Milzu!" - Research into product recipes and production technologies MILZU! for product introduction in the beverages and creams segment / SIA "Orkla Foods Latvija" - Reducing health and environmental risks in the development of food, sauces, juices, nectars and other beverage products /
SIA "Orkla Latvija" - Reducing the health determinants in the development of healthier flour and chip snack products / SIA "Lat Eko Food" - Research on the production heat treatment process, technology development and packaging conformity studies for products with animal raw materials/ SIA "Felici" - Development of Graci savoury, quick-cooking meals, integrating cooked fish products and legumes to provide the full amino acid spectrum of protein in vegan, vegetarian and pescatarian diets / SIA "Cannelle Bakery" - Development of a dairy substitution technology for use in the Cannelle Bakery products and shelf-life extension after refrigeration / SIA "Rāmkalni Nordeco", SIA "Peruza" - Development of a dairy substitution technology for use in Cannelle Bakery products and shelf-life extension after refrigeration / SIA "Gaļas pārstrādes uzņēmums Nākotne" - Development of new and innovative products to broaden product ranges and boost exportability in the company "Gaļas pārstrādes uzņēmums Nākotne" / SIA "Pharmeko Lettland" - Investigation of production technologies for antioxidant extracts from elderberry berries, juices and juice concentrates / SIA "Felici" - Stabilisation of vitamin C to provide the recommended daily intake and development of a usage guideline for a functional Graci pro-collagen muesli.

Viedo materiālu un tehnoloģiju kompetences centra

Alternative Plants SIA -Scaling of biotechnological production of plant cell biomass derived ingredients and substantiation of their biological activity / Biolat SIA - REGULATION OF AGING PROCESSES WITH PHYTOPHARMACY BIOACTIVE SUBSTANCES, AS WELL AS THE DEVELOPMENT AND RESEARCH OF NEW SENOLITHIC PRODUCTS IN GERANTOLOGY / Biosan SIA - Research and development of a multi-angle nephelometric detector / ChromSword SIA - Study of chromatographic retention behaviour of widely used API's (active pharmaceutical ingredients). / GroGlass SIA - Research on functional thin film deposition in chemical and vacuum coating processes - Phase 1 / GroGlass SIA - Research on functional thin film deposition in chemical and vacuum coating processes - Phase 2 / MADARA Cosmetics AS - Research of effective herbal and organic ingredients for the development of new decorative cosmetic products and understanding of production processes, research on plant-based plastic packaging / Dzelzsbetons MB SIA - Development of a new permanent moulding system for precast concrete elements / Dzelzsbetons MB SIA - Development of high-performance concrete and study of properties for precast concrete composite beams / SISTĒMU INOVĀCIJAS SIA - Development and adaptation of a large scale cell in vitro propagation bioreactor system / TENAX PANEL SIA - Polyurethane (PUR) and polyisocyanurate (PIR) thermal insulation products from optimised raw material compositions for improving the energy efficiency of buildings - Part 2. Functional fillers containing polyol compositions / TENAX PANEL SIA - High-strength insulation panels with polyurethane (PUR) and polyisocyanurate (PIR) thermal insulation layer / Tenapors SIA - Expanded polystyrene (EPS) products from construction and packaging waste / Troja SIA - Sound-absorbing plywood with a polyolefin-salt composite layer and its coatings of recycled polymer-wood composite / Kinetics Nail Systems SIA - Polymer microbead-filled UV-curable composite coatings /

Kinetics Nail Systems SIA - Improving the properties of pigmented coatings using different photoinitiators and different pigment types; and ensuring reproducibility of production using spectroscopic techniques." / Primekss SIA - Development of an innovative, cost-effective and watertight concrete basement structure for multi-storey residential buildings / Primekss SIA - Development of a new type of concrete anchor for thin fibre concrete structures / Tenachem SIA - Studies of oxidative and polycondensation reactions in two component insulated glass sealing systems with optimized raw material compositions / Biotechnomica SIA - Development of a personal automated dosing station for laboratories / Biosan AS - Development of a personal automated dosing station for laboratories / Biotehniskais centrs, AS - Investigation of bioreactor mass exchange conditions to increase the efficiency of fermentation processes / Pro Ceva, SIA - Integration of lactoferrin and lactoperoxidase isolation from primary milk in robotic milking machines / MADARA Cosmetics AS - Research of herbal and organic ingredient properties for the development of sun protection products. / Baltic3D.eu SIA - Development of 3D printable aircraft interior parts that meet EASA safety standards / Dinex Latvia, SIA - Development of a more efficient and compact thermal insulation coating (technology) for commercial diesel and gas engine exhaust systems / Vianova SIA - Development of production process of high-modulus asphalt concrete reinforced with glass fiber / Kinetics Nail Systems SIA - Optimisation of pigmented and pure UV-curable nail coatings formulations to reduce skin irritation risks: elimination of the oxygen oxidation layer and reduction of the maximum amount of monomer in the composite systems. / SISTĒMU INOVĀCIJAS AS - Development of a lactate optical sensor. / Polylabs SIA - Recycling of low-value plastic waste to produce more environmentally friendly polyurethane using ECO-POL technology / Labrains SIA - Development of high-quality cosmetic products of natural origin for dermatitis affected skin using innovative preservation systems / Politech SIA - Development of new production technology and new product - flexographic cleaner formulated on renewable and biodegradable materials / Groglass SIA - Research on the powder application materials during coated glass storage and transportation. / Kinetic Nail Systems SIA - Development of new products and production technology for a functional skin care line for the body.

Farmācijas, biomedicīnas un medicīnas tehnoloģiju kompetences centrs

Grindeks AS - Bioavailability studies / Grindeks AS - Development of new methods for the production of generic active pharmaceutical ingredients and wastewater treatment studiesactive pharmaceutical ingredients and wastewater treatment studies / MADARA Cosmetics AS - Composition and production technology development for natural functional cosmetics products / MADARA Cosmetics AS - Development of new and improved vegan cosmetics and production technology development / Olainfarm AS - Pre-clinical and Clinical Trials for medical products / Pharmidea SIA - Development of sterile liquid dosage form technology for manufacturing of dexmedetomidine injections in Grade C cleanrooms / Pharmidea SIA - Studies on sterile liquid dosage form technology development for manufacturing of levosimendan injectables and pilot batch development / RĪGAS FARMACEITISKĀ FABRIKA, AS - Research on herbal drug extracts for the development of new products in the categories of food supplements and medical devices / RĪGAS FARMACEITISKĀ FABRIKA, AS - Development of a laboratory and prototype series of an immunity syrup for paediatric patients and a laboratory and prototype series of a tonic body oil / Faneks SIA - Multi-analyte, unified analytical technology development studies for the characterisation of herbal raw materials and products / LabochemLV SIA - Multi-analyte, unified analytical technology development studies for characterisation of herbal raw materials and products / Conelum SIA - EloVISION & EloKIT TBC-Liquid / Apply SIA - EloVISION & EloKIT TBC-Liquid / Pharmidea SIA - Development of technology required to ensure meet the Data Integrity requirements of the pharmaceutical visual inspection processrequirements of the pharmaceutical visual inspection process / Zippy Vision SIA - Development of technology to support the Data Integrity requirements of the Pharmaceutical Visual Inspection process / MADARA Cosmetics AS - Development of new cosmetic products with vitamin C as well as production technology development / Grindeks AS - Development of a new method for the production of a generic active pharmaceutical ingredient and technology validation for the treatment of type 2 diabetes / Pharmidea SIA - Studies on technology development of long-acting, locally applicable, Ca++ salts based injectable dosage form, for manufacturing of anti-cancer immunological agent (TLR9 agonist) agatolimod / MADARA Cosmetics AS - Development of new cosmetic products with interferon activity modulating effects and antibacterial effects as well as production technology development / RĪGAS FARMACEITISKĀ FABRIKA, AS - Development of a new cosmetic line with 5 products / Access AV SIA un Apply SIA - Radiological evaluation of native computed tomography images for patients with acute ischemic stroke in the anterior cerebral circulation - technological method development and integration for the evaluation process of images using a neural network / Peruza SIA - Research and prototype creation of the required functionality of a home care bed for bedridden patients / Olainfarm AS - Clinical trials for the registration of medicinal products / Olainfarm AS - Studies of active pharmaceutical ingredients / Pharmidea SIA - Studies on development of production technology for Atosiban sterile liquid injectable dosage form and development of pilot batches for the China market / Grindeks AS - Development of new topical pharmaceutical products / Grindeks AS - Development of new finished dosage forms of immunosuppressants group medicines / Grindeks AS - Pharmacokinetic studies of generic medicines / Pharmidea SIA - Studies on the development of production technology for sterile injectable dosage form of Anidulafungin and development of pilot batches for the Eurasian Economic Union market / Grindeks AS - Pharmacokinetic studies of medicines of the group of nervous system diseases.

Informācijas un komunikācijas tehnoloģiju kompetences centrs

Sabiedrība ar ierobežotu atbildību "ZZ Dats" - Analytical data warehouse design framework for e-government / AS "RIX Technologies" - Intelligent assistant for support of users / Sabiedrība ar ierobežotu atbildību "Mobilly" - Research and prototyping of the development of a financial analysis tool based on a document management system / Sabiedrība ar ierobežotu atbildību "Baltijas Datoru Akadēmija" - Development of a modular Personnel Management Solution (PMS) based on smart technologies / SIA "Datorzinību centrs" - Creating a research support model to improve the data collection process of medical research / SIA "DIVI grupa" - Concurrency analysis in business process models / SIA "DIVI grupa" - Use of business process models for full functionality testing of an information system / Sabiedrība ar ierobežotu atbildību "ABC software" - Detection of atypical behaviour using a semi-supervised training approach in an unbalanced classroom environment / SIA "Lursoft IT" - Creation of a prototype to ensure the fulfilment of the obligations of control services and financial regulators, as well as for the management of portfolios of private sector clients / AS "RIX Technologies" - Creation of an automated process model for classifying, indexing, and assigning documents / Sabiedrība ar ierobežotu atbildību "ABC software" - Analysis of the behavior of users of IT systems and improvement of the efficiency of implemented business processes using AI/ML / SIA "WeAreDots" - Multi-object detection and tracking for vehicle traffic monitoring: combining 3D-LiDAR and camera data / SIA "DATI Group" - Resource-efficient optimization solutions for computing tasks / Sabiedrība ar ierobežotu atbildību "ABC software" - Creation of a method of constructing a unified behavior model of users of specialized IT systems in the field of engineering design using AI/ML algorithms. / SIA "DIVI grupa" - Application of artificial intelligence for optimization of e-mobility solutions / AS "RIX Technologies" - Creating a document representation model for ensuring high accuracy of automated document classification / SIA "Datorzinību centrs" - Improving production quality aspects and profits of poultry enterprises, because of the application of precision poultry farming methods based on data analysis and forecasting / SIA "Lursoft IT" - Comparative analysis of regulatory acts and financial data of companies from different countries for forecasting business results / SIA "WeAreDots" - A long-term re-identification (Re-ID) solution for improving the quality of education / Sabiedrība ar ierobežotu atbildību "TILDE" - Adaptive multimodal neural network-based machine translation / Sabiedrība ar ierobežotu atbildību "TILDE" - Neural network machine learning methods for automating the creation of dialogue scenarios of virtual assistants / Sabiedrība ar ierobežotu atbildību "TILDE" - Automated voice communication solutions for the healthcare industry / Sabiedrība ar ierobežotu atbildību "TILDE" - Automated creation of multilingual subtitles.

Viedo inženiersistēmu, transporta un enerģētikas kompetences centrs

Armgate SIA - Development of a modular type newborn incubator/ Baltic Scientific Instruments SIA - Development of a free-release radioactive pollution monitor for nuclear power companies / Conelum Apply SIA, Apply SIAConelum Apply SIA, Apply SIA – EloVISION / D un D centrs SIA - Aircraft perspective vibration diagnostic technology complex demonstrator / Earth Revival SIA - Innovative technology for rapid processing of sewage sludge, obtaining biological fertilizer / Energofirma JAUDA AS - Solution of transformer cooling problems in compact transformer substations / Lafivents SIA - Research and experimental development of an indoor air biofilter system based on the principle of bioremediation / RĪGAS ELEKTROMAŠĪNBŪVES RŪPNĪCA AS - Design and development of metro train traction drive system with supercapacitor accumulators / SCM Latvia SIA - Development and implementation of an innovative, high-efficiency heating system in production using the burning of biomass and reusable materials to obtain thermal energy / Termolat SIA - Capacitance sensors for roof monitoring / UAVFactory SIA - Development of a vertical take-off and landing aircraft /
Elgoo Tech SIA - Photocatalytic process - hydrogen production and surface coatings. / G.Supply SIA - Photocatalytic process - hydrogen production and surface coatings. / Baltic Scientific Instruments SIA - Research and development of an automated spectrometer for radioactive materials in which sample change is performed by a robot / Lafivents SIA - Energy demand balancing by implementing a high-level management system for building management, energy storage and energy exchange based on energy market dynamics and manipulation of short-term parameters in climate maintenance systems. / Lighthouse ESCO SIA - Prototype of control of critical parameters of lamps / UAVFactory SIA - Development of vertical take-off and landing aircraft / SCM Latvia SIA - Research and production of resource efficient noise barriers / Earth Revival Technologies SIA - Development of an adjustable hermetic system, safe for people and the environment, intended for the transportation of biohazardous materials with high viscosity. / RĪGAS ELEKTROMAŠĪNBŪVES RŪPNĪCA AS - Design and development of AC electric train traction converter / Lesla Latvia SIA - A study for the establishment of a shared infrastructure system for charging electric scooters.

Meža nozares kompetences centrs

Meža un koksnes produktu pētniecības un attīstības institūts - Special gratitude shall be expressed to State Fire and Rescue Service for support with data and useful recommendations. / Meža un koksnes produktu pētniecības un attīstības institūts - Detection of Knots in Oak Wood Planks / LATVIJAS FINIERIS JSC - Production of high-purity betulin from birch processing by-products / LATVIJAS FINIERIS JSC - New plywood binders and composites / LATVIJAS FINIERIS JSC - Modification of the impregnation mixture recipe for laminated plywood with different surface structures / EKJU Ltd - In-depth study of the conditions of the linseed paint application system and implementation of the experimental equipment system in the Ltd "EKJU" /Koksnes plūsmas datu centrs Ltd - Group survey automation capabilities / VMF LATVIA Ltd - Investigation of automated surveying devices and bark equations in harvester software / LSFRI Silava - Development of a biological preparation to reduce losses caused by root rot in conifer stands / LSFRI Silava - Technology for the effective transfer of genetic benefit in seedling production and forestry / LSFRI Silava - Modeling tools and recommendations development for the reduction of greenhouse gas (GHG) emissions in forest stands on fertile organic soils / Pavasars Wood Constructions Ltd - Protective decorative thermomechanical treatment of wood cladding materials / Kokapstrāde 98 Ltd - Glued window blanks of fast-growing tree species / SANDIS UN PARTNERI Ltd - Testing of alternative logging solutions for the development of non-standard fellings / QBit Ltd; TOPO DATI Ltd - Assessment of species detection possibilities using Sentinel satellite data (under Latvian conditions) / Funduss Ltd - Recycling of glued wood structural residues into useful large-scale wood construction materials / EKJU Ltd - Study of the conditions of the system for applying decorative finishing materials and development of the technological process of the experimental system/ LATVIJAS FINIERIS,AS - Development of specific and individualized coatings for wooden boards / Kontekss Ltd - Development of an optimisation programme for scanning technologies and sawing for obtaining timber growth useful for log sawing / LSFRI Silava - Heterobasidionlimiting the resulting root rot in spruce groves, forests with peat soils - possibilities of using chemical protection agents / LSFRI Silava - Technology for early diagnosis of the genetic determination part of persistence-related features for common spruce / LSFRI Silava - Modeling tools for characterizing the influence of groundwater level and other factors on greenhouse gas emissions from the surface of tree trunks in bogs and bogs / Pavasars Windows, Ltd; Meža un koksnes produktu pētniecības un attīstības institūts - Research and experimental development of prototypes of wood windows of the new type / Pavasars Housing Construction Ltd; Meža un koksnes produktu pētniecības un attīstības institūts - Development of prototypes of prefabricated specialised wooden building modules /

Ministry of Economics
Republic of Latvia

DEVELOPMENT OF NEW PRODUCTS AND TECHNOLOGIES WITHIN COMPETENCE CENTRES