

# ICT INDUSTRY IN LATVIA

Investment and Development Agency of Latvia

www.investinlatvia.org

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# Reasons to Choose Latvia







### Superior Connectivity

Quick and easy access from Riga to the whole Europe

#### RIX airport

airBaltic most punctual airline in Europe

100+ direct flights

20 min to the city centre

1,5-hour flight to Berlin, Copenhagen, Kyiv, Minsk, Moscow, Oslo, Prague, Stockholm, Warsaw

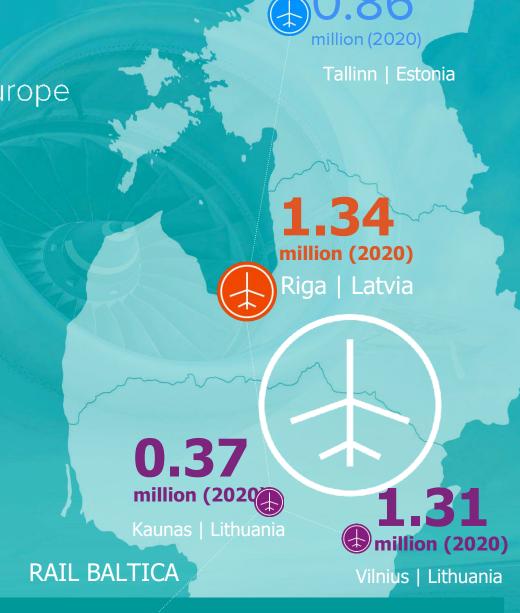
2,5-hour flight to Amsterdam, Brussels, Frankfurt, London, Milan, Munich, Paris, Stuttgart, Zurich

#### Rail Baltica

249 km/h speed for passenger trains

5-hour trip Riga—Warsaw

by 2026 - the railway connection Tallinn-Riga-Kaunas





#### Reasons to Choose Latvia



equal treatment of foreign investors and direct dialogue with government institutions



superior connectivity in the Baltics with 100+ direct flights from RIX, and high-speed railway (Rail Baltica by 2026)



**zero** corporate income tax on reinvested profit



40+ incentives for innovations and smart business development



easy and quick company registration in 1-3 days, access to digital government services with eID and eSignature

#2

among OECD countries in the International Tax
Competitiveness Index



### Inclusive, Innovative, Digital

Latvia is a diverse, digitally advanced and cost-efficient country in the EU

#1

in the EU with the largest share of women in management – 56% (Eurostat, 2019)

#1

as the most startup-friendly country in the world (Index Ventures, 2021)

#4

in the EU in eGovernment Benchmark 2020 (EC, 2020)

#19

in the world in Doing Business ranking (The World Bank, 2020) #1

in the Baltics in innovations (Bloomberg Innovation Index 2021)

elD

digital ID for signing documents and remote access to 120+ government services



## 12 Key Industries

Development of industries and ecosystems with high value-added



















































#### Five Smart Industries & Value-chains

Development of industries and ecosystems with high value-added





### The Ecosystem Approach

Development of industries and ecosystems with high value-added

Diverse ecosystems and strong collaboration: INDUSTRY + ACADEMIA + POLICY MAKERS

Since 2014 Smart Specialization Strategy (RIS3) for Latvia is being developed – a strategy of economic transformation towards higher added value and more efficient use of resources.

5 strategic RIS3 areas have been set and ICT is one of them, playing an important horizontal value:

- 1. knowledge intensive bioeconomy;
- 2. biomedicine, medical technologies, biopharmacy and biotechnologies;
- 3. smart materials, technologies and engineering systems;
- 4. smart Energy;
- 5. information and communication technologies.



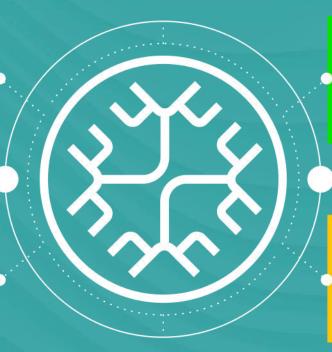


## The Ecosystem Approach

Launching the **ecosystem approach** — a dynamic process of identifying prospective, knowledge-intensive value chains and mapping out the ecosystems. There are **3 ecosystems** so far, and more to come.

Identifying prospective, knowledgeintensive value chains & mapping out the ecosystems

Benchmarking ecosystem results, improving the approach, finetuning processes (process development with the OECD)



Bringing together ecosystem's expertise, defining common goals & challenges

Proactively facilitate reach of these goals with the available support incentives



# Incentives and Support Mechanisms

Local companies have access to a broad range of 40+ incentives



IDEA DEVELOPMENT
(4)

The Idea Cup
Business Incubators
Accelerators
Events and support
of municipalities



BUSINESS AND INNOVATIONS (24)

Startup benefits
Innovation vouchers
Cluster programmes
Financing programmes
Norwegian grants
Employee training



EXPORT DEVELOPMENT (7)

Export promotion activities Cluster programmes Export credit guarantees LIAA network suppor



SPECIAL ECONOMIC ZONES (5)

80% CIT and RE tax rebates in five special economic zones in Latvia



ADMINISTRATIVE FAST-TRACK

Twice faster procedures for high priority FDI projects



#### Incentives for Innovation and Growth



EMPLOYEE TRAINING AND
KNOWLEDGE TRANSFER
Up to 200,000 EUR per company
50-60% intensity



PROMOTION OF INTERNATIONAL COMPETITIVENESS

Up to 40,000 EUR per year

50% intensity



INCENTIVES BY INDUSTRY ASSOCIATIONS

Various projects and training programmes co-financed by the EU



**INNOVATION VOUCHERS** 

Up to 25,000 EUR for designing prototyping, testing etc. 45-100% intensity



STARTUP BENEFITS

Up to 200,000 EUR for employee salary co-financing, or tax benefits. Startup visa for 5 founders and family



LOANS AND GRANTS

Various programmes for business and individuals by state financial institution "Altum"



### Green corridor to enable new investment

Benefits: twice shorter administrative procedures including territorial planning, construction permits, foreign workforce relocation.

#### CRITERIA: 3 OUT OF 4 FOR A POSITIVE EVALUATION

1.

2.

3.

4.

5 M € investment in 3 years

**50-75** jobs

Exports worth over 3 M € in 3 years

Over 250 000 € R&D or employee development





#### Diverse Talent Pool

Excellent balance of skills, work ethics, productivity and returns



#### **EDUCATED**

79 000 student pool

20 000 STEM students

the highest foreign student share in the Baltics (13%)



#### MULTILINGUAL

95% speaks at least 1 foreign language

54% speaks at least 2 foreign languages (English and Russian)



#### **CULTURE FIT**

150 nationalities, and 38% of the population is represented by minorities

26% of FDI from Nordics



#### **HIGH ROI**

41 000 EUR of annual average added value per ICT specialist

competitive operational and labor costs



# ICT Industry and Community



# Growing Impact of the ICT Industry

Continues development and growth of export-oriented industry

37k ICT specialists (4% of all labour force)

4,1 billion EUR turnover (+6%)

1,4 billion EUR value-added (+11% and 5% of total)

427 million EUR profit (+8%)

49% is exported (1,2 bEUR)

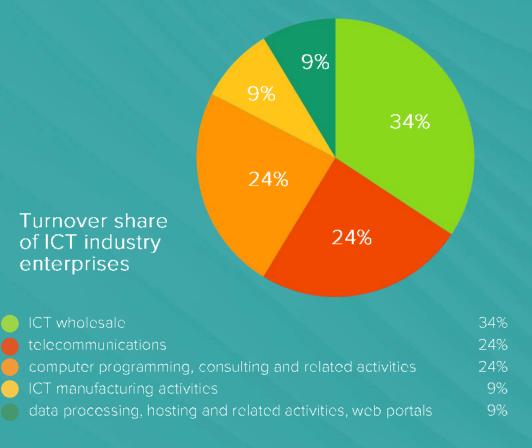
4,6% share of ICT value-added in GDP (+7%)

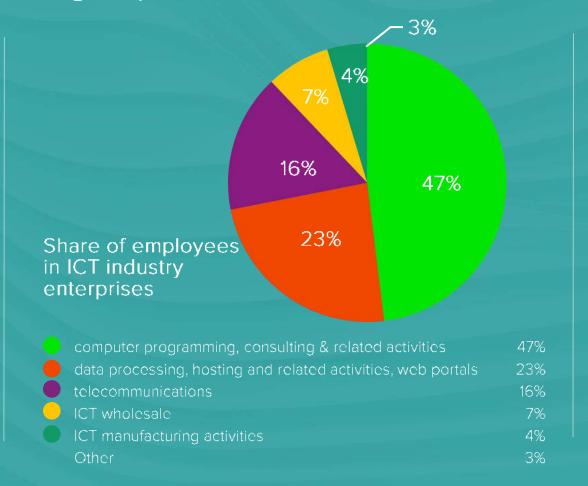
Source: Central Statistical Bureau of Latvia (2020)



### Breakdown of the ICT Industry

IT Services and ICT wholesale have the largest portion of the market





Source: Central Statistical Bureau of Latvia (data for 2019)



## International Rankings and Infrastructure

Latvia provides world-class ICT infrastructure and secures high rankings in ICT

94% 90%

is the overall fixed broadband coverage, and 69% are fibre connections (OECD & EC, 2019)

Internet access in Latvia in 2020

#3

in the world in mobile data usage (OECD, 2019)

#4

(DESI, 2020)

37%

of ICT specialists are females, twice higher than in the (Eurostat, 2019)

1st

5G military test site in Europe



# Promising Tech Segments



5G and loT

with local worldclass hardware and software developers LMT, SAF, MikroTik and others.



**Smart City** 

Riga provides three test zones for smart city pilot project development and testing in cooperation with leading universities.



UAV and Aerospace Technologies

Latvia is the member of the European space agency since 2020.



Biotech and medtech

Latvia is the leader in Life Sciences among Baltic



IT and Business Services

Riga is the most dynamically developing city in the CEE for business service centres.



Fintech

Both the Bank of Latvia and The Financial and Capital Market Commission are welcoming fintech innovations



## ICT Industry in the Spotlight

Government dedication to further digital transformation



"Latvia has already strong foundations in the digital infrastructure, which is one of the main pillars for our sustainable economic growth. We will continue our work with digital transformation, as the digital ecosystem will enhance our already great egovernance and business environment for creation, implementation and export of innovative ICT solutions in the upcoming years"

- Jānis Vitenbergs,

Minister, The Ministry of Economics



"COVID-19 pandemic has revealed not only new opportunities for ICT companies but also the urgency for even broader and deeper digitalization of all industries"

Kaspars Rožkalns,

Director of the Investment and Development Agency of Latvia

### Notable Newcomers and Expansions

Largest FDI projects in ICT and Business Services in 2019 and 2020

2019 2020 PRIME **FORCE** Newcomers QSC. norwegian AIRO Catering Services Latvija +310 workplaces +850 workplaces CABOT > VISMA CABOT SEB Expansions +140 workplaces +175 workplaces



### Key Players in IT Services

#### Leading IT service & solution providers in Latvia

acce	enture	World's leading provider of technology and technology consulting services.  Number of employees: 1700  www.accenture.com	DYNATECH	Develops custom and innovative IT solutions for complex business challenges that have companies worldwide.  Number of employees: 240  www.dynatech.lv
AT	EA	Northern Europe's market leader in IT infrastructure that delivers world class services and software products. Number of employees: 400 www.atea.com	⊚ emergn	An ICT consulting company that provides a range of various IT solution development and implementation across broad range of industries.  www.emergn.com
Cog	ınizant	The first Cognizant delivery network in Europe, focused on Telecom specifically and IT in general.  Number of employees: 250  www.cognizant.com	Evolution Gaming	World's leading B2B provider of video-streamed Live Dealer gaming. Number of employees: 3500 www.evolution.com
	AUGIEM ROUP	Latvian IT company with 11 successful brands that use latest technologies in different industries. Number of employees: 700 www.draugiemgroup.com	tieto <i>Evry</i>	A leading digital services and software company with local presence and global capabilities. Number of employees: 970 www.tietoevry.com
		European-oriented IT solutions and service provider that is		A leading business solution provider in Northern Europe,



European-oriented IT solutions and service provider that is delivering enterprise solutions for top global clients.

Number of employees: 480

www.ctco.lv



A leading business solution provider in Northern Europe, focusing on business optimisation and management tools for SME's and enterprise companies.

Number of employees: 230

www.visma.com



## Expanding Business Service Centres

Untapped opportunities and cooperation between ICT and business services

50+ business services centres with 15 500+ employed and growing

10% annual hire growth rate of the industry

Core functions: IT (58%), finance (50%), business support (38%), logistics (35%)

Main markets: Nordic countries (81%), CEE (62%), Western Europe (58%)



































#### 5G and IoT Overview

Latvia provides a testbed for 5G, smart city, and IoT pilot projects

Local innovation leaders in 5G & loT solution development testing and implementation. LTE-M and NB-loT connectivity networks are available

First mobile network for drones in Europe, enabling autonomous BVLOS flights

5G & IoT use-cases in transportation, infrastructure, military & defence, agriculture & forestry, environmental monitoring

International pilot projects – 5G-Routes, COMP4DRONES, iMUGS, Sparta & others

#### VEFRESH

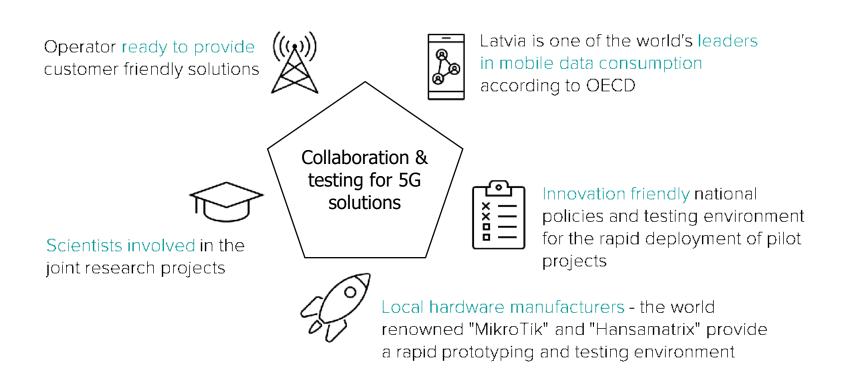
Smart innovation district in tech area of Riga www.vefresh.com



World's leading 5G event takes place in Riga www.5gtechritory.com

### Profound Cooperation in 5G and IoT

Pilot projects and tests involve academia, private and public sector





High speed research data network launched to help scientists battle cancer & combat the COVID-19 crisis



The first 5G military test site in Europe has been unveiled in Ādaži, Latvia.

# Use-cases and Application













- Sensors for road surface temperature measurement
- 2. Deformation or crash sensor
- 3. Sewage drain monitoring, maintenance
- 4. Air and noise monitoring
- 5. LMT and MikroTik 5G laboratory
- 6. Mobile Network-Enabled crossborder BVLOS drone flights



### Key Players in Network and IoT

Strong international & local connectivity providers & innovators



Third largest mobile service provider in Latvia. Number of employees: 480

www.bite.lv



A microwave data transmission equipment designer, producer and distributor.

Number of employees: 200

www.saftchnika.com



One of the largest carrier-neutral data centre operators in Northern Europe.

Number of employees: 70

www.deac.eu/en/



Mobile network service provider with the largest customer base in Latvia. Also has shared service centre and IoT division.

Number of employees: 650

www.tele2.lv



A mobile telecommunications operator with Innovation branch that is dedicated to 5G and IoT solutions and technologies. Number of employees: 590

www.innovations.lmt.lv



Latvian internet service provider, telecommunications, technology and entertainment company with 12 brands providing various ICT services and solutions.

Number of employees: 1300

www.tet.lv



Was founded in 1996 to develop routers and wireless ISP systems and now provides hardware and software for Internet connectivity in most of the countries around the world.

Number of employees: 250

www.mikrotik.com



Next-generation communications technology company, that creates technology platforms for Businesses, Smart Homes, and Internet Service Providers.

Number of employees: 80

www.ui.com



### Business Ready Infrastructure

Professional service providers with certified data centres

TIER III design and facility certified data centres with international network.

VISA / Mastercard PCI DSS Level 1 certificate for Internet commerce, which guarantees and controls electronic transactions online.

Certified key service providers with global partnerships:























#### Fintech Overview

Innovative ecosystem and well- established infrastructure for fintech development

91 fintechs in 2020 (+21%)

88% are planning to expand

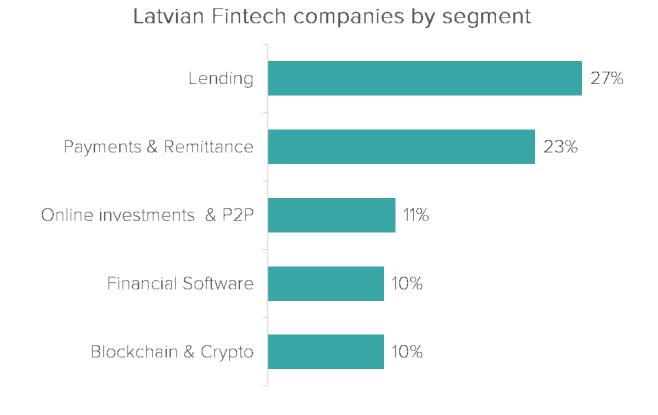
#### Main markets

Europe (88%), North America (6%), Asia Pacific (6%)

#### Developed infrastructure

Electronic Clearing System (EKS), proxy registry "Instant Links", virtual platform "ZibLab++"

Source: Latvian Fintech Report by Swedbank (2020)





KNOWLEDGEPRICE.COM

FinanceFlow

MINFOTECH

LOVAT

FINTELLIGENCE

Flipful



& Identity

**Analytics** 

& Big Data

Lending

SummarizeBot

& Capsulink

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Lahdes

NORDIGEN





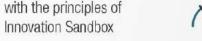
#### INNOVATION **SANDBOX: ACTION STEPS**

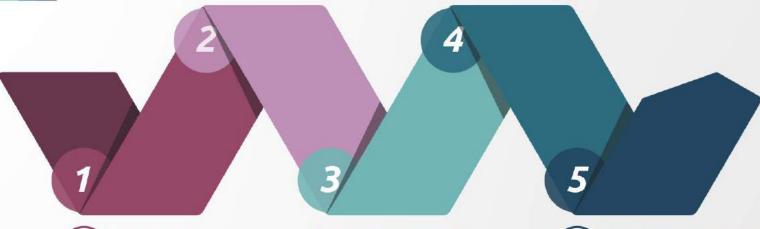
#### **EVALUATION OF** APPLICATION:

FCMC evaluates the application and gives an opinion on the compliance of applicant's innovative financial service with the principles of

#### TESTING:

(3 to 6 months, possibility to extend to 12 months) the applicant provides regular reports on the implementation of the plan, risk assessment, information on the development of the required (missing) measures and testing results





Source: Financial and Capital Market Commission

**APPLICANT'S** 

APPLICATION:

innovative services

information on the applicant

and a detailed description of



#### **DEVELOPMENT OF** TEST PLAN:

FCMC in cooperation with the applicant draws up a test plan and sets the period of testing



#### ASSESSMENT OF THE TEST AND **FURTHER ACTIONS:**

- The applicant submits testing results and information on the achievement of the target (risk assessment, procedures etc.);
- If the test is successful, FCMC removes operational restrictions (if any), and the applicant is entitled to provide the chosen service fully in accordance with the regulatory enactments.



## Key Players in Drone Technologies

Emerging 5G network facilitates new drone technology development



Academic and professional aviation center (TSI/APAC) is the first training provider in Latvia for both recreational and professional remote pilots.



Drone Plan provides a solution for accurate mapping and technical surveys in construction, oil and gas, utilities, mining, agriculture and transport.

www.apac.lv



Heavy lift drones for industrial and agricultural applications (e.g. crop spraying).





FIXAR drones are used for aerial photo-videography, land surveying, mapping, monitoring and inspections, last-mile delivery, and agricultural work.

www.fixar.pro

www.droneplan.eu



Develops and manufactures Unmanned Aerial Systems (UAS) for professional use cases in defense, search & rescue, industry. www.atlasdynamics.eu



SPH Engineering offers unmanned systems integration services and software development. UgCS is a unified survey mission planner for UAV platforms.

www.sph-engineering.com



Drone Racing Latvia is an organization that brings together FPV racing drone pilots to promote new sport in Latvia. www.droneracinglatvia.com



One of the world's leading developers of long endurance unmanned aircraft and subsystems.

www.uavfactory.com



# Drone Development



Atlas Dynamics





**UAV** Factory



SPH Engineering

### Digital Game Development Overview

Rapid growth of turnover and profit since 2017

49+ digital game development companies

30+ games released in 2019

30,1 million EUR turnover

16,5 million EUR profit

65% of games are for mobile platforms

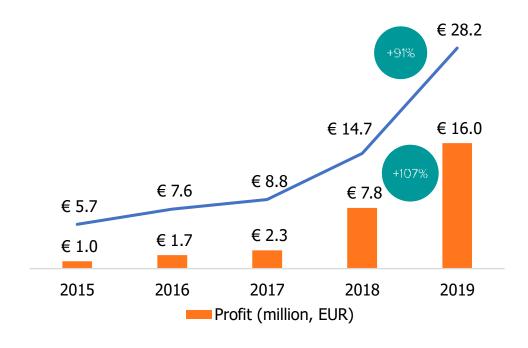


Latvian Game Developers Association with 90+ members and regular events.



Professional bachelor degree in computer game design & graphics at EKA University of Applied Sciences

Game Development Company Turnover and Profit in Latvia





# Key Players in Digital Game Development

Leading gamedev companies generate approximately 85% of industry turnover

#### Amber Games



An online game developer in the Baltic region, founded in 2006 in Riga. In 2008 Amber Games released online medieval strategy game 1100AD, the most recognized game of the company.

www.ambergames.com



#### FunGenerationLab

The gaming studio was founded in 2011 when mobile gaming was a new market and the dominant market segment was paid games. Launched 6 games since the foundation.

www.fungenerationlab.com



#### Beetroot Lab

Was founded in 2014 in Riga, and is specialising in the field of mobile game development for iOS and Android platforms. Has developed more than 100 games that have 5+ million appusers.

www.beetrootlab.com



#### Fufla

A small gamedev studio that develops mobile games. The most popular ones are Bacterial takeover, Word Battle and Puzzly Words.

www.bacterialtakeover.com



#### Estoty

The biggest hyper-casual games developer in the Baltic states with 1+ billion downloads and 200+ million active users across 40+ countries worldwide. Founded in 2012.

www.estoty.com



#### Game Insight

Game Insight was founded in 2009 and it is the world's leading innovator of mobile and social games, creating exceptional gameplay experiences for a wide range of audiences, from casual to hardcore.

www.game-insight.com



# Digital Games Developed in Latvia



Bacterial Takeover - Idle Clicker
Developer: Fufla
11 million downloads
www.bacterialtakeover.com



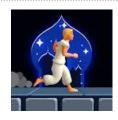
Johnny Trigger - Action Shooting Game Developer: Estoty (Saygames) 100k+ downloads www.estoty.com/games



Gods of Boom (Guns of Boom)
Developer: Game Insight
50+ million downloads
<a href="https://www.godsofboom.com">www.godsofboom.com</a>



Dystopia: Contest of Heroes
Developer: Beetroot Lab
100k+ downloads
www.dystopia.beetrootlab.com



Prince of Persia: Escape
Developer: Estoty (Ketchapp/Ubisoft)
5+ million downloads
www.ketchappgames.com/games/



GX Racing
Developer: FunGenerationLab
1+ million downloads
www.gxracing.com

# ICT Industry Testimonials

Local and foreign companies highly value business ethics & talent quality in Latvia



"Talents are the most precious asset in Latvia as we possess a powerful body of knowledge — we are reliable, industrious, speak several languages, generate new ideas, and create world-class products and services with high added value. The IT sector is one of the fastest-growing in Latvia's economy and the development of the industry is connected to the worldwide trend of digitalization"

- Maksims Jegorovs, Accenture Lead in Latvia



"Latvia is home to the world's most active mobile internet consumers, thanks to the super-efficient and advanced mobile network infrastructure we've built. As a mobile operator as well as an IT company and integrator, we are ready to help different industries tackle their challenges with mobile-enhanced technologies and embrace cross-border and cross-sectoral collaboration"

- Ingmārs Pūķis, VP and Member of the Board of LMT



# ICT Industry Testimonials

Foreign companies highly value business ethics & talent quality in Latvia



"Riga is central to a number of our industry-leading clients, and a strong source of IT and digital skills talent. It is a good location due to its proximity to Nordics and Central Europe, strong academic community, and the possibility to leverage association with European companies"

- Santosh Thomas, President, Global Growth Markets Cognizant

"Doing business in Latvia has made it possible for us to find strong developers with a strong sense of responsibility"

> - Johan Denning, Growth Manager Chess24



"Visma is very satisfied doing business in Latvia. Visma entered the market in 2014 and has since then grown the business in the country. Latvians are hard working, reliable, they adapt easily to different cultures and deliver all tasks in high quality"

- Therese Sletten, Director Strategic Initiatives, Visma Group

"Latvia is place where bright minds and hardworking culture form a rare set of employee qualities that contribute in achieving outstanding business results!"

- Arvīds Jēgers, Head of Shared Service Centre







# ICT Community in Latvia

Strengthening and supporting the industry and existing key players



#### Latvian IT Cluster

Latvian IT Cluster and Digital Innovation Centre is an IT community based organization initiating and leading cooperation of Latvian IT industry, educational institutions, public sector, business and industry associations. It supports Latvian IT companies operating in ICT business sector and acts as a guide for other business sectors' SMEs to promote the digital development of Latvia.

www.itbaltic.com



#### Latvian Electrical Engineering And Electronics Industry Association (LETERA)

Unites companies, research and educational institutions operating in the fields of electrical engineering, electronics, optical equipment, ICT, defense equipment, aviation and space technology.

www.letera.lv



#### Latvian ICT Association (LIKTA)

Information and Communication Technology association unites leading industry companies and organizations, as well as ICT professionals.

<u>www.likta.lv</u>



#### Microsoft Innovation Centre

Strengthens the cooperation between ICT industry, science, NGOs and public sector, in the development of export capable IT solutions and digital transformation (in cooperation with the University of Latvia).

www.lumic.lu.lv/en

# ICT Community Testimonials

ICT community urges to seize the opportunity for growth and to strengthen cooperation between all stakeholders



"Latvian IT community has gone far beyond its traditional perception and is aiming to change the industry, transform and make the overall ecosystem stronger, more innovative and digital. We are making bridge between Latvian ICT business sector & other business sectors' ensuring that SMEs are aware of the digital opportunities, tools and products, thus facilitating the integration of innovation into everyday life & business"

Gatis Ošs.

Chairman of the Board of Latvian IT Cluster



"Digitalization and ICT is changing our everyday lives and creating new opportunities for both businesses and employees. There are over 37k specialists employed in ICT sector in Latvia. With more than 2b EUR ICT export value, Latvia is the leader amongst Baltic States"

- Andris Melnūdris,

Director of Latvian ICT Association (LIKTA)

# ICT Education and Innovation



## ICT Education and Innovation

Internationally recognized education to match the demand of the industry

97 higher education ICT programmes

20 000 STEM students (25% of all)

9 000 students in ICT related programmes

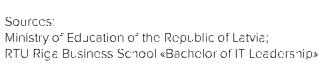
1 200 ICT graduates with the goal of 3 000



World-class ICT bachelor programme in cooperation with University at Buffalo and Bl Norwegian Business School.



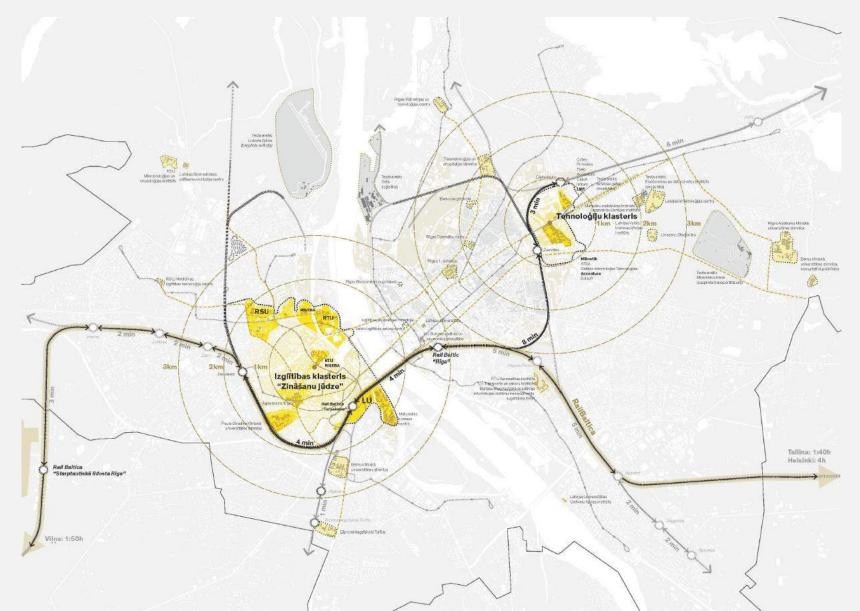
A public-private initiative for IT education promotion in Latvia that brings together top high schools, IT companies and other stakeholders. <a href="https://www.bits.education">www.bits.education</a>







# Knowledge mile & Technology cluster in Riga



# Evolving ICT Academic Education

Internationally recognized ICT programmes in higher education institutions



#### Riga Technical University & University of Latvia

Degree awarded: Bachelor of IT Leadership, Computer Science & Organization Technologies www.bitl.lv



#### Rezekne Academy of Technologies

Degree awarded: Programming Engineer & Professional Bachelor Degree in Information Technology www.rta.lv



#### Riga Technical University

Degree awarded: Bachelor Degree of Engineering Sciences in Computer Control and Computer Science.

www.international.rtu.lv



#### University of the West of England (UWE) & Transport and Telecommunication Institute (TSI)

Degree awarded: Bachelor of Computer Sciences (Double Degree) in Artificial Intelligence

<u>www.tsi.lv</u>



#### University of Latvia

Degree awarded: Bachelor of Natural Sciences in Computer Science.

www.lu.lv



#### Turība University

Degree awarded: Professional Bachelor's Degree in Computer Systems (Software engineer)

www.turiba.lv



#### Ventspils University of Applied Sciences

Degree awarded: Professional bachelor's degree in business management.

www.businessacademy.lv



#### Liepaja University

Degree awarded: Professional bachelor degree in Information Technology (Software Engineer)

www.liepu.lv



#### Latvia University of Life Sciences and Technologies

Degree awarded: Professional Bachelor in Information Technologies (Programming Engineer).

www.llu.lv



#### Vidzeme University of Applied Sciences

Degree awarded: Professional bachelor's degree in information technologies (UX/UI, VR/AR, AI/ML) www.va.lv



# Key Players in ICT R&D

#### Leading public universities and institutes with ICT focus



#### EDI – Institute of Electronics and Computer Science

Among the highest rated scientific institutions in Latvia specializing in Smart Embedded Cooperative Systems (SECS) in the fields of health, mobility, space, production, digital life, safety and security. EDI has invested several million curos in state-of-the-art equipment, which is used in joint collaboration with 300+ international EDI partners from both academia and industry. 300+ scientific and industrial partners world-wide.

https://www.edi.lv/en/



#### Riga Technical University

The only polytechnic university in Latvia and the largest university in the country. Its` Institute of Telecommunications has the only study programme in the Baltics that provides the high-quality education and prepares qualified professionals with extensive knowledge of next generation wireless communication systems, fibreoptic transmission systems, microwave and satellite communications and basic programming skills.

https://www.rtu.lv/en



#### University of Latvia

The University of Latvia is the national and leading higher education institution in Latvia. It's faculty of Computing study programmes are recognized by the Latvian employers and European education experts, having received the "Euro-Inf Quality Label". It offers specialization in computer science, information technology, software engineering, information systems, computer engineering and didactics of computer science.

https://www.lu.lv/en/

# Synergy of ICT Industry and Science

Joint research projects and partnerships













www.5g-routes.eu















#### COMP4DRONES

Particular focus of the project is safe software & hardware drone architectures.

Partners from Latvia - EDI, LMT, University of Latvia.

www.comp4drones.eu



















#### Integrated Modular Unmanned Ground System (iMUGS)

The project develops a modular and scalable architecture for hybrid manned-unmanned systems: aerial and ground platforms, command, control and communication equipment, sensors, payloads & algorithms. Latvian company LMT will be responsible communications technologies and equipping the autonomous unmanned ground vehicle with mobile technologies to ensure communications across multiple countries.















#### HumanE-Al-Net

The challenge is to develop robust, trustworthy Al systems that can 'understand' humans, adapt to complex real-world environments and interact appropriately in complex social settings. HumanE-Al-Net will lay the foundations for designing the principles for a new science that will make Al based on European values & closer to Europeans.

Partner from Latvia - Tilde

www.humane-ai.eu



# Successful partnerships with RTU

An example of successful ICT projects with Riga Technical University



#### Accenture and RTU - Virtual twin

An interdisciplinary team of students in cooperation with the information technology company Accenture and Riga Technical University (RTU) will develop a virtual twin for scientists at the Faculty of Electronics and Telecommunications. Students and faculty work together to develop prototypes and ideas for solutions in the fields of bioenergy, wastewater treatment, low-energy buildings, space, sensor technology and robotics.



#### AFFOC Solutions and RTU – New information transmission technology

Scientists from the Institute of Telecommunications and their partners have created an innovation in ICT that will allow information to be transmitted faster, more securely and further. A whispering gallery fashion microresonator is a glass bead fused to an optical fibre, where the generation of a frequency comb is initiated. Each carrier signal generated by the frequency comb allows replacing a single laser light source, creating a low-cost, energy-efficient solution for data transmission.



#### LMT and RTU – Industrial PhD study programme

The launch of unprecedented business and science cooperation initiative "Industrial Doctor" to promote the creation of innovations for the Latvian economy. The first two RTU industrial doctoral students have already started working on unmanned aerial vehicles (UAV) and digital road technology research for LMT.



#### Tet and RTU – Al-based IT monitoring system

Development of a unified ALIT monitoring solution that will simultaneously be able to analyze various IT infrastructure systems, helping to quickly and efficiently detect anomalies and errors. Algorithms are also able to predict potential incidents in the future, which will significantly reduce downtime risks and facilitate investment planning.



# ICT Courses and Upskilling

Private sector provides numerous opportunities for ICT skill development



#### Accenture IT Bootcamp

Bootcamp is the most extensive free IT training in programming and technology consulting in Latvia. www.bootcamp.lv



#### Riga Coding School

A coding school and IT career centre with more that 26 lecturers and 106 partners. Courses in C#, Java, JavaScript, Python, IT project management, Big Data, SQL.

www.rigacoding.lv

#### CODELEX



Courses for beginners or intermediate level, and those who are planning to start their career in IT. Courses cover HTML, CSS, JavaScipt, PHP, C#, Java, Web-development



#### Riga TechGirls & She Goes Tech

A community of female ICT specialists that educate and inspires girls & women about technology

www.rigatechgirls.com and www.shegoestech.lv

#### Learn IT

www.codelex.io



Interactive coding club for kids and pupil of grades 1 - 9 that aims to develop logical thinking, problem solving and cooperation skills



#### **ROBO HUB**

Robotics school based on Lego Education programme for kids age 3-12. The school uses gamification approach to teach the foundations of technologies.

www.robohub.lv



#### LMT Drone Centre

www.learnit.lv

Drone piloting school by LMT that provides theoretical foundation about drones, regulations, navigation as well as practice in professional drone control.



#### Start(it)

Social education project with the aim to increase the knowledge and required skills for the IT industry among Latvian population.

www.startit.lv





# Incentives for Smart Company Growth

Government support for employee upskilling and knowledge transfer

Up to 50-60% of costs coverage capped at EUR 200 000 per project for professional trainings or knowledge transfer activities:

#### Eligible costs:

 Training course costs (implementation of digitalization, automation and robotization, specialized language courses, training materials etc.)

- Transportation and accommodation costs in Latvia and abroad.
- Salaries of employees during trainings.

Total available funding EUR 7,9 million Project duration: until 31.12.2023

Sources: Investment and Development Agency of Latvia





# ICT Academia Testimonials

Driving the next generation of ICT talent in Latvia



"Human labor is one of the most expensive resources of today. If a company wants to remain competitive, it has to embrace digital technologies and digitize, optimize, automate and robotize its processes, ultimately replacing humans by digital systems. Scientific innovations are key enablers for this transition"

Kaspars Ozols, Deputy director of development,
 Institute of Electronics & Computer Science (EDI)



"Successful development and implementation of contemporary IT solutions require a broad set of skills. Latvia/USA/Norway double degree Bachelor program "Computer Science and Organizational Technologies" combines information technology (IT) with various aspects of organizational development. The Program's interdisciplinary curriculum is exciting and challenging and prepares students for becoming the new generation of LEADERS for technology-intensive organizations."

- Jānis Grēviņš, Director of Riga Business School



# Thriving Startup Community



# Startup Law and Startup Ecosystem

Your best startup hub in the European Union

Latvia is ranked #1 as the most startup-friendly country in the world (Index Ventures, 2021)

Startup visa is a temporary residence permit for up to 5 founders and their family members (up to 3 years)

**Startup law benefits** 45% co-financing of highly qualified employees; or flat social tax + 0% personal income. Employee stock options.

Other benefits among 40+ incentives (business incubators, accelerators, innovation vouchers, support to promote foreign trade etc.)

www.startuplatvia.eu

Source: Startup Latvia



# Startup Community Shapers

A broad range of contributors and stakeholders

**GOVERNMENT** 







**ASSOCIATIONS** 







AND VENTURE CAPITAL

FUNDS & ACCELERETORS















**HUBS & CLUSTERS** 











Source: Startup Latvia



# Notable Startups and Success Stories

A number of promising and successful startups based in Latvia

Castprint	Creatively designed 3D printed casts that currently are being piloted in hospitals.  www.castprint.co	infogram	An intuitive visualization tool that empowers people and teams to create beautiful content.  Acquired by Prezi www.infogram.com
cake®	Cake HR is a cloud solution that simplifies and automates HR tasks, increases productivity and provides great experience. Acquired by Sage HR <u>www.sage.hr</u>	<b>≡</b> lokalise	Top-notch localization solution for translating websites, other software and apps in any language. www.lokalise.com
@ exonicus	A leading global provider of trauma training technologies for military and civilian organizations.  www.exonicus.com	mintos	A fintech startup that operates a global P2P marketplace for investments in loans.  www.mintos.com
Funderful <sup>*</sup>	Uses Al to enable university students and alumni to trigger online conversations that increases enrolment or donations.  Acquired by Ruffalo Noel Levitz <a href="https://www.ruffalonl.com">www.ruffalonl.com</a>	Nordigen	A fintech startup helping banks and lenders improve the speed and accuracy of their credit decisions to approve more creditworthy customers.  www.nordigen.com
	Gamechanger Audio develops unique effects pedals for world class musicians. www.gamechangeraudio.com	PRINTFUL	World's leading print-on-demand and drop shipping company that enables online stores to prepare custom designs and sends them directly to their customers.  www.printful.com
GIRAFFE 360	Provides market leading technology that captures space for virtual tours, floor plan and wide-angle photography.  www.giraffe360.com	Sonarworks	Innovative sound calibration software that provides accurate listening experience for music creators and listeners.  www.sonarworks.com



# A Place to Work and Live

# VEFRESH Smart City and Innovation District

Leading ICT district that is located in Riga

VEFRESH aims to redevelop VEF district in Riga city as an innovation sandbox where corporations, startups and public sector can prototype and test their latest solutions.

4 000 ICT specialists in VEF area in Riga

40% of all Latvia ICT export

630 mEUR annual revenue

Stakeholders: Riga City Council, Ministry of Economics of Latvia, Accenture, LMT, Jaunā Teika, New Hanza Capital, VEF Kultūras pils.





# Availability of Office Space in Riga

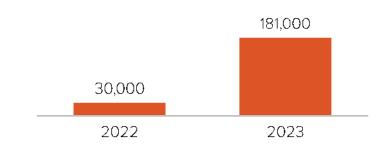
Large-scale A-class office project pipeline for 2022-2023

800 000 sqm A and B class office stock in Riga

1500+ coworking stations

211 000 sqm development pipeline until 2023

Office development pipeline in Riga (sqm)



Source: Colliers International (Q3 2021)





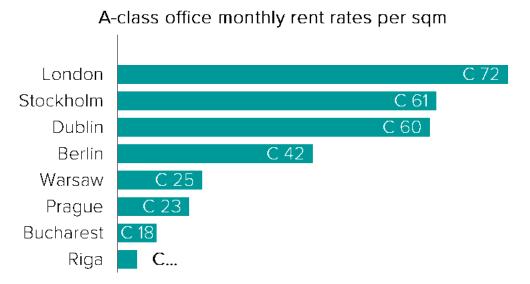


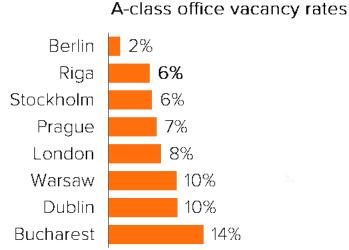




# Availability of Office Space in Riga

A-class office space with low rent rates and reasonable vacancy rate





Note: vacancy rate in Riga excluding recently commissioned A-class office center in the large-scale «Z-Towers» project. The average vacancy rate for A and B class offices in Riga is 12%.

Source: Colliers (February, 2021)



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# Affordable Housing and Increasing Development

Latvia has the most affordable housing among the Baltic countries

One-bedroom monthly rent in the city centre



Riga ranked #1 in Baltics with highest score in housing availability index (180.9) and with lowest average apartment transaction price in new housing projects (1632 EUR/sqm).

Sources: Numbeo.com, Swedbank Baltic Housing Affordability Index (Q4, 2020)



# Excellent Value for Money

ICT talent will have sufficient means for comfortable living in Latvia

Income and expenses in Riga

€ 1230

€ 971

Average monthly net salary in Riga (private sector)

Estimated monthly expenses for comfortable living in Riga (single person) Average monthly net salary in IT consulting, computer programming and related activities in Riga (private sector)

€ 1917

**STABLE** salary growth in ICT in Latvia

Latvia 3.9% Estonia 4.2%

Lithuania 7.4%

Latvia has a stable ICT salary growth rate in Baltics in 2021 (research by Fontes).

Sources:

Central Statistical Bureau of Latvia (Q4 2020) Fontes Recruitment agency annual ICT industry salary report 2020



## ICT Labour Cost Overview

Position	Net monthly salary, EUR		Gross monthly salary, EUR		Total monthly costs for the employer, EUR	
IT support specialist	900	1100	1257	1536	1553	1899
Systems Engineer	1400	2100	1968	2988	2432	3693
Systems administrator	1700	2200	2405	3134	2972	3873
Junior Programmer	1650	2100	2332	2988	2882	3693
Programmer	2100	2600	2988	3717	3693	4594
Senior Programmer	2700	3500	3863	5029	4774	6215

Indicated salary levels are related to companies in Riga and available to qualified specialists with good English. Salary levels for similar positions are up to 15-20% lower outside Riga city. There is no premium for English and Russian language knowledge.

Source: Manpower Latvia (2021)



### Vibrant and Diverse Life

Truly European standard of living on the shores of the Baltic Sea

#2 greenest country in EU 2019

500 km of sandy beaches

45% of Latvia is covered in forests

Opera with 200+ performances every year

Historic centre of Riga is UNESCO World Heritage site

5000+ restaurants, various street food festivals & special restaurant weeks.



## **Events and Networking**

#### A list of a must-visit ICT and startup events in Latvia



#### **5G TECHRITORY**

World's leading annual 5G conference that takes place in Riga, and brings together world's industry leaders and policymakers. www.5qtechritory.com



#### Riga Dev Days

A conference for tech journalists and bloggers who participate in tech conversations within two days full of emerging content. <a href="https://www.rigadevdays.lv">www.rigadevdays.lv</a>



#### Deep Tech Atelier

A conference and a practical workshop dedicated to deep tech startup creation and further development.



#### Theory and Practice of Software Testing (TAPOST)

TAPOST is an annual international conference for testing professionals, researchers and students from all over Europe. www.tapost.org



#### Digital Freedom Festival

www.deeptechatelier.com

An influential event with 1000+ participants discussing trends in digital technologies, startups, policymaking, and lifestyle. www.digitalfreedomfestival.com



#### Tech Industry

The biggest international trade fair in the Baltics for automation, electronics, engineering, industrial supplies, and innovations. www.techindustrv.lv



#### eCOM360

A conference for eCommerce practitioners from all around the world who share case studies, experience and recent trends. www.ecom360.io



#### TechChill

Brings together 2000+ attendees, including startups, innovative corporations, regional investors and talented tech enthusiasts. www.techchill.co



#### RIGA COMM

An annual IT and business event for entrepreneurs and professionals of service and manufacturing fields, executives of state institutions and organisations.



#### UX Riga

User experience conference that inspires and educates digital product developers, through keynotes, workshops and case studies.

www.uxriga.com





#### RIGA

Most Dynamically Developing City (CEE Business Services Awards, 2021)

The third largest city in the Nordics with 1,1 million inhabitants in Riga region

20 minute drive to the seaside and to the airport

The most affordable housing and







LOW COMPETITION

**EASY TO ENTER & SCALE** 

TRAINING INCENTIVES

**FAST-TRACK PROCEDURES** 

**EXCELLENT VALUE FOR MONEY** 

**SUPERIOR ACCESSIBILITY** 

MODERN ICT INFRASTRUCTURE

# Welcome on board

invest@liaa.gov.lv +371 6703 9473 www.investinlatvia.org www.liaa.gov.lv



# About Us

# Investment and Development Agency of Latvia

Government agency with global presence

- 300 employees
- 20 representative offices around the world
- 4 departments











# LIAA international presence





# Investment and Development Agency of Latvia

Your personal guide for setting up business operations in Latvia



Assistance with investment location selection & implementation of investment projects.



Provision of all relevant information on business opportunities & business incentives.



Identification of the best property options for manufacturing facilities, offices, & greenfield development.



Assistance in establishing contacts with Latvian business partners, municipalities, & associations.



## Successful I IAA FDI Cases













































