



PROGRAMME ASSESSMENT

Lycée Guillaume Kroll

BTS Communication Technologies

Final report submitted to the Ministry of Research and
Higher Education on 28 January 2026

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1 Executive Summary

The panel, appointed to assess the application for re-accreditation of the BTS Communication Technologies studied the presented documentation and took the opportunity during a site visit to reflect upon their findings with the management, teaching staff, students and industrial partners of the programme.

The panel concludes that the aims and objectives of the BTS programme are consistently translated into the curriculum. The balance between theoretical and practical learning is aligned with the intended learning outcomes and the level 5 descriptors of the Luxembourg Qualifications Framework. There is a well-structured modular approach to the curriculum. The panel appreciates the explicit workload calculations and the strong alignment with industry needs. Both students and companies are convinced of the added value of the BTS programme. Nevertheless, the student groups that are enrolled in the programme remain small.

This enables the BTS-COT to offer a student-centered training programme with a close follow-up on the student's progress.

The information about BTS-COT published on the website of Lycée Guillaume Kroll is transparent about the requirements, the objectives and the content of the programme. The management sets high standards on teaching level and technological focus, to form specialized technicians that meet the expectations of the technology industry. The students benefit from a close partnership with regional companies and combine both theoretical and practical training with adapted evaluations, thus ensuring the learning outcomes to be obtained.

With both government and industry support, the Lycée provides the programme with sufficient means to create a learning environment that meets the standards. Students have access to modern and well-equipped labs and state-of-the-art technologies.

The teaching staff makes a great commitment to the programme. The teaching competences and professional expertise are in place, and there is awareness of the challenges in the field. Students are well tutored and interact actively with their teachers. The teachers are led to keep their courses up to date with the changes in technology and align spontaneously with their colleagues in the programme.

The quality assurance method of the programme is based mostly on feedback from students and industry. The curriculum group holds the responsibility to align the requirements of course content, learning objectives, and industry needs. The panel was presented with a lot of vivid examples of adjustments to the programme. The panel encourages the team to work further on a structural approach to integrate innovations into the programme and ensure follow-up as a team.

Overall, the panel is convinced that the BTS-COT meets the assessment criteria and consequently recommends re-accreditation of the programme.

2 Introduction

In 2011, the first accreditation for the BTS in Communication Technologies (originally called 'Telecommunication Networks', until 2020) launched the development of different technological and ICT studies at the Lycée Guillaume Kroll. Together with the BTS in Cloud Computing (2018) and BTS Cybersecurity (2021) the BTS Communication Technologies (BTS-COT) forms the 'Future Hub', a label used by the Lycée to highlight its ambition for innovative technology and ICT sciences programmes.

In 2016, the BTS was re-accredited, and the evidence that its graduates were very wanted in the technological Industries of the Grand Duchy of Luxembourg was already established. In 2021, the name of the BTS was not the only change in the application file for the re-accreditation. Due to rapid changes in the sector, the programme chose to enlarge its focus on telecommunication networks with the development and monitoring of telecommunication technology.

The BTS-COT is closely linked to the major ICT enterprises in the region.

In order to keep up with rapid evolutions in the ICT sector, the curriculum of the BTS-COT presented today for re-accreditation, is altered with a change in the internship (one internship during the 4th semester with an integrated final year project), a change in the programme grid and with the introduction of new topics and courses.

The programme is built upon 3 modules, organized in the first 3 semesters: General Training, IT-Networking and Telecommunications. The workload and the amount of theoretical and practical teaching in the programme are carefully balanced, and evaluations are adapted to the requirements on level 5 of the Luxemburg Qualifications Framework. The programme comprises 120 ECTS in total, with an estimated 25-hour workload per credit.

The programme aims to train highly qualified professionals in telecommunications, the IT networks and broadcasting sector, as well as in the connectivity technology needed for the Internet of Things (IoT) and Internet of Everything (IoE). The BTS-COT programme is based on the deployment of 5G mobile transmission, both wired (LAN, WAN) and unwired (Wifi, Bluetooth, ...) IT networks and satellite data transmission. The consequences of the introduction of Generative Artificial Intelligence (GenAI) in the sector constitute a new challenge in various courses.

Graduates are employable immediately after obtaining their diploma, but they can also pursue their study with an extra year to obtain a professional bachelor's degree.

3 Programme assessment BTS Communication Technologies

3.1 Assessment area 1: Aims and objectives of the programme

Assessment area 1 is detailed in the following assessment criteria:

- a) The programme complies with the provisions relating to programmes leading to the BTS, as defined in Title II¹.
- b) The programme has a **coherent curriculum** which reflects the programme's intended **learning objectives** and the **learning outcomes** to be achieved by the student. It is broken down into **knowledge, specific skills, and transversal skills**.
- c) The programme is defined in accordance with **European standards** and the Bologna Process. It is defined in terms of **ECTS credits**.
- d) The programme is **divided into modules**, each of which is awarded a certain number of ECTS credits. Each module is made up of one or more theoretical or practical units, known as "**courses**". Each course carries a minimum of one ECTS credit and a maximum of 20 ECTS credits. The objectives and learning outcomes of each module and course are clearly defined.
- e) The **workload** is appropriate and balanced between semesters.
- f) The **ratio of theoretical to practical teaching** is consistent with the programme's objectives.
- g) **For each module** of the programme, the appropriateness of the **workload**, the types and methods of **assessment** and the intended **learning outcomes** are determined and documented in relation to the **level 5** descriptors of the Luxembourg Qualifications Framework, in accordance with the amended Law of 28 October 2016 on the recognition of professional qualifications^{2 3}, and in relation to the number of ECTS credits allocated to each module of the programme.
- h) Programmes preparing for **regulated professions** within the meaning of the amended Act of 28 October 2016⁴ on the recognition of professional qualifications **comply with the legislative and regulatory requirements governing the regulated profession concerned**. This compliance is established by means of a detailed **report drawn up by the competent minister responsible** for the profession concerned. This report is a **mandatory part** of the accreditation file.

The panel analyzed the provided documentation carefully and agrees that the course meets the indicators stated as decisive by the Luxembourg educational authorities. The programme clearly indicates how the study load is distributed over the entire curriculum, and how it aims to achieve learning outcomes adapted on level 5 of the Luxembourg Qualifications Framework.

The programme focuses on technical and transversal skills training that is complementary to the learning of technical knowledge. There is a well-structured modular approach to the curriculum (General Training, Networking, and Telecommunications). The panel appreciates the explicit workload calculations (25-30 hours per ECTS) and the strong alignment with

¹ https://legilux.public.lu/eli/etat/leg/loi/2023/07/21/a470/jo#title_2

² <https://legilux.public.lu/eli/etat/leg/loi/2016/10/28/n2/jo>

³ https://legilux.public.lu/eli/etat/leg/loi/2016/10/28/n2/jo#art_69

⁴ <https://legilux.public.lu/eli/etat/leg/loi/2016/10/28/n2/jo>

industry needs. The professional competences are well-documented, and there is a strong focus on practical applications and lab work. A wide variety of technologies are offered for students to use. Assessment criteria are clear.

The panel notices that the programme is not used to its full capacity: the average enrollment is below 9 students/year in the past 7 years, with 1 or 2 students not obtaining the degree in each enrollment. The panel discussed with the management how they approach these numbers and how they develop a strategy to attract and retain students to the programme. This was also a major concern to the 'panel de recevabilité' prior to the re-accreditation procedure and led to the development of a recruitment strategy by the management.

The management elaborates on the challenge of increasing the number of students. They invest in the promotion of the programme, in Luxemburg but also abroad. The integration of the BTS into a secondary school presents a great opportunity to increase the number of students. This group, and students that drop out from university, form the main target group. The required level of mathematical knowledge remains a barrier to many candidates. Students nowadays prefer soft skills to scientific matters, even if there are a lot of jobs to be found in the technology sector. They have a different idea of what ICT is about. There is also the problem that the civil effect of the study is lowered by the non-validation of BTS as a grade between secondary and bachelor level. Graduates who start in the public sector are often paid as high school graduate technicians, regardless of completion of an additional two years of study. A bachelor's degree is necessary if one wants to pursue a career in the public sector on a higher scale. For this, Lycée Guillaume Kroll works together with Lorraine University (BUT 'réseaux et télécommunications'), where they can finish their bachelors in one year.

Both students and companies underline the value of the BTS programme. For them, the added value is the broad curriculum, not only focusing on technical skills but also on soft skills and languages. Being taught in small groups is seen as an advantage. The teachers really invest their time. They compare BTS to a Swiss army knife: they can work in different kinds of projects and play different roles in their company, thanks to the broadness of the curriculum. Graduates feel able to understand different systems and be open minded to integrate themselves in different ways of working. Companies linked to the programme point to the number of training hours on the courses. The internal training for starters in the company can be reduced to a minimum.

The management is convinced that there should be no compromise on the required level of mathematics to attract more students. Even if the programme is not academic, but oriented to the professional market, it remains important that the theoretical level is high enough, as maths is a tool for learning in different courses at level 5. Also, a good theoretical basis is necessary for graduates who wish to continue their studies towards a bachelor's degree. The influx of students from within the Lycée is clear. The school is a bridge between secondary grades and continued study. At vocational level, they don't have the knowledge to go to university. BTS gives them the opportunity to specialize in the field. They find a more interesting job in the companies linked to the programme. The graduates are wanted by the companies, but they are ready to continue studying too.

The programme shows a good balance between theory and practical work. The panel is interested in the way this balance is built and the choices that were made to ensure that the system is fully integrated.

The programme puts high regard for student-centered learning, which is why they will enroll a maximum of 12 students a year. By implementing the final year's internship, the student will create lots of experience on top of the company-related (group) projects in class. The panel sees a good balance and diversity of subject topics the students must dive into throughout the 2 years of BTS study. Soft skills like teamwork, error handling and communication skills (in English) are seen as an asset and training is integrated in the various courses.

Conclusion

Based on their findings from desk research and confirmed in the discussions during the site visit, the panel finds that the programme has met the assessment criteria regarding the aims and objectives of the programme.

3.2 Assessment area 2: Admission, evaluation, certification

Assessment area 2 is detailed in the following assessment criteria:

- a) **The Lycée publishes**, in a clear, precise, and up-to-date manner, **information on its BTS programmes**, the **respective status** of its programmes with regard to accreditation, the **admission requirements** for the various programmes, **the enrolment fees**, the **total cost** to be expected per programme, **the curriculum** for the programmes offered, the **intended learning outcomes** and the **qualifications** leading to said programmes.
- b) The **admission requirements** for the programme of study are clearly defined and published. The modalities of potential **entry examinations** must be published 3 months in advance.
- c) The procedure for **validation of prior learning or experience** is clearly defined, in accordance with the provisions of Article 11⁵.
- d) **Assessment methods** are defined in relation to the learning objectives and are designed to verify the achievement of the programme's intended learning outcomes.
- e) **The assessment methods** applied in the various modules and courses are clearly **communicated** to the students.
- f) **The degree shall comply with the provisions** of Article 26(2)⁶, and shall be **accompanied by a supplement** complying with the provisions of Article 26(3)⁷.

The panel finds the information about the programme, as published on the website, accurate and complete. The information is published in French, while the course itself is in English. The communication is tailored to the targeted students and used on multiple communication platforms. The programme clearly describes the learning environment and informs about the fee per semester. Detailed curriculum information is provided.

⁵ https://legilux.public.lu/eli/etat/leg/loi/2023/07/21/a470/jo#art_11

⁶ https://legilux.public.lu/eli/etat/leg/loi/2023/07/21/a470/jo#art_26

⁷ https://legilux.public.lu/eli/etat/leg/loi/2023/07/21/a470/jo#art_26

Apart from the published information, the panel is curious about the management's views on advertising the BTS programme to interested candidates, in the light of the challenge to increase the number of students.

The management acknowledges that even with accurate information, it is difficult to attract large numbers of students because of the technical profile of the course. They want to attract students with the right motivation and affinity with technological products. In order to select the right students for the programme, an admission test was installed.

The admission tests are well structured on 3 components: skills test (mathematics and physics), digital/IT knowledge; and an English language interview. Candidates can prepare themselves for the admission tests using published preparation materials.

There is a defined VAE (Validation des Acquis d'Expérience) that validates experiences gained in practice, without following the teaching programme (except for the 30 ECTS the VAE students are required to acquire within the programme).

The panel appreciates the multiple assessment approach: formative assessment during courses; summative assessment through formal exams; continuous evaluation; lab reports and practical work evaluation. The panel finds the weighting system behind the evaluation system logical and adapted to the learning objectives. Students are informed about the assessment methods, and their results are regularly communicated with them, following a structured feedback process.

As the number of enrolled students remains small, meetings between students and their coordinator regularly take place, ensuring a close follow-up on the student's progress. The follow up is also entrusted to a mentor, who will also talk to the students whenever they show signs of doubt or lack of motivation.

There is awareness about evolutions in evaluation methods. More recently, the coordinator of the programme pushed towards a different type of evaluation. There was training on assessing lab reports in a better way. Before these reports didn't count much, students weren't motivated to put an effort into their reporting. Teachers also invest in better communication on how students are assessed (period, what aspects, etc.).

The panel raised some specific questions to the teaching staff about increasing oral examination, as a reaction to the use of AI as a problem-solver, thus creating an extra challenge to assess the students on their proper knowledge and know-how.

The teachers have all incorporated AI as a tool in their pedagogical approach, and in the background, they are working on a shared approach. There is also a national initiative reflecting on how education could meet the challenges raised by generative AI? Within Lycée Guillaume Kroll, guidelines about evaluations and AI were developed. They take the time for every individual to follow up on their learning process, and this continuous evaluation is accepted. With AI, students have the possibility to understand quicker and learn quicker. It helps to bridge language issues in the courses. But the teachers also make sure that in examinations, a number of tasks must be done without internet support. Students have to configure manually in a system, for instance. Students are trained to find a solution on their own. They must be able to explain how they came about some ways of thinking.

The certification process is aligned with European standards.

Conclusion

Based on their findings from desk research and confirmed in the discussions during the site visit, the panel finds that the programme has met the assessment criteria regarding admission, evaluation and certification

3.3 Assessment area 3: Implementation of the programme

Assessment area 3 is detailed in the following assessment criteria:

- a) The programme **has sufficient resources in terms of teaching staff and financial and material means** to meet its specific needs and achieve its objectives. These resources are available throughout the entire duration of the programme.
- b) The Lycée has **appropriate infrastructure** to offer the proposed programme and enable its students to do achieve the intended learning outcomes.
- c) Teaching is provided by a **teaching staff that is competent** from a didactic and pedagogical point of view and capable of relating teaching to professional practice in the field concerned and to current research. Teaching is student-centered and encourages active student participation. The suitability of each of the professional profiles of the available and planned teaching staff is clearly demonstrated in relation to the programme's objectives and its intended learning outcomes.
- d) The **proportion between teachers appointed in the Lycée and external contractors** is appropriate to the objectives of the curriculum, it being understood that the **proportion of lessons provided by external contractors may not exceed the threshold of 40% set in Article 9(2)⁸**.
- e) **Continuing training programmes** are provided for teaching staff.
- f) In the case of alternate programmes, the school has a specific and compulsory **training programme for the trainers who deliver the practical teaching modules in the workplace**.
- g) Students benefit from appropriate supervision and full information. A **tutoring programme** is offered to students.

Lycée Guillaume Kroll sees the hosting of the BTS programmes within the school as an important asset to increase learning opportunities for both pupils and teaching staff. During the site visit, the panel could see that the facilities are modern and suitable for the programme, with well-equipped labs and tight collaborations with local industry for on-site learning.

There is a clear budget allocation process for the necessary equipment, with support from industry partners and the government. Students have access to a grand collection of tools that they will meet in the job market. They are enabled to create projects based on current company challenges and even work together with these companies on practical project assignments. With both government and industry support, the school provides the programme with sufficient means to meet the objectives and create a learning environment that meets the standards.

Regarding the teaching staff, both academic and industry experiences are well mixed, and the teaching staff is motivated to keep up with the rapidly changing technologies. In particular, regular workshops by external trainers are planned and organized by the teachers

⁸ https://legilux.public.lu/eli/etat/leg/loi/2023/07/21/a470/jo#art_9

themselves. The alumni are involved as a pool of external trainers. The college has lecturers with high expertise, and with small groups of students, this expertise can be passed down in more detail according to each student.

The teaching load appears to be well balanced across staff members and semesters.

Upon meeting the students and alumni, the panel was impressed by the positive feedback they gave on the quality of the teaching, and the motivation and enthusiasm of the teachers.

A certain number of the staff also teach at level 4 at the Lycée and took the opportunity to teach in the BTS programme. They like it because it's a way to work in their field of expertise, and to develop themselves further as a professional. Teaching on level 5 demands a different approach to the students, and the panel discussed with the teachers about the way they adapt their approaches from one level to the next.

A lot of students are known to the staff as former pupils. In the beginning of the level 5 programme, the teachers can rely on the relationship built in level 4 with these students, and gradually they are expecting more autonomous work and ownership of their progress. These students were told in advance what they could expect at BTS-level: less hands-on training, a more theoretical approach, and more personal involvement required of the student. The teachers focus more on practical training (lab work) and certain aspects of the profession that are less known on vocational level (like working on presentation skills, or the evolving of technical vocabulary to the terminology used by middle management). A different dynamic is created, with group work and discussions on how to approach a problem. Along the way, they expect more autonomy from the students.

The group also has a number of teachers who only work on level 5 and there are teachers from the professional field. Their experiences led to certain changes to the courses, e.g. within the mathematical course (more integrated, less hours per week), the integration of AI, and modification of older technologies that are not applied that much anymore.

The teachers are very close to the students. The lessons and training are student centred and teachers are easily approached with questions or ideas. Teachers stay after hours to work with the students and help them think through a programming problem. Students testify to the panel that their teachers are well prepared. Their questions, like 'how a telephone antenna works' or how to repair a game console, immediately resulted in a practical demonstration and workshop. Students feel that they really work together with their teachers, and they are inspired by their enthusiasm and expertise.

A mentor is appointed for every student throughout the programme.

The teachers engage in a continuous training programme, organised together with the Institution de Formation de l'Éducation Nationale (IFEN). They testify to the panel that their courses are often discussed among themselves. They adjust so that the content of the programme becomes more integrated. Students need the knowledge of other courses to progress. They also integrate new developments, and the needs of the working field very quickly into the programme. The staff acknowledges the need to go from individual actions and 'coffee machine discussions' to a more systematic method and national validation of the methods for adjustments to the courses (e.g. AI and evaluations)

The management sets high standards for the staff. One becomes a secondary school teacher only after following a special programme and taking a teacher's exam. This ensures the teaching competences, and a teacher's mindset: to be respectful, have ample technical skills and be able to understand the problems of students. There is no specific standard for teaching at level 5 in a BTS programme. External experts don't have to pass the exam. For external teachers, the school makes sure they provide for the pedagogical training themselves.

Conclusion

Based on their findings from desk research and confirmed in the discussions during the site visit, the panel finds that the programme has met the assessment criteria regarding the implementation of the programme.

3.4 Assessment area 4: Quality assurance measures

Assessment area 4 is detailed in the following assessment criteria:

- a) **The Lycée ensures the collection, analysis, and use of relevant information for the effective management and continuous improvement of its BTS programmes.**
- b) The Lycée has a **quality assurance system** for its BTS programmes, which it makes **publicly available**. The quality assurance procedures applied by the Lycée **comply with** the requirements of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).
- c) **The programmes are regularly subjected to internal evaluation to ensure that they take into account the latest research and didactic developments in the relevant field**, achieve the intended learning outcomes, and **meet the constantly evolving needs of students and society**.
- d) The Lycée maintains regular and formalized **exchanges with professional circles in the Grand Duchy of Luxembourg** related to its BTS programmes.
- e) **Responsibilities, competencies, and decision-making processes related to the BTS programme are defined clearly and transparently.**
- f) **Teachers and students** have sufficient means to express their positions and **participate** in decision-making through representation in various bodies and committees.
- g) In the case of an application for the **reaccreditation** of a programme, it is demonstrated to what extent, and through which means, actions, and decisions **the Lycée has taken into account the recommendations outlined** in the evaluation report and the accreditation decision of the previous period.

The self evaluation report demonstrates the system for quality assurance that is used in the Lycée for its BTS programmes. Recently, a joint committee for BTS quality was founded to direct quality monitoring and actions in a more structured and common manner.

In the report, a list of recommendations of the previous accreditation panel is paired with the measures taken consequently. In particular, the formalization of feedback from students, companies, and debrief of teachers have been put in place to guarantee the follow up of signals and ideas of these stakeholders.

The programme makes a lot of effort to involve all stakeholders in the monitoring of quality assurance. The 'curriculum group' holds a strong commitment to ensuring quality within the

programme. The programme coordinator and teaching staff are drivers of continuous improvement. Teachers collect and analyze input from students and companies concerning their course.

The panel appreciates the flexibility she sees in many aspects of the programme, but is not convinced about the systematic approach to ensure sustainable quality (PDCA-cycle) of the programme. The self-evaluation is not clear about the way priorities are determined, or the outcome of innovations measured. The panel enquired about the methods used to ensure a systematic alignment between course content, learning objectives, industry needs, and evaluation.

In the dialogue, the coordinator and teachers were very open to give individual examples of how the curriculum was updated as a follow up of signals given by students and industrial partners: the traditional math's and physics courses became more integrated, AI was blended throughout the programme, ... To emphasize the professional focus on level 5, the balance between theory and practice shifted towards more practical than theoretical training, and more continuous assessment of the learning during the course was introduced. The programme focuses on applied technology and applied science, like satellite communication links - an industry that is very present in the region.

Critical evaluation is always necessary. The curriculum group focuses on what is relevant and important for the BTS Communication Technologies programme. In order to stay accurate, this sometimes means that courses are removed after discussing this with the teacher and one or two members of staff: for instance, the 'logical simplifications' course.

The curriculum group writes guidelines to enable everybody to be on the same track. They propose a change, and if the effect is received positively - after discussing this with students and teachers - it is implemented on the programme. It is an iterative process: an idea needs to be tried out before being able to see how it actually works.

The panel saw no evidence that the methods used for adjustments to the programme are applied in a systematic procedure.

The coordinator spends a lot of time on curriculum management, as there is a lot of feedback to be considered. Feedback from graduated students is collected to measure the content of the course to the requirements of the profession.

At the end of each year, the curriculum group organizes a debriefing with the partnering companies. This is a valuable feedback moment that allows the programme to focus on what is important on the professional market. The outcomes of these exchanges are discussed with the staff, and even with students.

The invited companies and alumni confirm to the panel that the exchanges with the programme lead to the right qualifications and competences they are expecting with starting professionals. The collaboration between the programme and a partner company is very close. At Lux Net for example, courses are given on site; allowing the students to actually see and understand the fiber infrastructure and the data center. The company benefits from this collaboration with the influx and retaining of good students.

At the end of the semester, students fill in a google form to give feedback to the teachers. On their own initiative, as a group, they even wrote a full document as extra feedback. They indicated that their feedback was discussed and taken to heart by the teachers. They actively engage to deliver their findings to the staff.

Conclusion

Based on their findings from desk research and confirmed in the discussions during the site visit, the panel finds that the programme has met the assessment criteria regarding the quality assurance measures.

General conclusion

The accreditation panel is positive about the BTS programme on communication technologies.

The management sets high standards on the programme, and invests in strong partnerships with the professional field in the region. The panel met with a team that seemed very competent, very engaged, and very aware of the challenges. There is a close relationship between the teachers and the students. The programme has a positive impact on their lives. Students and alumni are real ambassadors of the BTS.

There is a lot of confidence within the team to share ideas. The panel saw a good reflective culture. Colleagues and students are seen as critical friends, and their feedback is welcomed and taken seriously. There is an active use of the working field to initiate actualizations in the programme. This is a good basis to establish innovative content and interactivity in the programme. There is a good balance between theoretical and practical teaching. Thanks to close collaboration with the partnering companies, the access to hardware is impressive.

There is room for a more systematic approach to ensure the quality of the programme. Every teacher is looking to improve his courses by himself, but there is no established common approach to implement new developments. The panel encourages the team to organize discussions and decide on the programme's evolution as a group.

The panel advises the programme management to allocate more time and resources to the programming process. Give the members of the team space to make road maps. It will make the process stronger and increase the identity of the BTS-COT.

The enrolment numbers remain a concern that asks for a well-thought-out strategy. The panel suggests that the partnering companies and alumni play a more prominent role in the promotion of this valuable programme. Towards the pupils in vocational training, it could be a good idea to invest in embedded workshops to trigger their curiosity and give them a better idea of the actual work in the communication technology field.

4 Judgement

- Assessment area 1: The aims and objectives of the BTS programme are consistently translated into the curriculum. The balance between theoretical and practical learning is aligned with the intended learning outcomes and the level 5 descriptors of the Luxembourg Qualifications Framework. There is a well-structured modular approach to the curriculum. The panel appreciates the explicit workload calculations and the strong alignment with industry needs. Both students and companies are convinced of the added value of the BTS programme. Even though the programme struggles to meet the enrolment objective of 12 students a year, the panel finds that the programme has met the assessment criteria.
- Assessment area 2: The programme is very transparent about the objectives and the content of the BTS CT in its communication. The panel encourages the management to keep investing in the active promotion of this programme, for example by organizing embedded courses for level 4 pupils, to increase the number of candidates to take the admission test. However, the panel appreciates the management's strong views on keeping high standards of teaching level and technological focus, rather than attracting larger groups with an easier programme. The students benefit from a very close mentoring and a variety of evaluation methods, ensuring the learning outcomes to be obtained. The certification is based on a balanced and adapted programme that meets the level 5 standards. The panel finds that the programme has met the assessment criteria.
- Assessment area 3: With both government and industry support, the school provides the programme with sufficient means to meet the objectives and creates a learning environment that meets the standards. In many ways, the teaching staff make a great commitment to the programme. The teaching competences and professional expertise are in place, and there is awareness of the challenges in the field. Students are well tutored and interact actively with their teachers. As for the professional development and didactical quality of the teaching staff, the panel is convinced that defining a specific set of standards for teaching at BTS level, would help the programme to develop a specific training programme for the entire team. The panel finds that the programme has met the assessment criteria.
- Assessment area 4: The quality assurance method of the programme is based mostly on feedback from students and industry. The curriculum group holds the responsibility to align the requirements of course content, learning objectives, and industry needs. The panel was presented with a lot of vivid examples of adjustments to the programme and was able to gain more insight into the evaluation system in place. The panel **recommends** the team to work further on a structural approach to integrate innovations into the programme, and ensure follow-up as a team. The panel appreciates the efforts that have been put into the quality of the programme. However, the panel also suggests to put further effort into calibrating the program at level 5. The panel would **recommend** formalization of the PDCA cycle and benchmarking with international standards to enhance the quality assurance to this more systematic approach. The panel finds that the programme has met the assessment criteria.

Consequently, the panel recommends the re-accreditation for the BTS-COT programme of Lycée Guillaume Kroll.

Assessment area		Judgement
1	Aims and objectives of the study programme	MET
2	Admission, evaluation, certification	MET
3	Implementation of the programme	MET
4	Quality assurance measures	MET
	Overall judgement	MET

5 Annexes

5.1 Annex 1 – Composition of the panel

- Dirk Kerckhoven, director Don Bosco Education Centre Brussels (Chair)
- Xavier Goaoc, Professor in research and teaching, Université de Lorraine
- Amin Mantrach, Manager Applied Science - Generative & Responsive AI, Amazon
- Avkaran Sarminder, Student BA in ICT, Odisee University of Applied Sciences

The panel was supported by:

- David Corradi, NVAO process coordinator
- Christel Verhas, secretary trained and certified by NVAO

All panel members and the secretary have signed a declaration of independence.

5.2 Annex 2 – Schedule of the site visit

08.30-08.45	Closed panel meeting
08.45-09.55	Dialogue with management/coordination of the Lycée and the programme
09.55-10.10	Closed panel meeting/break*
10.10-11.20	Dialogue with teaching staff /support staff
11.20-11:45	Closed panel meeting
11.45-13.00	Light lunch/closed panel meeting Short visit of the facilities and informal meetings with students
13.00-14.00	Dialogue with employers and alumni
14.00-14.20	Closed panel meeting/break
14.20-15.20	Meeting with students
15.20-15.30	Closed panel meeting/break
15.30–16.00	Backup time: meeting with programme management
16.00-17.00	Closed panel meeting
17.00-17.30	Mutual dialogue programme management and panel regarding the findings of the day

5.3 Annex 3 – Documents reviewed

- Rapport d'évaluation Du BTS Communication technologies, 28/04/2021
- Self-Evaluation Report - Reaccreditation File, 15/07/ 2025
- Course catalogue 2026-2027 BTS communication technologies
- End of year internship reports
- Example of a 'supplément au diplôme'

5.4 Annex 4 – Abbreviations used

BTS-COT *Brévet de Technicien Supérieur en Communication Technologies*

ECTS *European Credit Transfer and Accumulation System*

GenAI *Generative Artificial Intelligence*

IFEN *Institution de Formation de L'Education Nationale*

IoT *Internet of things*

IoE *Internet of Everything*

LAN *Local Area Network*

VAE (*Validation des Acquis d'Expérience*)

WAN *Wide Area Network*

Colophon

QUALITY ASSURANCE SYSTEM LUXEMBOURG

Assessment framework BTS

28 January 2026

Compilation: NVAO □ FLANDERS

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