

Training of Civil engineers and construction in Latvia

Martins Vilnitis,
Dr.sc.ing., Assoc. Prof.
Riga Technical University,
Faculty of Civil Engineering

EDUCATION



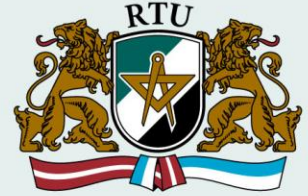
- **2005 - 2011** - Riga Technical University, Faculty of Civil Engineering, **Doctor of Engineering;**
- **1994 - 1996** - Riga Technical University, Faculty of Civil Engineering, **Master Degree;**
- **1989 - 1994** - Riga Technical University, Faculty of Civil Engineering, **Bachelor of Engineering and Civil Engineering**

Work Experience in RTU



- November, **2013** to present – **Director of study program Civil Engineering;**
- July, **2011** to present - **Head of the Department of Construction Technology;**
- September, **2006** to present - **Assistant Professor;**
- September, **1995** to September, **2006** – **Lecturer.**

Other skills



- February, **2007** to present - the **Owner of company** MV Consult Ltd engaged in real estate valuation and **construction supervision**.
- **Professional Certificate** Nr. 5-00103 (permit of **construction supervision**) and Nr. 4-00107 (permit of **construction management**).
- Latvian Association of Civil Engineers (**LACE**), **Member of the Board** since March, **2015**.

Latvia in facts



AREA: 64 589 km²
POPULATION: 2.2 million
CAPITAL: Riga
LANGUAGE: Latvian

RELIGION: Lutheran (34%);
Catholic (24%); Ortodox (18%)

CLIMATE: Humid continental
TEMPERATURES:
winter - 33C ... -10C
summer +17C....+30C

6 public universities
120.000 students
2nd highest enrollment rate
552 per 10.000

Riga Technical University



FOUNDED **1862**



8 FACULTIES

34 INSTITUTES

134 STUDY
PROGRAMS

MORE THAN
100.000
GRADUATES



16.000 STUDENTS

767 ACADEMIC STAFF

502 RESEARCHERS

13 RESEARCH CENTRES



RESEARCH FIELDS:

ENERGY

INFORMATION &
COMMUNICATION

MATERIAL SCIENCE &
CHEMISTRY

SAFETY & SECURITY

SMART NETWORKS

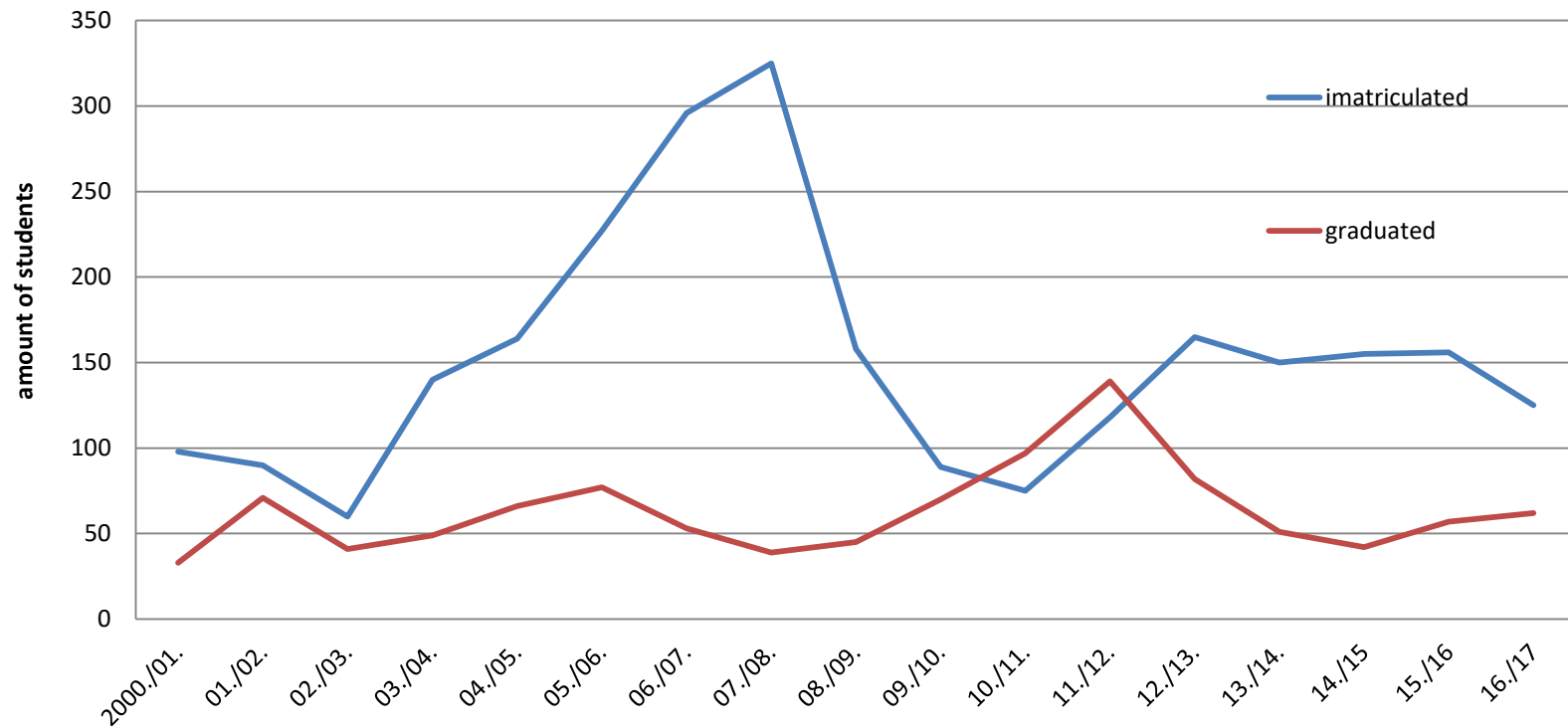
RTU campus



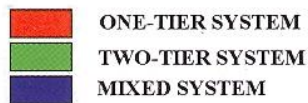
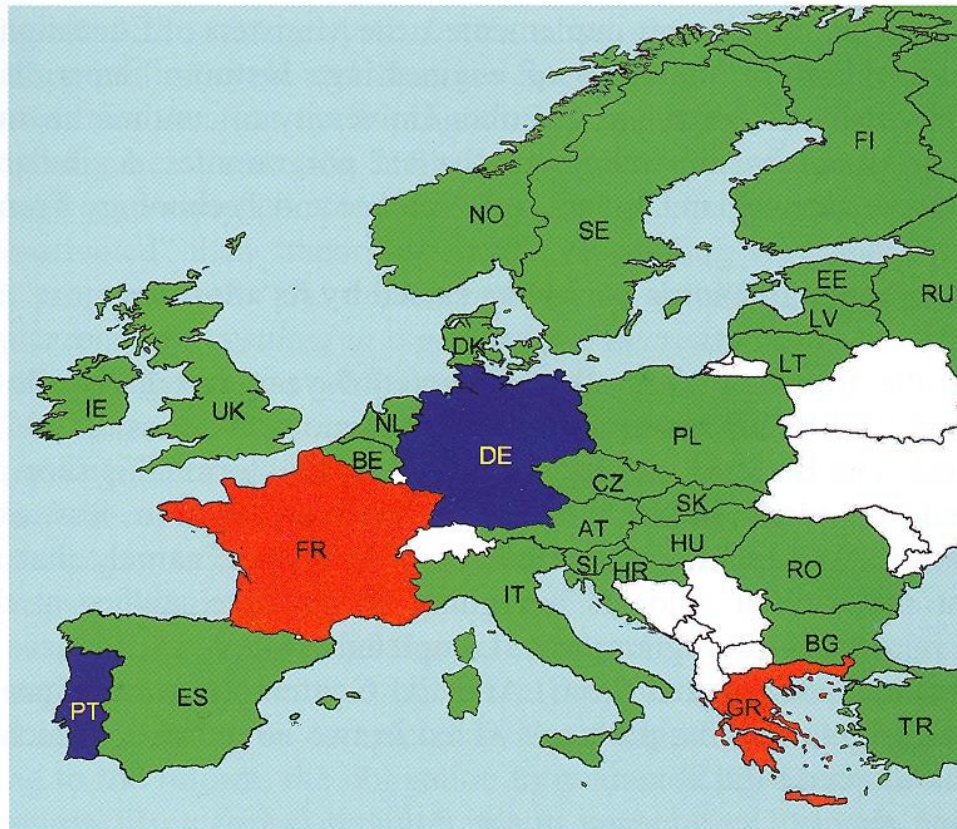
FACULTY of CIVIL ENGINEERING



bachelor of Civil engineering



BOLOGNA PROCESS

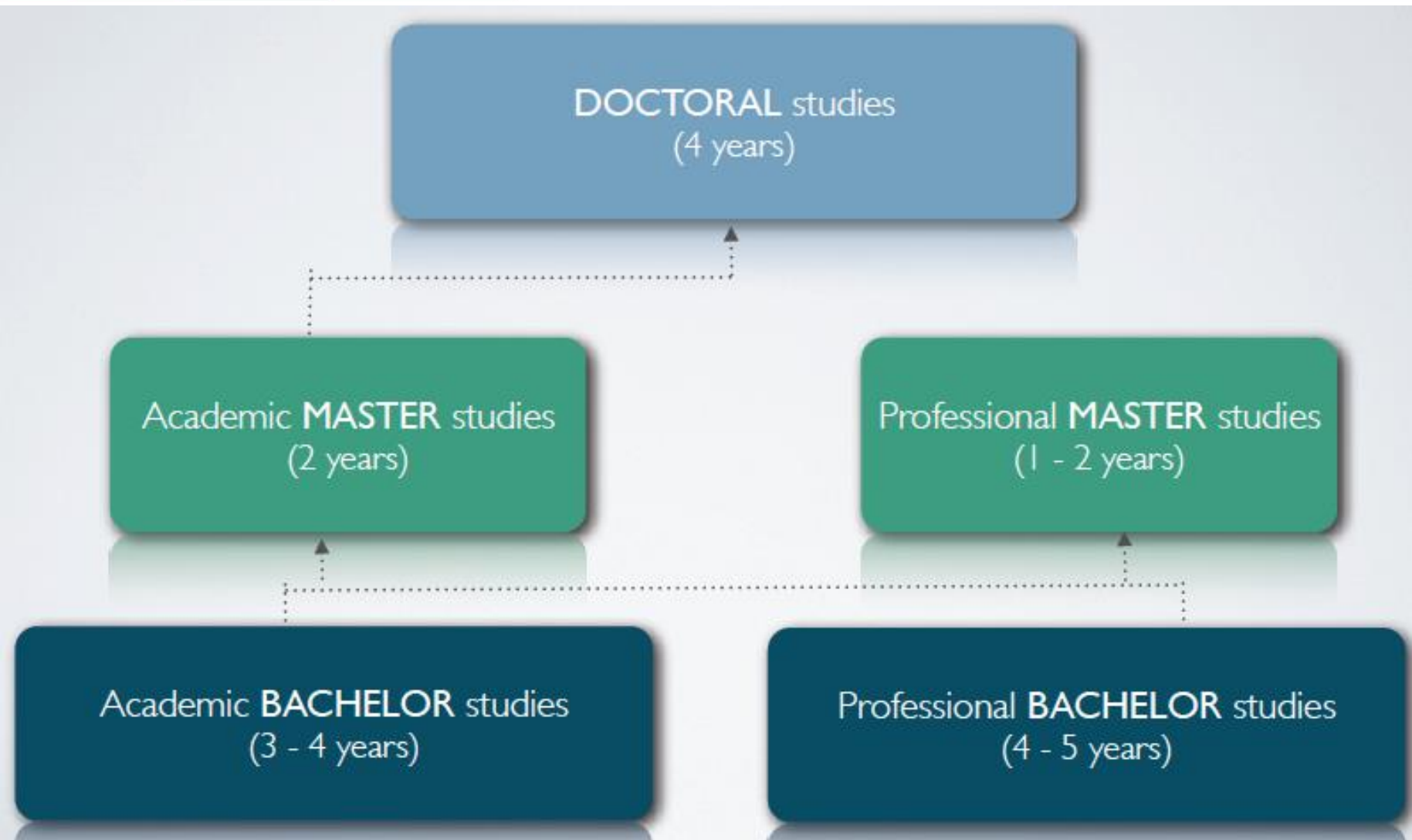


**System of Civil
Engineer's Education
in Europe**

2009.-2010.g.

Seventh EUCEET volume „Inquiries into European Higher Education in Civil Engineering”. Edited by Iacint Manoliu. ISBN 978-973-100-123-4 – Bucarest – 2010. – 276p.

Study process



Construction engineer



The right to an independent practice in the field of construction in the profession of a construction engineer may be acquired in the following specialties:

No.	How many years of construction practice needed	education	
		A2	A1
1.	Structural engineer	3	NA
2.	Construction works management	3	5
3.	Construction works supervision	3	5
4.	Engineering research	5	NA

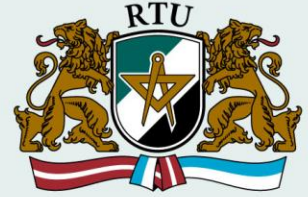
Construction engineer



The right to an independent practice in the profession of a construction engineer in the specialties referred above may be acquired by a person who:

- 1) has acquired the second (or first) level vocational higher education in a study programme of a construction engineer;
- 2) has acquired the knowledge and skills necessary for an independent practice;
- 3) has received a certificate of building practice in accordance with the procedures laid down in laws and regulations.

Latvian Association of Civil Engineers



- Currently, LACE unites 720 civil engineers, 65 associate members, 40 junior members (students), and 5 legal associate members, from all of the regions of Latvia.
- LACE members are engineers, contractors, architects, road and bridge specialists, plumbers, heating engineers, and hydro technicians.

Documents for Certification



- particular application for certain specialties;
- a certified copy of vocational higher education Diploma (with attachment – list of subjects).
- proof of the necessary skills for an independent construction practice in the certified specialty.

Certification procedures

- As a proof of construction practice could be stated - employer's assignment; copy of construction permit; Technical design, with the necessary calculations of loads and structural elements; expertise opinion.
- Before the commencement of the certification process, the applicant must pay the national fee (150 euro) for certification services.

Exam for certificate



- Each exam ticket has 12 questions and for each question are given 3 responses, which could be correct or wrong.
- Each applicant provided by 60 minutes to consider the responses on questions.
- The applicant could make just one mistake to pass the exam.
- If the applicant is not passed the exam twice, certification institution, shall take a decision on the competence of the applicant.

Professional Certificate



- Certificates are issued to building specialists for an indefinite period of time, also the building specialists shall regularly improve their professional qualification.
- Information regarding the certificate of an architect's practice and a certificate of construction practice shall be included in the public register of building specialists (CIS).
- Building specialists have a duty to insure their professional liability for the damage caused in the construction process.

Construction Information System



- updating your contact information, if needed;
- information on the additional vocational education;
- invoice on the annual monitoring fee (70 EUR per one specialitie) transfer to certification institution;
- copies of the certificates for courses directly related to the professional qualification development programs in the previous year;
- projects and designs proofing the independent practice in the previous year.

Construction Information System

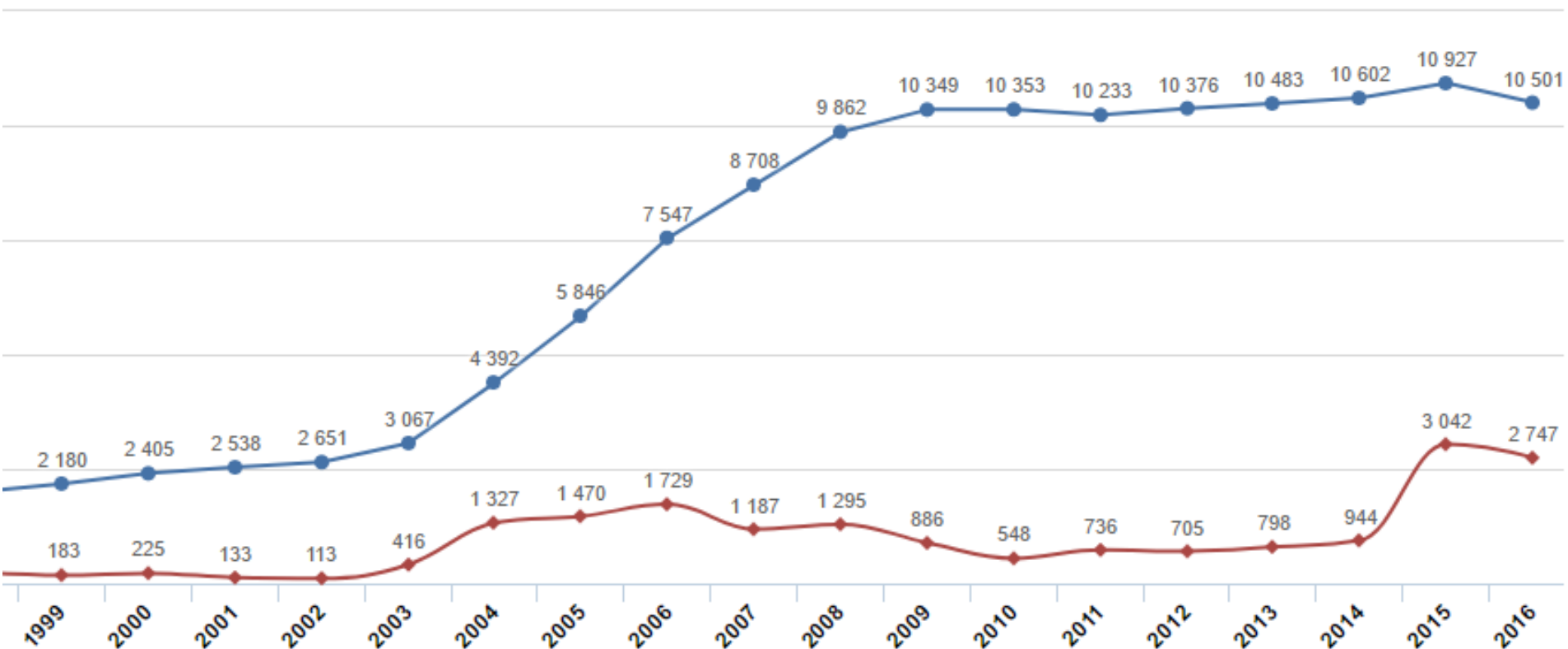


- Currently, four registers, namely the Register of Construction Merchants, the Register of Certificates of Building Practice and Architect's Practice, the Register of Building Inspectors and the Register of Administrators of Residential Houses, are available to the public on the portal www.bis.gov.lv.
- The aim of CIS in future is to ensure the circulation of electronic construction documentation, public needs for information regarding construction processes, equal approach to making decisions on construction, and single interpretation of laws within the entire territory of Latvia.

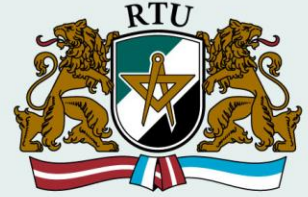
Issued certificates



— Aktīvo sertifikātu skaits — Izsniegto sertifikātu skaits

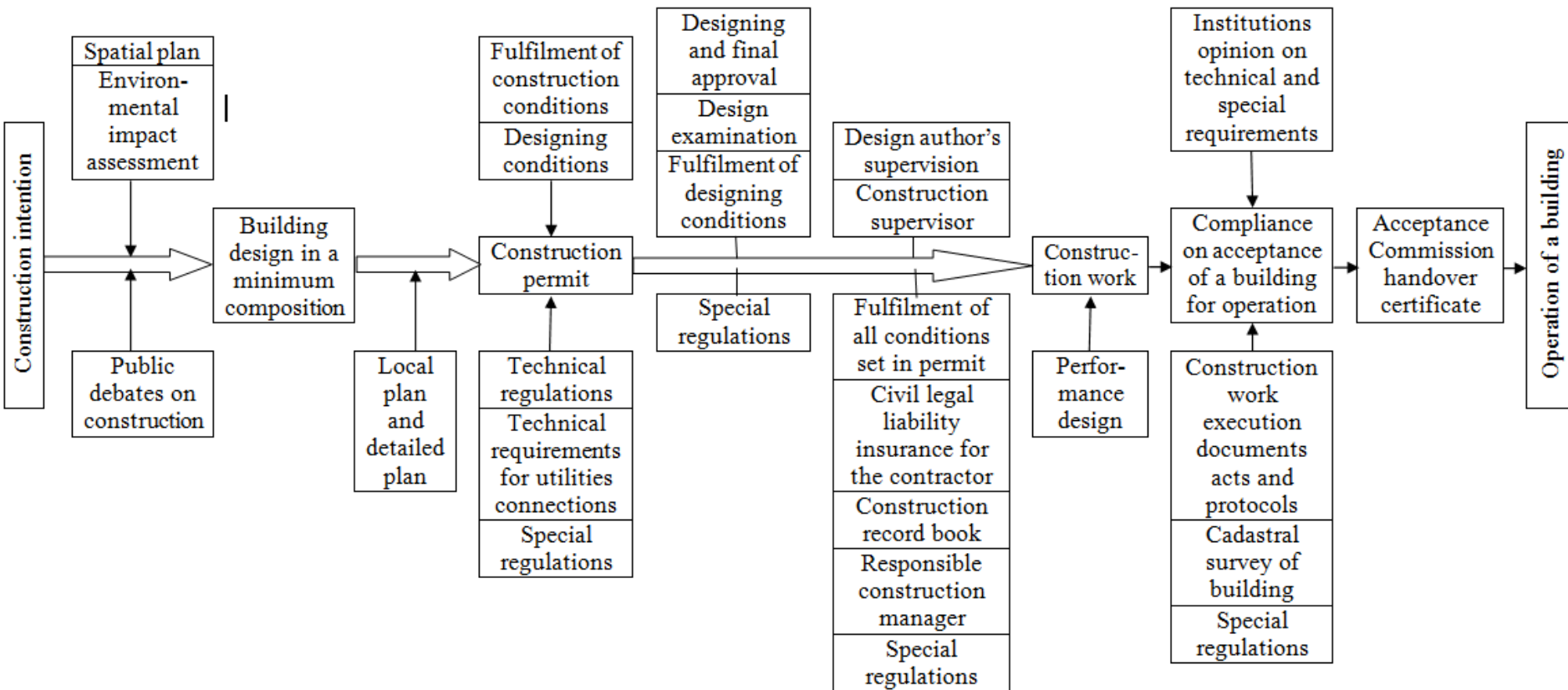


Construction Law, from October, 2014

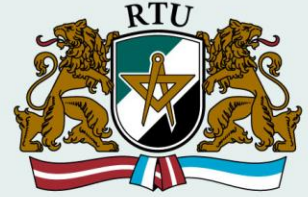


- The General Construction Regulations classifies buildings into three groups depending on complexity and potential effects on the environment. The first group includes uninhabitable one-floor buildings with specific features, for example, small-buildings, outhouses. The third group includes so-called “socially important structures” – structures with more than five floors meant for more than 100 people etc.

Construction process

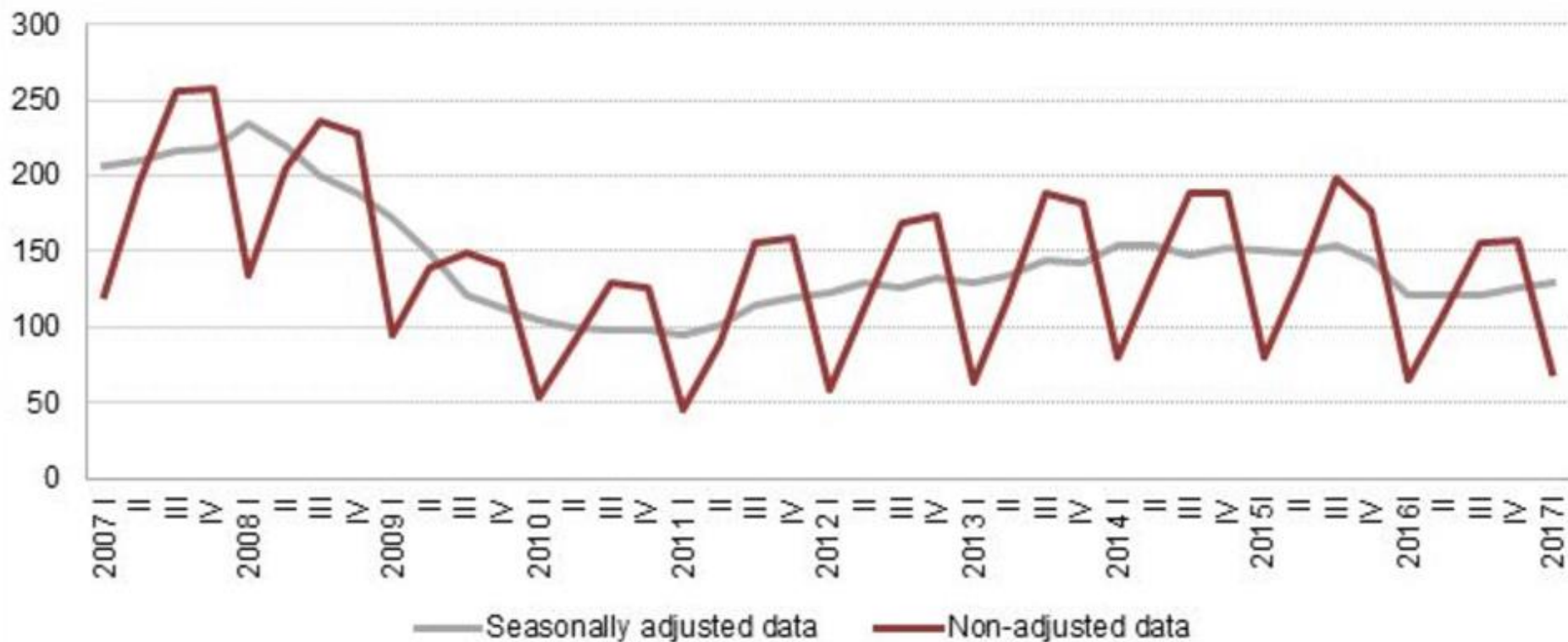


State Construction Control Bureau

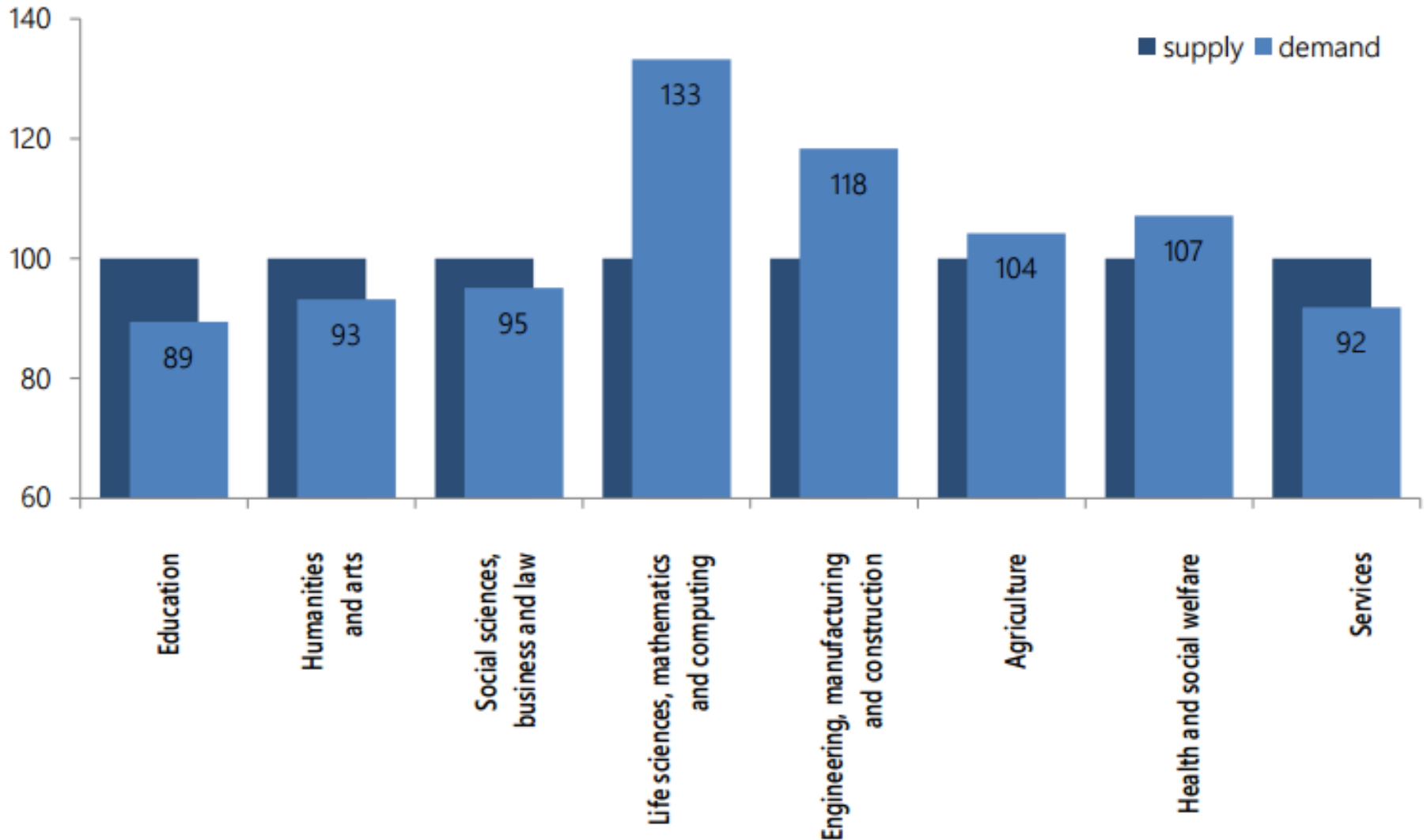


- ensure the State control of construction works from July 2015,
- carry out monitoring of operation of public buildings from January 2015,
- grant the right to an independent practice with a specialisation in the expert-examination of construction from January 2016
- carry out the monitoring of an independent practice of construction engineers from January 2016.

Index of production in million EUR



Higher education



Conclusion



Education of Civil engineers:

- Not sufficient financing (equipment and salaries);
- Knowledges of students in secondary schools (science subjects - physics, chemistry, mathematics);
- Lack of motivation, competition between students.
- Industry involvement in the development of students practical knowledges.

Conclusion



Certification of engineers:

- amount of Civil engineers decreases;
- according with Construction law after 2020 almost 3 000 engineers loose certificates;
- resources to chech more than 10 000 certified specialists annual monitoring in CIS;
- quality of courses directly related to the professional qualification development programs.

Conclusion



Construction in Latvia:

- could be stated as stabil till 2020;
- directly dependent on European funds;
- «shadow» economy, payment of taxes;
- high demand for qualified construction workers (welder, plumber, electrician, e.t.c.);
- quality for reasonable price and contract completed in time!
- reducing bureaucracy in adoption of the new Construction law.

Dziękuję za uwagę!