

FIG Commission 2 on Professional Education

Work Plan 2023–2026

1. FIG Commission 2 Work Plan 2023-2026

The focus of FIG Commission 2 is on innovative and effective professional education and training for surveyors. With clear linkages to the vision of the FIG Council Work plan through the commission working groups our activities are underpinned by ensuring that surveyors work for the good of society and to ensure their relevance.

FIG Commission 2 in the previous term has started a FIG publication on the topic: Enhancing Surveying Education through Blended Learning, which is in almost ready to publish version and after the final proofreading by the editors the process of publishing may start.

The commission is focusing on developing academic networks for knowledge sharing, innovative learning and teaching and learning styles in surveying education. Our new Working Group will focus on Education in the domain of Land Administration and will work jointly with FIG Commission 7 WG 7.7.

2. Terms of Reference

- Professional surveying education (vocational, higher and academic education) curriculum development.
- Professional surveying education (vocational, higher and academic education) learning and teaching methods and technologies
- The role of professional education and its relation to the public sector, private sector and professional organizations.
- The domain of professional surveying education (continuing professional development).
- Knowledge transfer in education and training, and via existing academic networks.
- An inventory of all Surveying education institutions in the world.

3. Mission statement

Promote good practices in professional surveying education by:

- Exploring the needs of society and endorsing universities and other educational organizations to develop mechanisms and processes that will help to meet those needs.
- **Methods and content of education:** To support and promote advances in learning and teaching methods and content of curricula with special emphasis on the impact of technology and learning styles on education (outcome – report on state of education).

- **Knowledge sharing.** Promoting sharing of advances in professional education, research in surveying education and training and initiate joint projects (curriculum development, educational material development, joint courses, quality assurance etc.). Improving dissemination of information on educational theory and practice to the members across the world via existing academic networks. (outcome – special issue of journal, seminars/conferences).
- **Supporting capacity building** for surveying education in the developing world, through strengthening knowledge transfer (including collaboration with UN-GGIM, GLTN, RICS and academic networks). (outcome – regional knowledge sharing).
- **Cooperation with other professions.** Reinforcing cooperation with Educational Commissions of International Organisations on the related professions.
- **Continuing Professional Development.** Encourage improved surveying practice through the promotion of continuing professional development (CPD) and the practical application of research, help surveyors continuously to update their academic and professional profiles.

Key priorities include becoming a more active Commission, a focus on worldwide professional education, supporting the innovative education in surveying domain, and preparing land professionals for new challenges. A new propriety area included in the key priorities would be the topic ***Ethics in professional education and research.***

4. General

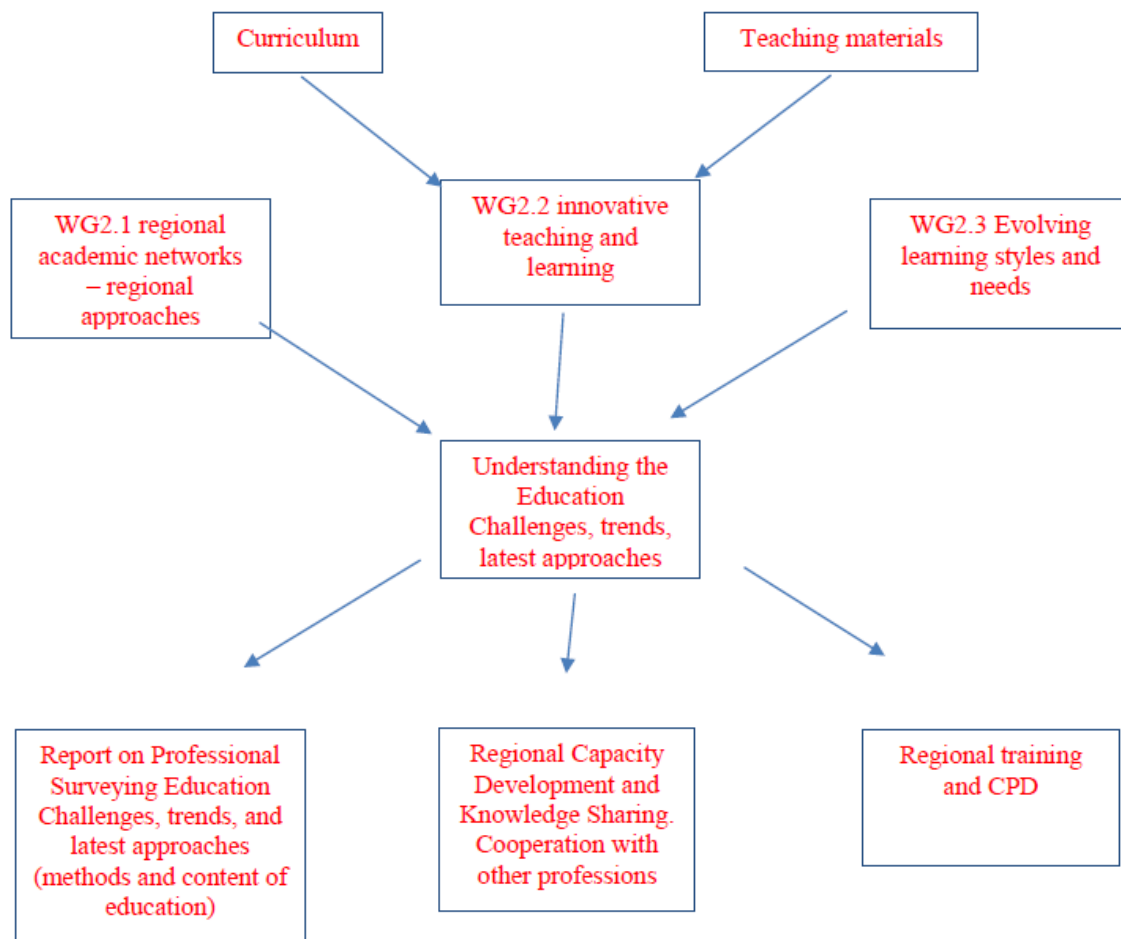
FIG Commission 2 is the domain of professional surveying education. The traditional core areas for the commission are: 1) curriculum and core surveying body of knowledge, 2) teaching and learning methodology, 3) marketing and management of professional education and 4) accreditation and quality assurance. During the 2011-2014 term Frank (2008, 2012) and Greenfeld (2010, 2012) centred on the understanding of the surveying core body of knowledge.

During the 2015 -2018, FIG Commission 2 built on the above work focusing on the following themes (i) *Becoming an active Commission*, (ii) *Professional education world-wide*, (iii) *the chain of professional surveying education*, and (iii) *towards educating the land professional*. A key publications from this term were Masum et al (2017) focusing on Bridging the Gap between Demand for and Supply of Professional Education, and Groenendijk (2017) reviewing the VGGTs in the curriculum (next step in this research is to research the gaps in the implementation and adoption of the VGGTs in the curriculum).

Innovative learning and teaching has always received major attention in FIG Commission 2. This is reflected in the work of Enemark (2004, 2008, 2009; Enemark & Gallant, 2012) promoting innovative teaching and learning approaches in surveying education, in particular project- and problem-based learning. E-learning, open learning and knowledge management achieved major attention by Markus (2005, 2008, and 2010). The work on e- learning resulted in the most recent publication by FIG Commission 2: FIG Publication No. 46. Enhancing Surveying Education through e-Learning. Markus (2010) mentioned the following two challenges for FIG Commission 2 that are still highly relevant to consider: ubiquitous learning and open education.

Developing educational and skills qualifications of surveying professionals and technicians is one of the other main concerns for FIG Commission 2. For some countries this is of more concern than others. In the United States ABET is used to allow standard recognition of educational surveying qualifications (Frank, 2007, 2009, 2010). In the United Kingdom, RICS has developed educational criteria that allow universities to assess the suitability of their curricula to the professional needs (Plimmer, 2003; Frank, 2010). With the rapidly changing surveying profession it is a continuous challenge to maintain a system of standardization. The former chair of FIG Commission 2 has worked intensively on defining educational surveying qualifications and in relation to the core surveying body of knowledge and learning and teaching methodologies (Frank, 2012).

For the term 2019 -2022, FIG Commission 2 has continued to build on the work carried out by the former commission chairs. FIG Commission 2 term 2019 – 2022 has developed following focus areas and the new term 2023-2026 intends to continue:



Although the period 2019-2022 was affected by the worldwide pandemic, the FIG Commission 2 had several activities F2F (in 2019 and 2022), one Annual Meeting outside regular WW (joint with Commission 7) and online activities, resulting with a very serious draft of the FIG publication from

Commission 2 with highly appreciated input from active members called: Enhancing Surveying Education through Blended Learning.

The new term of FIG Commission 2 2023-2026 is continuation of the previous excellent work of the active chair, WG chairs and other members of this commission with inheritance that quality and hard work should continue in the future. The new term is continuing the previous philosophy of Commission 2 adding to it one more working group which is described and explained in details in the next section.

FIG Commission 2 annual meetings and FIG regional conference 2024

The annual meetings of Commission 2 are planned to be executed during each of the three years FIG Working Weeks and during the FIG Congress in 2026. In addition, one or two annual meetings are planned to be executed outside of this standard pattern for example:

- FIG Commission 2 annual meeting in the Netherlands in October 2023 (jointly with Commission 7), in Enschede in the new building of ITC within the University of Twente Campus.
- FIG Commission 2 annual meeting in second half of 2025, location TBC.

There is also an idea to organize a FIG Regional conference in the second half of 2024, in Montevideo, Uruguay. This idea was shared with FIG Office president and vice-presidents. More details will follow.

5. Working Groups

The work of FIG Commission 2 is organized in 4 working groups. Each of the working groups represents an area of focus in professional surveying education. During the four-year term of office workshops at least one Commission 2 workshop will be organized. Ideally, each planned event will focus on one or more themes from a working group.

Working Group 2.1 Developing and strengthening academic networks

Experience has shown that regional networks of academic institutions supports knowledge sharing in areas of education, research and capacity development.

Specific Objectives

- To share knowledge and good practices in surveying curricula and programs across educational institutions and across countries – especially through existing and newly created academic networks.
- Contribute to the final Commission 2 report on professional education.
- To seek feedback from these academic networks on changes in curricula and approaches to professional education that respond to the changing nature of the surveying profession.
- To discuss and describe core competences (knowledge, skills and attitudes) for the education of future land surveyors and land professionals.
- Exploring the needs of society and endorsing universities and other educational organizations to develop mechanisms and processes that will help to meet those needs.
- **Knowledge sharing.** Promoting sharing of advances in professional education, research in surveying education and training and initiate joint projects (curriculum development, educational material development, joint courses, quality assurance etc.). Improving

dissemination of information on educational theory and practice to the members across the world

- **Supporting capacity building** for surveying education in the developing world, through strengthening knowledge transfer (including with UN-GGIM, RICS and regional academic networks).
- **Cooperation with other professions.** Reinforcing cooperation with Educational Commissions Report on Professional Surveying Education Challenges, trends, and latest approaches (methods and content of education) Regional Capacity Development and Knowledge Sharing. Cooperation with other professions Regional training and CPD of International Organisations on the related professions.

Chair:

Francis Roy, Laval University, Canada francis.roy@scg.ulaval.ca

Co-chair TBC

Support Dimo Todorovski, University of Twente, the Netherlands, d.todorovski@utwente.nl

Contributing partner – GLTN.

Workshop(s)

Developing and Strengthening Academic Networks Workshop/Session within FIG 2023; in Orlando USA
Similar workshop/session during the FIG Working Week in 2024 (or 2025).

The final report presented and discussed at the Congress in 2026.

Publication(s)

Contribute a chapter on the role of academic networks to the Commission 2 report on surveying education.

Latin America Land Administration Network (LALAN) current status and planned future activities; for FIG 2023.

Developing a Francophone Academic Network of Universities (FANU); for FIG 2025 (or FIG 2026).

Timetable

The report is the major output of this working group and will be a 4-year project.

Beneficiaries

Higher education institutions, national associations, governments, international governing bodies, cadaster and land registration organizations; chartered surveyors, private surveyors and FIG Corporate Members.

Working Group 2.2 Innovation in Curriculum development implementation

The topic of this working group was a focus of attention of at least previous three to four terms of Commission 2. This term 2023-2026 will extend the work done by Commission 2 in the previous terms, which focused on Europe, and extend this focus globally. This align with aspects highlighted in Masum et al (2017) *Enhancing the Role of Surveyors: Bridging the Gap Between Demand for and Supply of Professional Education* (paper published in a peer reviewed journal late 2018).

Specific Objectives

- To exchange and promote good practices in teaching and learning methodologies in professional education of the surveying and land professional. The aim is to capture the very best teaching that our members are doing and not currently writing about.
- **Increase** the FIG membership's understanding of the challenges, trends, theories and innovation in professional education by exploring the needs of society and industry – from perspective of innovation in Curriculum development and implementation
- Contribute to the final Commission 2 report on professional education.
- **To capture and share** the very best teaching and research in higher education that FIG members are doing and not currently writing about.
- **To support and promote** advances in learning and teaching methods and content of curricula with an emphasis on the impact of technology and learning styles on education.
- **Develop** continuing professional development (CPD) programs in response to societal and industrial changes
- A new propriety area included in the key priorities would be the topic ***Ethics in professional education and research***. A topic that could be jointly developed with Commission 1.

Chair

William Kelly, University of Glasgow, Scotland, william.kelly@glasgow.ac.uk
Co-chair TBC

Support Rosario Casanova, Universidad de la República de Uruguay, Uruguay
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Contributing partner – UN-GGIM Academic Network.

Specific project(s)

This working group will encourage members to publish and present on innovative learning, teaching and technology (both as used in industry and as used in education) applied to Surveying and Geomatics education. This includes, but is not limited to, student online peer assessments, rubrics, inter-grader reliability in marking of practical projects, personal reflective diaries, and development of 'graduate attributes' in surveying students.

Workshop(s)

Workshops/sessions during the FIG Working Weeks in 2023, 2024 and 2025.

The final report presented and discussed at the Congress in 2026 .

Publication(s)

Conference papers and journal papers arising from the work of this working group.

Timetable

The report is the major output of this working group and will be a 4-year project.

Beneficiaries

Higher education institutions, national associations, governments, international governing bodies, cadaster and land registration organizations; chartered surveyors, private surveyors and FIG Corporate Members.

Working Group 2.3 Young surveyors in Education - Learning styles in surveying education

This working group is intended to have representative suggested by the president of Young Surveyors Network YSN to work closely other WG of FIG Commission 2 for improving the professional education globally. In addition this Working Group 2.3 would support the idea of the FIG Vice-Chair to make an inventory of all Surveying education institutions in the world. A new opportunity for FIG inter-commission-task force is the collaboration with the TF on Diversity and inclusion.

Objectives

- To survey, analyse and document the learning styles of students at different ages (including young surveyors) and from different regions.
- increase our understanding of the varied ways that surveying students learn.
- Contribute to the final Commission 2 report on education.
- Exploring the needs of society and endorsing universities and other educational organizations to develop mechanisms and processes that will help to meet those needs.
- **Methods and content of education:** To support and promote advances in learning and teaching methods and content of curricula with special emphasis on the impact of technology and learning styles on education.
- **Knowledge sharing.** Promoting sharing of advances in professional education, research in surveying education and training and initiate joint projects (curriculum development, educational material development, joint courses, quality assurance etc.). Improving dissemination of information on educational theory and practice to the members across the world.

Chair: Dimo Todorovski (temporary) , University of Twente, the Netherlands d.todorovski@utwente.nl

Co-chair TBC

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Specific project(s)

This working group will work with the Commission 2 chair and vice-chair, and YSN chair to design and implement a survey/questionnaire in order to make the inventory of all Surveying education institutions in the world. A key focus in the first year will be designing the survey/questions and then implementing the questionnaire in as many countries in the world as practical.

The working group will seek support from FIG to send to all FIG academic members, and of the FIG regional networks and Working Group 2.1 to distribute to regional networks. This will take the scope beyond a focus on young surveyors.

Workshop(s)

Workshops during the FIG Working Week in Acra Ghana 2024

Interim results presented at Working Weeks in 2024 and 2025, and the final report presented at the Congress in 2026.

Publication(s)

- Contribute a chapter on student learning styles to the Commission 2 report on surveying education.
- Other specific conference papers and journal papers arising from the work of this working group.

Timetable

- The report is the major output of this working group and will be a 4-year project.

Beneficiaries

Individuals, potential surveyors, higher education institutions, vocational schools, society, labor market, public and private sector; FIG's corporate members; young surveyors and potential surveyors.

Working Group 2.4 / 7.7 Land Administration Education

Land administration is multi-faceted and encompasses 'hard' aspects such as 3D modelling, digital twins, artificial intelligence and BIM, and 'softer' aspects such as land tenure, customary rights, fit-for-purpose solutions, integrated land use planning, and gender. Effective land administration is crucial for development and tenure security, addressing several sustainable development goals. Several higher education institutions already offer land administration curricula at undergraduate and/or postgraduate levels, however there is need for constant revision and update to accommodate new approaches and opportunities. This combined C2 / C7 working group seeks to evaluate, support and further develop land administration teaching essentials.

Objectives

- To survey, analyse and document land administration curricula in use and proposed in different regions.
- To partner with GLTN, NELGA and other stakeholders in the further development of the Teaching Essentials for Responsible Land Administration (TERLA), including implementation guidelines and use cases.
- To explore context-specific land administration needs and support universities and other educational organizations to develop mechanisms and processes that will help to meet those needs.

Policy Issues

FELA pathway 8: Capacity and Education. The WG will act to support higher education in developing and implementing curricula for land administration.

SDG 4.4: Improving skilled youth and adults through education and training.

SDG 4.7: Ensuring learners acquire knowledge and skills to promote sustainable development.

Chair

Simon Hull, University of Cape Town, Republic of South Africa, simon.hull@uct.ac.za

Co-chair

Emmanuel Gavu, KNUST Kumasi, Ghana, ekgavu1.cap@knust.edu.gh

Specific project(s)

1. **TERLA** (with GLTN, NELGA et al).
 - a. **2023 – 2025:** There are currently 6 modules in the Teaching Essentials. The WG could focus on reviewing one module per semester for 3 years, with feedback at Working Weeks.
 - b. **2025 – 2026:** Plan and implement FIG joint WG sessions / workshops to share experiences from TERLA implementation. Use these to develop one or more curricula at willing institutions.
 - c. **2026:** Presentation at Congress and FIG/GLTN Publication on the entire TERLA curriculum, including implementation guidelines and use cases.
2. **Land administration curriculum review:** in parallel with and in support of 1 above:

- a. **2023 – 2025:** review of published land administration curricula disseminated into undergraduate, Honours, Masters and PhD levels. Combination of desktop study and interview / survey.
- b. **2026:** Presentation at Congress and peer-reviewed journal article (*Survey Review?*).

Workshop(s)

Workshops may be organised around each TERLA module, for implementation experiences, and for data collection pertaining to the curriculum review.

Publication(s)

1. Joint FIG/GLTN publication on TERLA.
2. Presentations at Working Weeks and Congress.
3. Peer-reviewed journal article: Teaching the next generation of land administrators (provisional title).

Timetable

See above.

Beneficiaries

Higher education institutions offering formal programmes and/or CPD; government officials, NGOs and others attending; member associations and education/training accreditation bodies.

6. Co-operation with Other Commissions and Task Forces

By its nature FIG Commission 2, Professional Education, has a relation to all the other technical commissions as is illustrated in figure 1. However, with some commissions it has a stronger relation than with others.

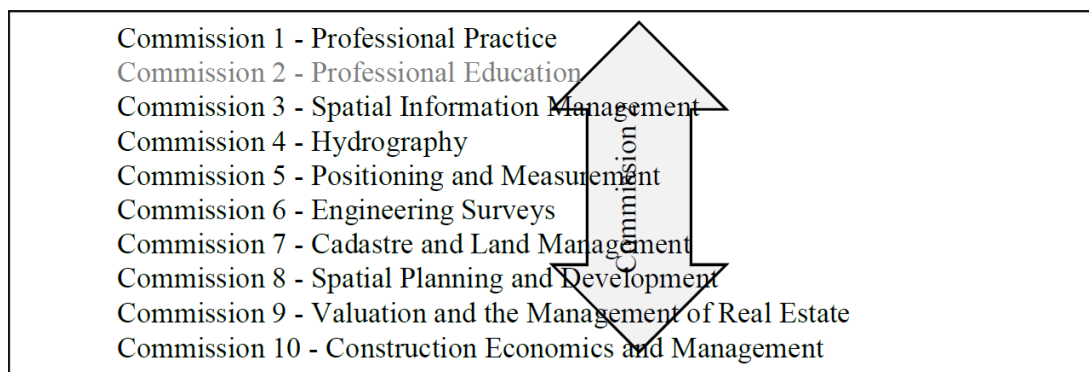


Figure 1. The position and function of FIG Commission 2 in relation to the other Commissions.

Commission 2 works closely together with Commission 1 and in particular with Working Group 1.1 - Changing Nature of Work and the Role of a Surveyor.

Commission 2 has a close connection to Commission 7 Cadastre and Land Management. The changing nature of the surveyor or land professional is best illustrated by the trends and developments in cadaster and land management.

FIG Commission 2 has a role in supporting the Young Surveyors Network, some of FIG Task Forces like Africa Task Force and the OICRF (The International Office for Cadastre and Land Records) (OICRF).

FIG Task Force on Sustainable Development Goals (TF on SDGs)

Commission 2 focuses on innovative and effective professional education and training for surveyors. That makes SDG Goal 4 "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" the most relevant to the work of Commission 2. As we focus on higher education the following targets are particularly relevant:

- Target 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable including persons with disabilities, indigenous peoples and children in vulnerable situations
- Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

How do you include the SDG's in your daily work?

The indicators under Targets 4.3, 4.4 and 4.5 provide some guidance on how Commission 2 can support meeting the overall Goal 4. Our work focusses on making higher education more accessible for all potential surveying students therefore supporting participation and this is a key focus of Working Group 1 on regional academic networks. Working Group 2 also seeks to support education for sustainable development in conjunction with the other commissions.

- Indicator 4.3.1: Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
- Indicator 4.5.1: Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated
- Indicator 4.7.1: Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment. (statement from David Mitchell previous chair FIG Commission 2)

7. Co-operation with United Nation Organisations, Sister Associations and other Partners

UN-GGIM and FIG Comm 2

Co-operation with the Academic Network of UN-GGIM, special with the Americas is envisaged. The FIG Commission 2 vice-chair is the academic representative of Americas into the UN-GGIM. Considering as our commission's strength our vice-chair will be a bridging person between these two organisations and identify appropriate channels for enriching this relation and collaboration.

FAO/FIG Academic forum

The Academic Forum is the platform for FIG Academic Members. Traditionally Commission 2 has a leading role in the Academic Forum. During the FIG Congress 2014 in Kuala Lumpur the Forum discussed and prepared an initial statement on Academic responsibilities and the Voluntary Guidelines on the Responsible Governance of Tenure (VGGT). Further Academic Forums were held at subsequent FIG Working Weeks and the 2018 Istanbul Congress. For its new term, FIG Commission 2 will continue to play an instrumental part in the Academic Forum and working with the Council to explore partnership with FAO and FIG Academic Partnership program.

During the 2022 Congress, Commission 2 contributed to one of two joint FIG/FAO sessions with core emphasis on progress in supporting the application of the Guidelines, including FAO selected invitees as presenters of related experiences:

- FAO/FIG Academic Forum - Progress in supporting the application of the Guidelines, and opportunities to engage regional, sub-regional, academic and young surveyors' networks

8. Commission 2 Officers

Commission 2 Chair

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15.03.2023

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