FIRST® Robotics Competition

Business Plan Team **5553**

ROBO'LYON
The FIRST French Team

Mission Statement

Robo'Lyon is the first French team to participate in the *FIRST*® Robotics Competition.
We wish to promote the *FIRST*® Robotics Competition in our country and expand the *FIRST*® community by helping new teams to emerge because **our mission is to increase young people's interest in Science and Technology and support them to grow in these areas through the preparation and participation in the *FIRST*® Robotics Competition.**

Team History and Growth

Anthony Dailly is a student who spent one year in North America where he discovered the *FIRST*® Robotics Competition. He **created Robo'Lyon in September 2014.**

Anthony proposed the project to his school Notre Dame de Bellegarde and engaged a few friends in the adventure. They participated to their first competition in April 2015 in Montreal where they won the Entrepreneurship award.

Since 2015, the team involves **students from three grades** (15-16, 16-17 and 17-18 years old). **Each year, one third of the team** (the oldest one) **leaves** the school, and therefore Robo'Lyon, to join the University. Moreover, each year, we welcome around ten young newcomers. Some students become mentors when leaving school or later.

We have defined three different focus for the three populations: **learn and try (youngest), do (middle age), train and coach (oldest).**

- We have a recruitment campaign and we select through interviews performed by a few mentors and students.
- Since 2019, the rookies also attend a **summer camp** in June-July where they are trained by the current team members and where lot of focus is put in getting to know each other's and knowing the competition.
- An **inclusion weekend** is also the opportunity to learn even more and start the pre-season full of energy and ideas.

WHY "ROBO'LYON"?

5553
It is our team number. Although we are the 5553rd registered team, we are the first French team.

The lion
It is an allusion to Lyon, our city. It is also a symbol of strength and power serving as a model.

Robo'Lyon
It is a name easy to understand and remember. It summarizes our mission: build robots for the FIRST Robotics Competition and underlines our origins.

Our signature
"The FIRST French team" underlines our pride to be the first team from France which have ever participates in the FRC. The choice of English reflects our international dimension.

Our colors
Blue, white and red colors of the logo allow us to bear proudly the colors of France during the competition.

ORGANIZATIONAL STRUCTURE

The team tried along the journey different organizational models, but until 2018, there was a split between business (communication, marketing) and technical.

4 years ago, we have decided to increase the one team spirit by identifying and formulating main roles (see appendix 1: roles description) and business hubs (see appendix 1 bis: hubs definition).
All students and mentors are mapped into several hubs according to their interests, but this is not a fixed map and everyone can explore different type of jobs.

Since 2020, we have changed our ways of working to become more Agile. We use the SCRUM methodology and the students work in small groups on prototypes, building and testing new mechanisms during the pre-season.

This allows the students to:

- interact more,
- understand the problems of the other jobs,
- brainstorm altogether, bringing new perspectives,
- build prototypes in a shorter time and learn from experience.

RISK ANALYSIS

See SWOT Analysis in appendix 2.

BEING FRENCH IS A CHALLENGE

In France, as we are the only Team which participate in the competition, we have additional constraints to overcome:

Expansive travel for 40 members and a robot	Compete against American teams with more ressources than us	Our building period is three weeks shorter	
Studying in French school system with timetables unsuited to a competition	Import a large part of the parts from USA	Prove that young people are capable of innovation, entrepreneurship and professionalism	

MARKETING

We have a **logo** and clear **communication guidelines** that we use in all communications and advertising items.

We communicate through

- a weekly **Newsletter**
- our **Website** (event page and announcements)
- social media posts: **Facebook, Instagram, LinkedIn**

We sell advertising items through an **online shop**.

We held **events** and create/stick **posters** in public buildings, shops in our city and the cities around to promote them.

We also participate to external events (like **IT and robotics fairs**) where we promote the competition, our team and our partners.

We organize **visits and demonstrations** on demand in other schools, partners and potential partners' premises.

You can find us here:

- **Website**: www.robolyon.com
- **Facebook**: https://www.facebook.com/robolyonoff
- **Instagram**: https://instagram.com/robolyonoff/
- **Linkedin**: https://www.linkedin.com/in/robo-lyon-82037ba8/

FINANCIALS:

See income statement and balance sheet in appendix 3.

Our needs:

For a regional

Events (ex: fairs)	3 000 €
Registration fees	5 000 €
Robot building	15 000 €
Goodies and communication in competition	2 000 €
Travel (16 team members and robot)	20 000 €
Other (food, material…)	2 000 €
	47 000 €

For a championship

Registration fees	5 000 €
Travel (team and robot)	50 000 €
Robot modifications	1 000 €
	56 000 €

How do we get there?

1. Building and following the budget:

One of the mentors is a professional accountant and sometimes involve one student to build and follow up the budget. At the beginning of the season, we calculate the costs foreseen for building the robot (including the material), for the travel of the team, for the transportation of the robot, etc. (see charts in appendix). We search for partners and held events in order to find the necessary money (see chapter 'collecting funds'). We follow-up on the budget in the monthly executive committee. Note! It is difficult to plan for the potential qualification to the championship and we need to anticipate and collect more money than necessary for the regional, in case we are qualified.

2. Collecting funds:

From our website, people can access an event page where they can give money directly, buy their participation to events or buy services.

We sell advertising items through an online shop.

We organize events like Christmas tree selling, Salmon selling, etc.

We collect money through sponsors, family participation, membership, donations.

All the students are involved in partners' search.

3. Relationship with sponsors and recognition

- All our partners receive our Newsletter and can follow our progresses through this channel.
- They are welcome to visit us in our room in Notre Dame de Bellegarde School.
- They are invited to the annual kick-off.
- They can follow the competition through our website.
- We also organize a partner's evening after the season to thank them for their support.
- We visit our partners and do demos of the robot on demand.

We give visibility to our partners

All along the year:

- We talk about our partners and show their logo in all our events.
- We bring kakemonos and talk about partners in external events we participate in.
- We make specific posts on social networks such as LinkedIn and Facebook
- Our partners' logo are visible in the Robo'Lyon official tee shirts and jackets.

During competitions:

- We bring kakemonos on our Robo’Lyon stand.
- Major partners can have their logo on the Robot.
- We talk about and thank our partners during interviews.

Appendix 1 – Organization (roles)

Mentor: « Hand over and support »

- Pass down his knowledge and experience
- Support, advise and guide
- Make the others grow

Referrer: « Welcome and facilitate »

- Guide his protégé all along the season to know more about Robo'Lyon and the competition
- Be a point of contact for the protégé for any question
- Facilitate the integration of the protégé in the group

Student: « Learn and do »

- Learn the techniques and how to use the tools
- Be curious and ask questions
- Listen
- Do
- Escalate information, needs, questions to Management Committee representative

Student member of management committee: « Channel of communication »

- Participate to Management committees
- Take actively part of the meetings and decisions
- Channel of communication between Management committee and the group:
- Communicate decisions and all important news,
- Collect students' requests / suggestions and send them to Management committee
- Act according to decisions and report on actions taken

Head of hub: « Coordinate »

- Takes all necessary measures for the good management of the hub
- Reports progress to the rest of the team

Responsible of the Robot: « Secure the building of the robot »

- Ensure coordination between the different hubs in order to make sure that the robot complies with the competition rules and the team's expectations within the agreed budget.
- Manages the production schedule so that all the hubs can work on the robot within the allocated time.

Head of hub Budget and Purchasing: « Purchase »

- Ensures management of the robot budget under the control of the treasurer.
- Control purchase requests for the robot or equipment.

Appendix 1bis – Organization (hubs)

ACCOUNTING: Establish the budget forecast for the association

GAME STRATEGY: Analyse and define the best possible strategies for the competition

CAD: Design based on a common definition the different elements of the robot

COMMUNICATION AND EVENTS: Communicate broadly Robo'Lyon activities and promote our sponsors and partners through the social media. Create and organize different events to promote Robo'Lyon, ensure that we are known and collect funds for the association.

PROGRAMMING: Encode the robot and the applications needed for the team to perform.

PLAYGROUND & BUMPERS: Create and manage the playground.

ELECTRICS & PNEUMATICS: Ensures the control of the electric and pneumatic parts of the robot.

ROBO'LYON KIDS MENTORING: Support the Robo'Lyon FLL teams.

INSPIRES: Promote Robo'Lyon inside and outside the FIRST community.

TECHNICAL DOCUMENTATION: Aggregate and spread the technical knowledge.

RH / TEAM DYNAMIC: Create the conditions for a good team dynamic, collaboration, continuous learning, etc.

PROMOTION: Promote the Robo'Lyon association and ensure that we participate to diverse events.

SPONSORS & PARTNERS: Actively search for new partners while keeping the existing ones. Maintain the documentation that allow us to present Robo'Lyon to potential future partners.

BUDGET, PURCHASING AND LOGISTIC: "STRATEGIC MISSION, Ensure a smooth flow of the season by ensuring the availability of necessary equipment"

Appendix 2 - SWOT Analysis

STRENGTHS (+)

- Very engaged students willing to succeed.
- New highly skilled mentors in Agile and Technology.
- Stability: the students stay 3 years in the team.
- We start to have a good experience and learn from our mistakes. Each year we succeed to win the regional or get an award (chairman, engineering inspiration). We participated 2 times in 7 years the championship and this give us energy to continue.
- Recruitment: we can chose among many interesting profiles, as many students are willing to be part of the team.
- Our students, even not skilled in technology are smart and clever in mathematics, sciences, etc.
- The team have a good support from the school and the student's family

WEAKNESSES (-)

- Students do not know anything about robotics, IT, etc.… They come from a general school and do not have any technical competences when they join the team.
- Mentors invest a lot of time to support students to grow, sometimes difficult to include in their planning with own job on the side.
- Students needs to learn a lot about communication and marketing as well, as finding sponsors is a big challenge in France.
- Speaking English is sometimes a challenge for students and mentors.
- We are a few teams in Europe and the culture is different, building alliances can be a challenge.

Internal Factors

OPPORTUNITIES (+)

- Robo'Lyon win the Innovation Award in 2021 giving lot of visibility to *FIRST*® in France.
- Robo'lyon is a founding partner of Robotique *FIRST*® France, with 'Fusion Jeunesse France.
- 'Fusion jeunesse France' is now well known (organizer of the Montreal Regional event).
- Organizing a regional event in France, would allow the teams in Europe to: increase *FIRST*® visibility, engage more teams, train ourselves.
- Robotics events are hold in our city allowing us to be seen by current or potential sponsors.

THREATS (-)

- Sponsoring concept is not very common in France; companies are not willing to support students associations.
- *FIRST*® competition nearly unknown in France.
- Expensive travel of 40 members and a robot.
- Building period shorter due to the time necessary for the robot transportation.
- Participation to several Regional events impossible due to cost.
- Importation of most of the robot's parts from the US.
- Study in the French school system with schedules non-adapted to the competition.
-

External Factors

Appendix 3 – Financials

BALANCE SHEET 2020-08-31

ASSETS		LIABILITIES	
		Cash Reserves	$ 16 203
Availabilities	$ 19 350	Financial year result	$ 3 147
		Debts	$ 0
		Miscellaneous	$ 0
TOTAL ASSETS	**$ 19 350**	**TOTAL LIABILITIES**	**$ 19 350**

The year 2021 is not presented because it is not representative.

INCOME STATEMENT

REVENUES	2020	Forecast 2022
Sales of goods	$ 6 326	$ 6 989
Subscriptions	$ 4 890	$ 4 664
Events	$ 1 958	$ 0
Sponsoring	$ 41 481	$ 29 079
Participation from families	$ 19 800	$ 7 957
TOTAL	**$ 74 455**	**$ 48 689**

EXPENSES	2020	Forecast 2022
Purchases of goods	$ 4 794	$ 4 694
Raw materials purchases & other supplies	$ 14 716	$ 15 249
Set of tools	$ 760	$ 1 799
Insurance	$ 130	$ 141
Publications	$ 2 844	$ 156
Transports and customs	$ 3 115	$ 2 081
Regional event spendings	$ 49 120	$ 25 520
Other travel expenses	$ 1 051	$ 3 421
Bank charges	$ 419	$ 235
Internet	$ 373	$ 0
TOTAL	**$ 71 321**	**$ 53 296**

NET INCOME	$ 3 134	$ - 4 607