

Gears of SUCCESS

UNDER CONTROL

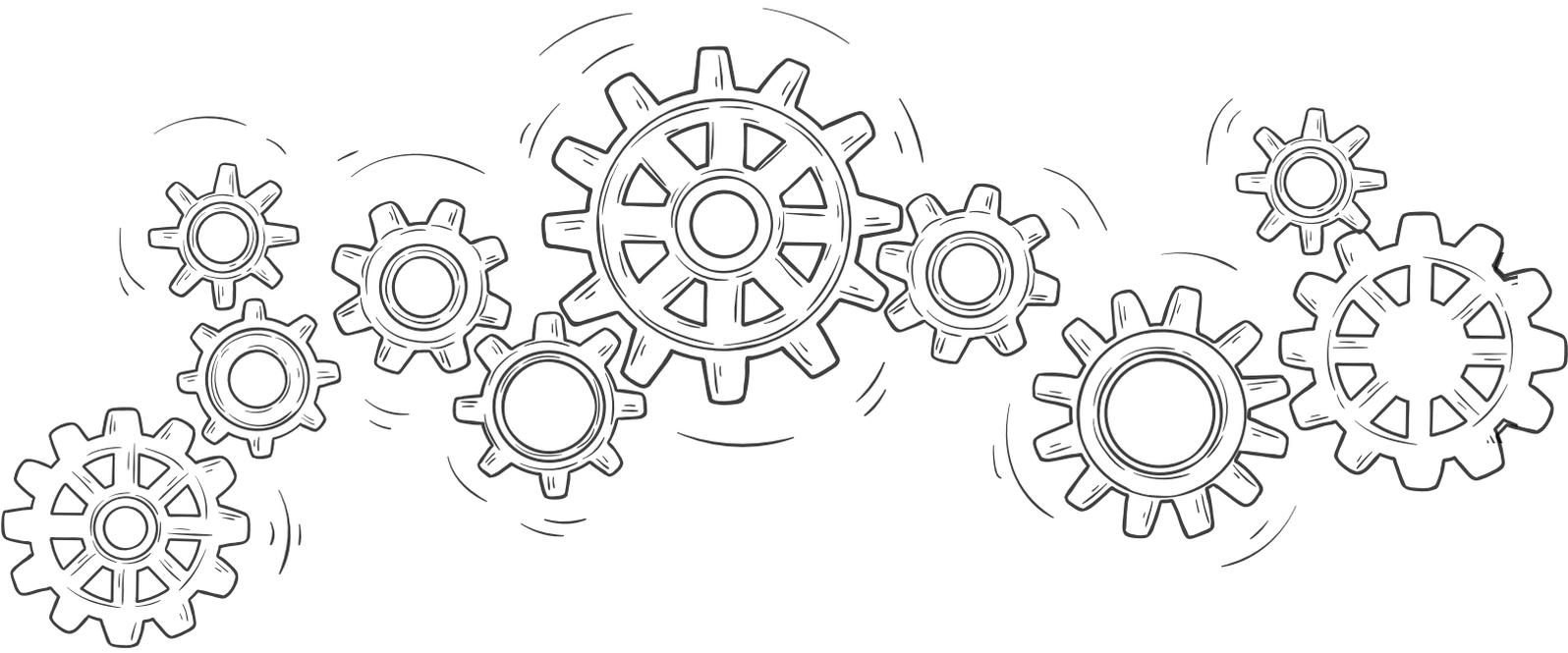
#1156



**SUSTAINABILITY
PLAN**
Under Control 1156



WWW.UNDERCONTROL1156.COM



'CAUSE WE ARE UNDER CONTROL



SUMMARY

ABOUT THE TEAM

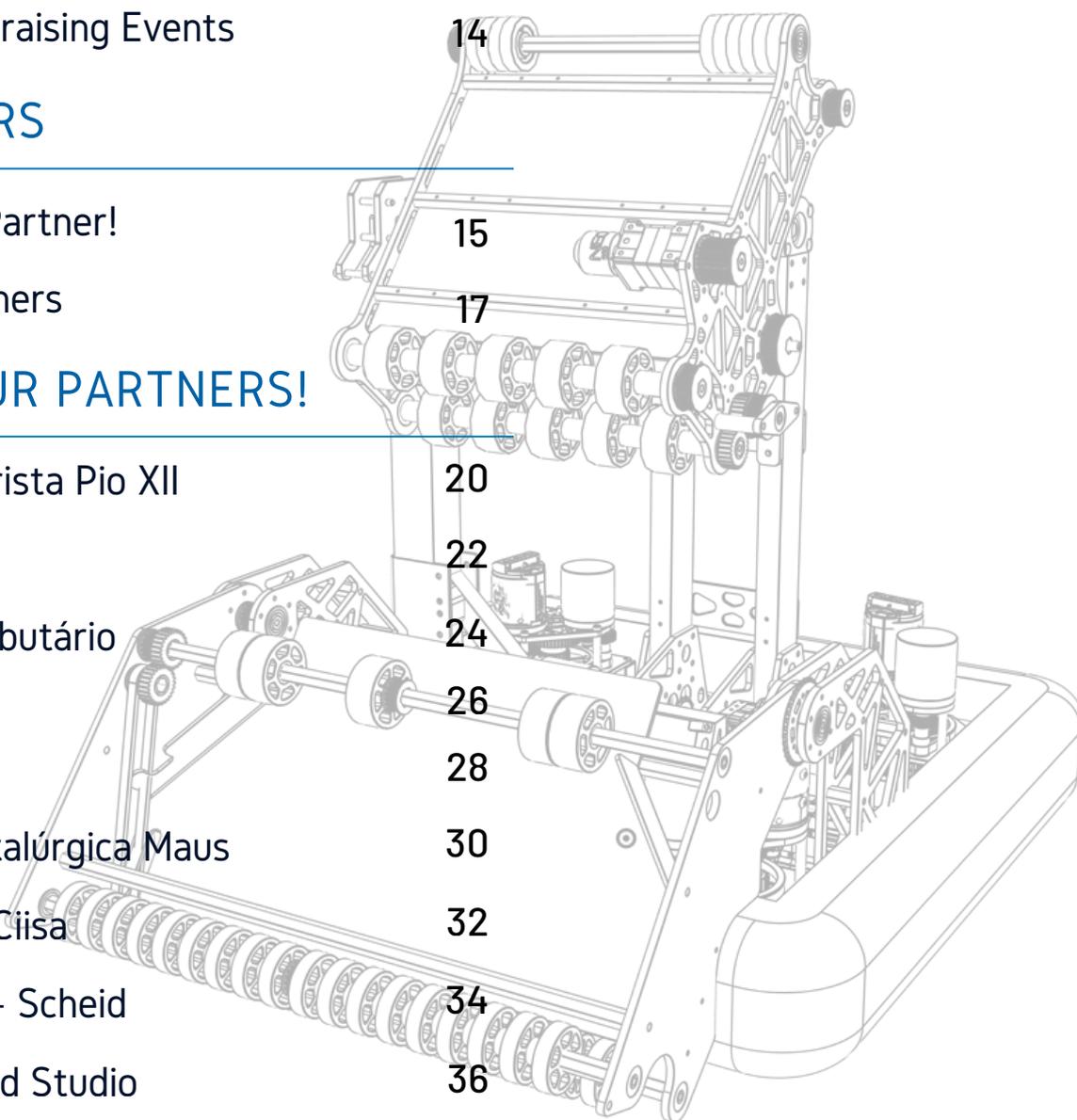
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WHAT IS UNDER CONTROL

Under Control #1156 was founded in 2002 in Novo Hamburgo, Rio Grande do Sul, with the objective of introducing *FIRST*® and its principles to our school. After participating in our first competition in 2003, we became the first Brazilian team in existence to win the Rookie All-Star Award.

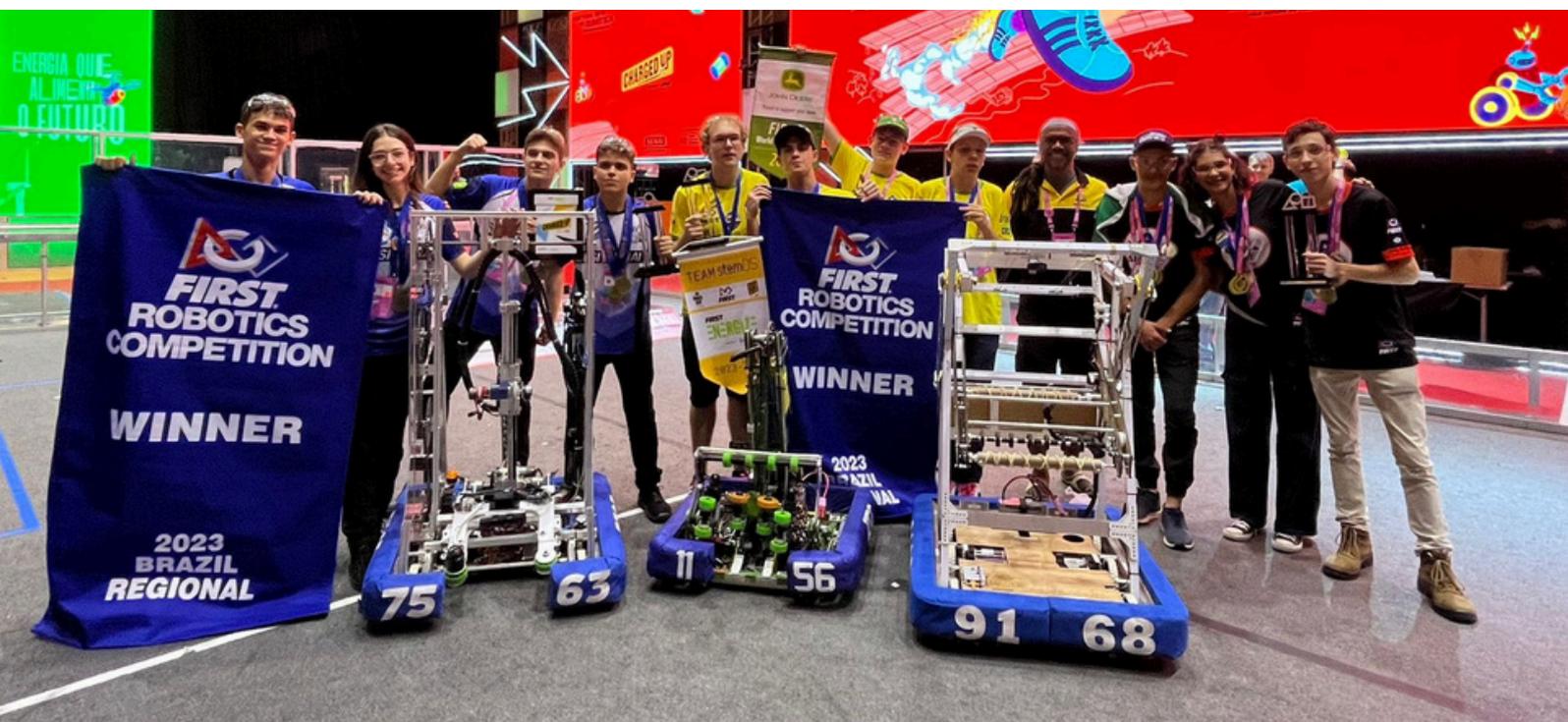


Since then, 1156 has been steadily supporting its members to grow autonomously, introducing and promoting STEAM in its community, making strong connections with partners and sponsors, and changing the way people see robotics and the lives of thousands of people for more than 20 years.



WHAT IS **FIRST**[®]

FIRST[®] (For Inspiration and Recognition of Science and Technology) is a robotics community that prepares young people for the future through a suite of inclusive, team-based robotics programs in school or in structured afterschool programs.



The mission of FIRST[®] is to inspire young people to be science and technology leaders and innovators, by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

1156'S MISSION

“In summary, the concept of mission involves a purpose or specific objective assigned to an individual, group organization or entity. It defines what is to be accomplished, guides the actions and serves as a guide to direct efforts in seeking desired results.”



Under Control's mission is to inspire generations through STEAM, building leaders for the future, promoting values of professionalism, humanity and excellence.



1156'S TEAM HISTORY & GROWTH



Ivan Boesing, a professor that knew FIRST®, had always dreamed of creating a robotics team. So 1156 was founded in April of 2002. The team was created at our school, in Novo Hamburgo, Porto Alegre's metropolitan area, known as the national capital of footwear, due the high amount of local industries in the field.



Robotics has become a key factor in these industries' productivity increase to remain competitive in the 21st century. It also holds some of the largest technology companies in the country, such as SAP and Stihl. In 2003, our team took part in its first competition, the J&J Mid-Atlantic Regional, winning the Rookie All-Star Award and becoming the first brazilian team to win this award.

1156'S HUMAN RESOURCES

REPIO 2.0

In order to spread robotics and increase the number of members in the team, we developed in 2017 the Repio 2.0 project. With it, we yearly offer preparatory STEAM courses where students from our school can develop soft skills, technical skills, discover new talents, and join 1156. In this project, we offer Maker courses, that develop technical skills, such as mechanical, programming, electrical and CAD, and Marketing, that develops non-technical skills. Since 9th grade, our classmates are able to be a member of our FRC team, currently composed by 25 active members, 10 active mentors and 37 alumni.

FROM STUDENTS TO MENTORS

Besides competing, we maintain our members engaged through various actions related to robotics and STEAM, such as volunteering on events, being part of outreach projects & running projects with sponsors. These close interactions with sponsors become internship programs, opening doors to career development.

As the seasons pass by, 1156's members gain more experience, knowledge and become leaders due to all the contact they have with *FIRST*® associated areas. Everything they had learned is transmitted to new members of the team, establishing a learn to teach cycle inside the team.

Staying engaged with the team after graduation, the students become alumni, preparing their career as mentors in the team.



1156'S MEMBER'S SUSTAINABILITY

STUDENT'S GUIDE

Equipe Under Control #1156
Guia do Estudante - Temporada 2023-2024

Para este Manual:
Este manual destina-se a conter as informações necessárias para que todos os estudantes da Under Control entendam os procedimentos administrativos e logísticos do time FRC Under Control 1156. Todas as alterações no manual são revisadas e aprovadas pelos mentores da equipe.

- Inspirado no Team Handbook do 1678 Citrus Circuits.



Based on Gracious Professionalism and the 1678 Citrus Circuits Team's Handbook, we developed our student's guide. This document talks about various topics, like coexistence rules, lab presence policy, behavior expected from students and FIRST®'s core values.

We also have a mentor's guide involving similar topics. Both documents were signed by all team members and mentors.

Since its implementation, our members became more dedicated regarding tasks and deadlines, boosting our season performance.



1156'S STRUCTURE



ORGANIZATIONAL STRUCTURE

Due to the high costs of buying our machinery and taking Under Control to international travelings, we've been strictly managing our money and wisely looking for new partners and sponsors to support us with discounts, products and/or services.

Identifying the need of accurate finance control on the team, we created a cash flow control tool on Google Sheets, which only the business leader and lead mentors have access. In this tool, we input the initial funds of the season, which the team receive/raised in the off season, allowing us to have control over the amounts spent and received during the season, thus forecasting the amount needed for the next season, based on pre-established values.



1156'S CHART & BUDGETS



Main mentors:
Matheus Delazari
Cibele Gonchoroski

Mechanics/ Production	Electrical/ Programming	CAD	Awards	Business	Marketing	Mentors suport
Matheus D.	Bruno Toso	Henrique	Cibele	Isabela	Júlia	Gabriel
Mateus	Luca Carvalho	Victor	Guilherme L.	Ana Amora	Helena	Pedro

Students

Artur Koch Bruno Nunes Ico Johann Luca Carvalho	Maria Eugênia Lucca Becker Ana Amora Günther Steinmeier Arthur Guiel	Arthur Duarte Mateus Maus Victor Zanchi Guilherme de Souza Ben Hur Schmidt	Helena Reinhart Giovanna Isoppo Virginia Pieri Valentina Loeblein Gabriel Kalsing	Juliana Ferraz Marianna Cardoso Kauã Roese Vitória Gomes
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1156 UNDER TRIP



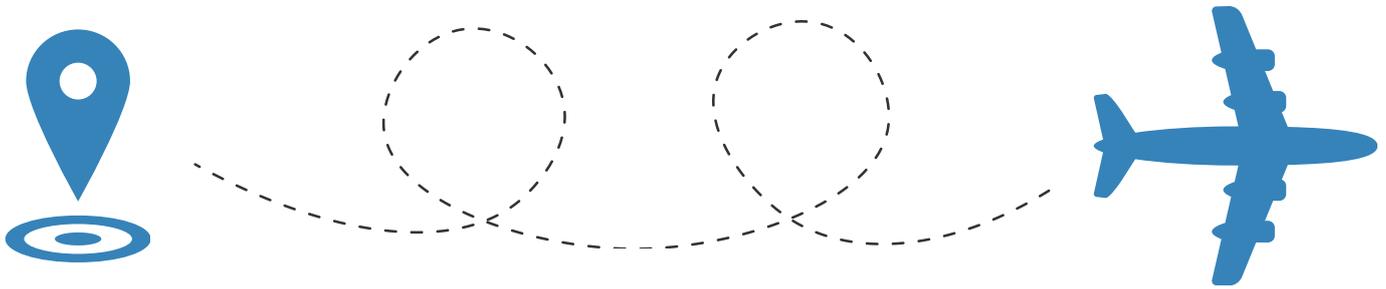
In the end of 2023, Under Control initiated the Under Trip project, that aimed to reduce the travel cost of the competitions, that are payed by the members themselves.

Companies and businesses were contacted to assist in this process, where we presented our proposal regarding the amount supported.

Our sponsor, Cypress Turismo, helps us since 2004 with the logistics of passports, visas and purchase of tickets.

They were a big partner for this project.





To complete this project, we counted with two very important sponsors, Bombas Beck and Cigam.



Bombas Beck was founded in 1967 and initiated its activities operating in the hydraulic pumps and effluent treatment equipment sector.

Cigam acts as an agent of digital transformation, taking innovation, technology, management and information to all of the business ecosystem.



1156'S FUNDRAISING EVENTS

Our team is known for participating in and promoting events in our community, and this is one of our strategies for raising money: fundraising events.

Each year, we promote the Robotics Thrift and the Robotics Tea in our school, which has become one of our biggest sources of income. In the Thrift all of our team members separate any kind of object that is not currently at use and bring them for donation. And the Tea we assembled kits with delicious sweets and each member of the team had to sell at least 10 kits. Our Booster Club helps us organize and manage these events.

We also participate in school events, promoting sales of products or food produced by our team, besides our demonstrations with our robots in the same event.



1156'S BOOSTER CLUB

Our team significantly relies on the support of students' families, playing an essential role in our growth. Active participation of parents in our fundraising events is crucial, as there are certain responsibilities that students sometimes cannot take on. Their knowledge and collaboration are fundamental to materialize students' ideas in fundraising, ensuring the ongoing and effective functioning of our team.

Furthermore, when possible, parents also accompany the team in competitions, remaining available for any help.





BECOME A

SPONSORSHIP SCALE

ROOKIE

R\$ 100 - R\$999

- Instagram post
- Logo on team's banner
- Small website highlight
- Team available for meetings, projects, demonstrations & others.

RISING STAR

R\$ 1.000 - R\$ 4.999

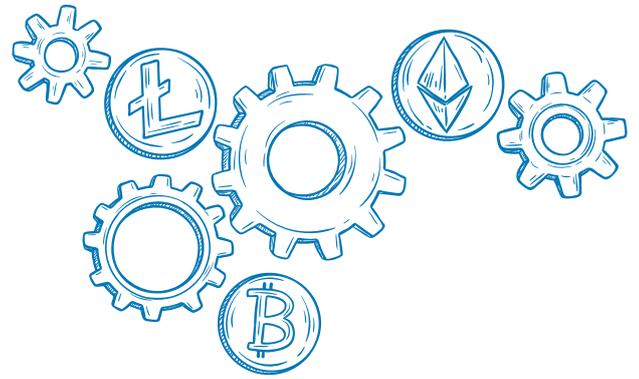
- All the benefits of "Rookie" tier.
- Brand's Propaganda on social medias

ALL STAR

R\$ 5.000 - R\$ 9.999

- All the benefits of "Rookie" & "Rising star" tier
- Small highlight on team's t-shirt
- Logo on robot fairing

PARTNER!



MVP

R\$ 10,000 - R\$ 14.999

- All the benefits of "Rookie" & "Rising Star" tier
- Medium highlight on team's t-shirt
- Medium highlight on website

HALL OF FAME

R\$ 15.000 OU MAIS

- All the benefits of "Rookie" & "All Star" tier
- Big highlight on team's t-shirt
- Big highlight on team's website + Instagram
- Logo on team's polo shirt
- 2 pages on the sustainability plan

STEAM SUPPLIER

MATERIAL AND/OR SERVICE

- Logo on robot fairing
- The benefits depend according to the service or supply offered

1156'S PARTNERS



Due to the high costs of managing a FRC Team and all the steps needed to run it, our team wisely searches for new sponsors and partners to support us, in many ways.

From now on, Under Control 1156 will introduce you to one of our main pillars of keeping our team sustainable.

STELLA

FLUIDIC
automação industrial



stemOS
NEXT LEVEL ROBOTICS

Metalúrgica
Maus
Desde 1970

COLÉGIO MARISTA
PIO XII



JOHN DEERE

RA
Rockwell
Automation

CiISA

scheid
ESQUADRIAS

000
odd.studio

DOMÍNIO
TRIBUTÁRIO
GESTÃO TRIBUTÁRIA INTELIGENTE

COFEROXI

Qualcomm

CYPRESS
TURISMO

e-core

UP SENSOR
TECNOLOGIA

Prof.
LUCAS SILVA
Certificações

MAGNÓLIA
MOVELARIA

APPENDIX

TEAM ANALYSIS

SWOT ANALYSIS



BUSINESS MODEL CANVAS





COLÉGIO MARISTA PIO XII



"Educators are involved, every day, in the mission of educating with competence through creative and innovative processes, awakening the protagonism for social transformation. About a thousand students, from Kindergarten to High School, learn daily that knowledge goes far beyond the classroom."



All members of our team are from the school, which is a part of the Marist network, being inspired by their mission every day.



Colégio Marista Pio XII is an extremely important partner! They not only provide us with a place for both our FTC & FRC teams to work, but also greatly assist us in running events and developing our projects.



SUPPORT

One of the ways in which the school helped the team was by providing two high-end laptops for use in programming and as part of the driver station, allowing students to do their best with phenomenal performance.

Another way in which the school helps the team is by providing spaces for our fundraising events, like thrift stores and cake sales. These actions are extremely valuable, as they allow us to keep the team alive.



PRACTICES IN THE SCHOOL ENVIRONMENT



With Colégio Marista Pio XII, we organize several activities, demonstrations and actions within the school itself, spreadin STEAM in our school environment, and inspiring over a thousand students, some of which choose to join the team!





JOHN DEERE

The company is a world leader in the manufacture of agricultural equipment, with over 600 different models in its production line, which includes tractors, implements for soil preparation, planters, mechanical cultivators, sprayers, grain and cotton harvesters and equipment for haying and ensiling.



This image shows us the empowerment of women in STEAM, and the strength of our Girls In Control project, which aims to help women develop more interest in the area, something that John Deere has always encouraged us to do with their support.

“

Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.



Our partnership with John Deere also includes several visits to their workspace and factory in our region, giving our students the opportunity to learn about their methods and activities.



JOHN DEERE INSPIRE PROGRAM

"The John Deere Inspire Program empowers the next generation of innovators to pursue science, technology, engineering and math (STEM) education and careers. John Deere Inspire partners with established STEM organizations in our communities to mentor and support the next generation of innovators and leaders.

Our team helped implement the John Deere Inspire Program in Brazil; creating new *FIRST*® teams and spreading the program's message.





DOMÍNIO TRIBUTÁRIO

GESTÃO TRIBUTÁRIA INTELIGENTE

Domínio Tributário is a tax management company focused in offering solutions to reduction of tax costs.



Through a differentiated method, they support consumers in a personalized way, with a wide range of tax services. It's technical team is composed by tax accountants.

They work to ensure that their clients obtain greater liquidity and better management of tax issues. A proof of that is they have already accounted for millions of reais in tax benefits reverted to companies.

THEIR PURPOSE

identify and implement tax reduction, through tax benefits and market value partnerships.

THEIR MISSION

reduce tax costs, and recover significant amounts through the application of tax benefits, with strategic vision and intelligence.

THEIR VISION

to be seen as a reference company in tax management in Brazil until 2030.



**Certain destinies will only
be visible once we change
the way we observe.**



We are excited to share the progress of our partnership with Domínio Tributário! Even though it's a recent collaboration, we're already working on something exciting together.

We are preparing for a friendly tournament that promises to further unite our efforts in favor of education and innovation.

With the help of the generous Atto kits donated by Rotary, we are about to provide an incredible experience for public schools in our region. This tournament will not just be a competition, but a celebration of the creative and inventive potential of students.

We expect 12 public school teams from our city to participate. The tournament is scheduled for the end of October this year, and we can't wait to see what's to come!





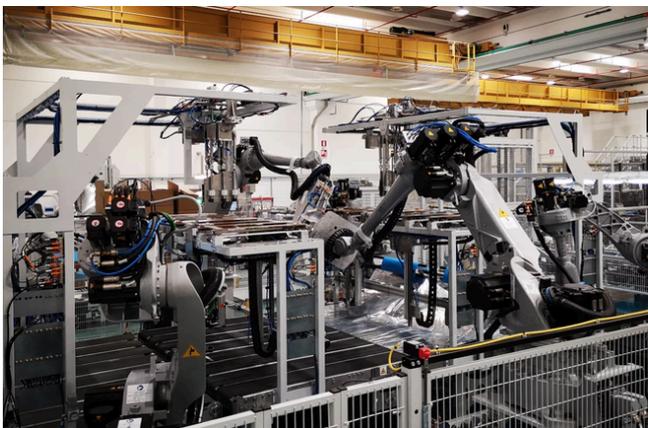
Rockwell Automation

World leaders in digital transformation and industrial automation.

Rockwell Automation's mission is to improve the life standard, making the world more productive and sustainable. They have the commiment to enable the next generation of smart production.

In the whole world, their main product brands Allen-Bradley® and FactoryTalk® are recognized by their excellence.

Their sharpened focus in technological inovation, speciallized knowledge, integrity and corporate responsability feed their sucess.



Their approach begins with a deep understanding of the best oppotrunities for productivity. Then, they combine ther differentiated technology and experence in the area to provide positive business results for their costumers.



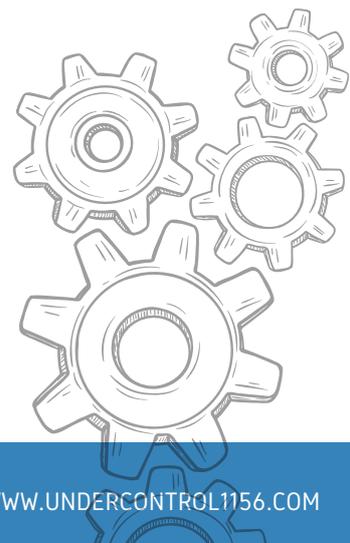
Our Rockwell mentor, Izabella Gazzola, plays a key role on our team, guiding us toward developing essential communication skills and achieving personal results.



We are committed to absorbing Izabella's teachings and advice, especially when it comes to positioning ourselves assertively and confidently in different situations.



At the end of 2023, we participated in a meeting with teams sponsored by Rockwell, so we were able to exchange experiences and talk about expectations for the new season.



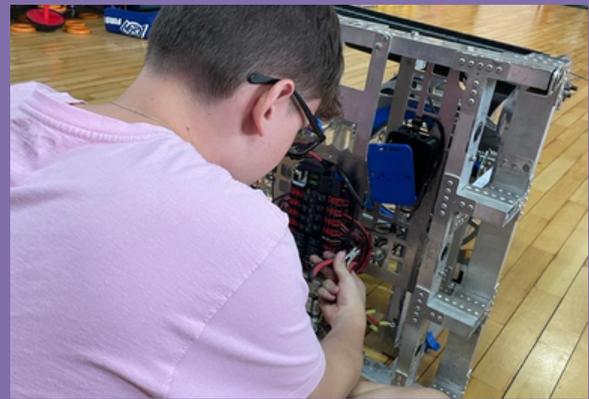
stemOS

NEXT LEVEL ROBOTICS

"StemOS was born to take educational robotics to the next level in Brazil, promoting and bringing materials to the country for competition categories that did not exist here before. With our solutions, your school or team can go further, giving students the opportunity to develop new skills and experiences."



stemOS was founded and is composed of 1156 alumni!



stemOS helps us by supplying us with tools and parts that we need to assemble our robot.



In addition, stemOS and Under Control are always partnering up for events and actions, such as livestreams, scrimmage tournaments, and mentorship actions. We know can always count on their support of stemOS, and the opposite is equally true for them!

stemOs was our partner in our Swerve Club project, which aimed to raise money to invest in the Swerve traction, allowing us to improve our performance on the court.



3ª EDIÇÃO
**SINOS
VALLEY**
CHALLENGE

stemOS was a key partner in organizing all 3 editions of our friendly Sinos Valley Challenge scrimmage event. They helped us with:

- rental materials;
- volunteers;
- the knowhow needed to run a FIRST event.



STELLA

"Evolving is in the essence of Stella. We are driven by the desire to create, innovate, surprise. Questioning standards, we create innovative products for the best experiences with lighting. Our focus on the product, the attention to detail, the dynamic and creative team and the customer experience are the cornerstones of our brand."

STELLA CHALLENGE LEDS

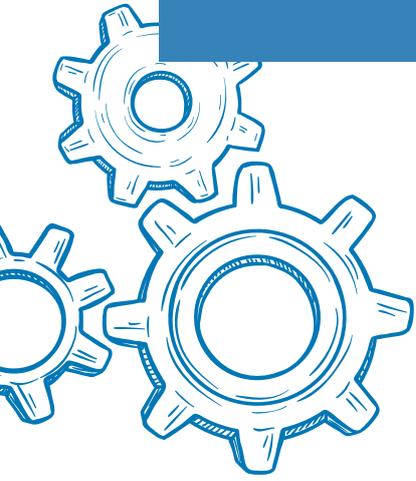
At the end of 2021, Under Control, in partnership with the company, offered a CAD course for high school students. The challenge's final project was an automated system for the goniophotometer, a sensor that analyzes the characteristics of the lamps produced by Stella, where the winning system design would be applied within the company. After the 3-month period, participants not only fulfilled the proposed challenge, but were also trained to perform high-level CAD work.

The LEDs that Stella provided us helped us on the 2023 court in different ways, the LED was able to communicate between the pilots and the human player so that he would know if he should give the robot a cone or cube to pick up, it also warned our pilots when they managed to pick up a cube helping to see the other side of the court and warning the riders that the match was about to end, flashing red.

IMPACT BOARD 2023

The Impact Award is the most prestigious award in the FIRST® Robotics competition, and to present it we were able to count with Stella's help. They provided various materials related to lighting such as LED strips and ultra-slim power supplies, both of which made our presentation board very special!





Most of the parts needed for our robot require precise machining, which we have really limited tools to do by ourselves in our own laboratory.

Therefore, the help of companies with a large availability of machinery is essential for our team.

With the partnership of Metalúrgica Maus, it was possible to streamline many mechanical processes during the build season.

Metalúrgica Maus has been innovating in the footwear industry since 1970, using different techniques to evolve its products.



Close to the beginning of our partnership, the company provided us with a visit to their factory. It was fundamental for us to understand how Maus could help us with its machinery.





“COFEROXI is a company located in the city of São Leopoldo-RS, the main activity is the sale and processing of sheet metal of various alloys, such as: carbon steel, galvanized, stainless steel and aluminum, among other alloys. We have several types of steel alloys for immediate delivery, we also process the steel supplied by the customer. We provide the project service to the client, where the client has the idea and we have the solution.”

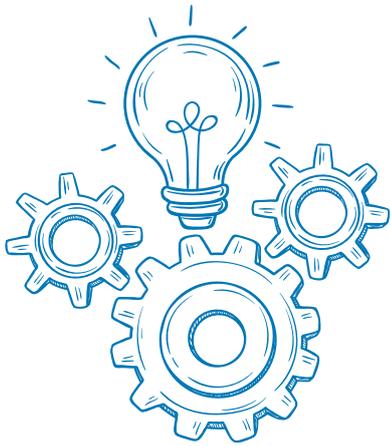
LASER CUTTING ROBOT PARTS

Laser cutting is a very important step in the construction of our robots! Our partners, CoferOxi, are essential for projects to be developed in the best possible way.

In 2022, they mainly helped with the shooter of our off-season robot, Dionísio. In 2023, their resources were an essential tool in the creation of Archon's intake.

Now in 2024, they did Viper's bellypan, made the pieces for the intake and the climber and they were essential to our robot this year!





Ciisa



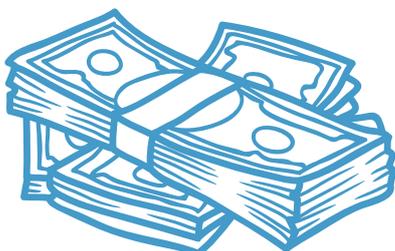
Controladoria e Finanças

"In its portfolio, CIISA has the full capacity to implement management tools with a focus on qualifying the profitability and profitability of the projects submitted to us. impact on the healthy generation of cash, as well as on the company's profitability."

Ciisa's help mainly comes from financial support. They are a great asset to the team, helping greatly in managing our finances and ensuring the sustainability of the team.



The company greatly enhanced business in our Team, and one of our members was hired by Ciisa.



Qualcomm

"Qualcomm is enabling a world where everyone and everything can be intelligently connected. With our one technology roadmap, we're building on our leadership in connectivity, high-performance and low-power computing, and on-device AI to power the connected intelligent edge."

Qualcomm's partnership with Under Control 1156 started through their 2023 grant. The financial support they give us goes directly into regional event payments.

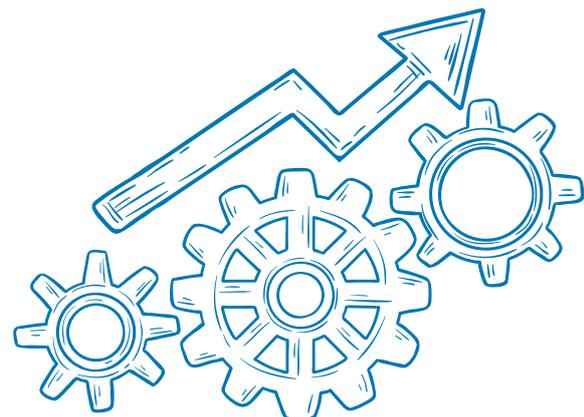
Qualcomm

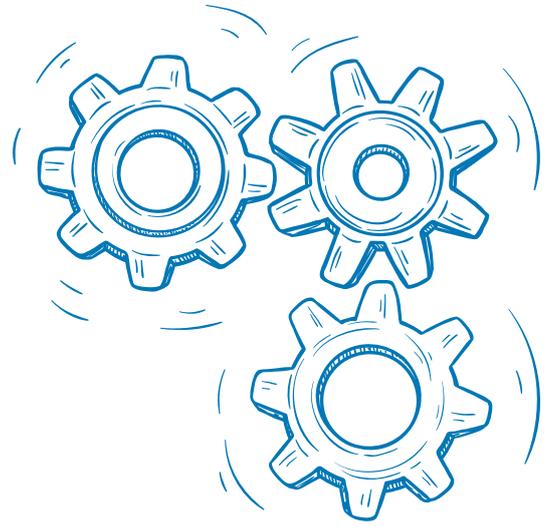
The future of digital intelligence—now loading



“

Working together, we will always go further. Believing in the potential of each one is believing in everyone's goal.





"Our purpose is to contribute, through excellent miters, to the realization of the environments dreamed of by our customers."

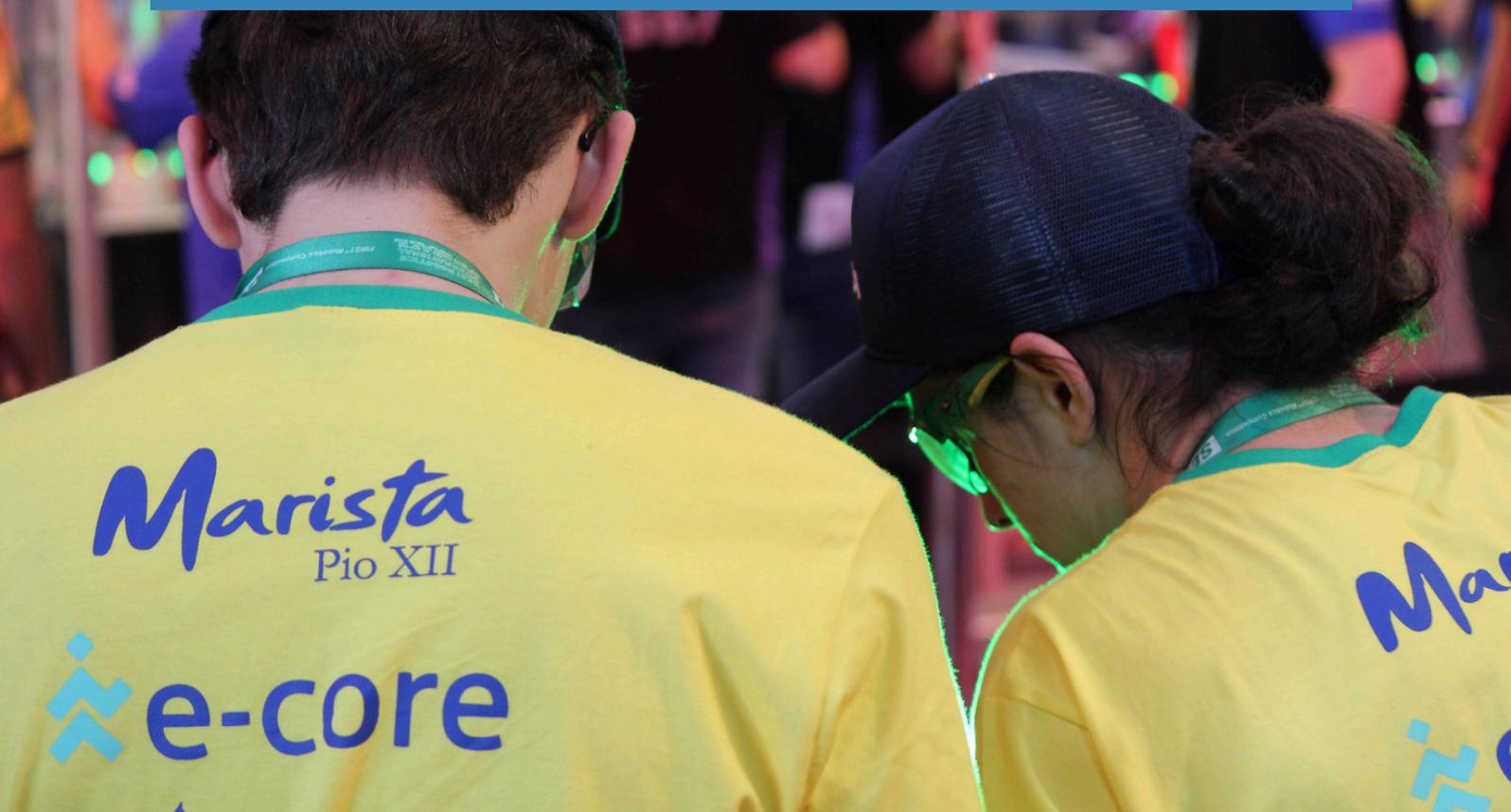
Scheid helps us by supporting events, building our school's *FIRST*® LEGO League courts, and assisting with the construction of our practice courts during the construction season.



IMPACT BOARD 2024

To help us present the Impact Award, the most prestigious award in the *FIRST*® Robotics competition, we counted with Scheid's help. They provided materials and services such as MDF wood and painting to make our vision come true. With their assistance, our presentation board was extra special!

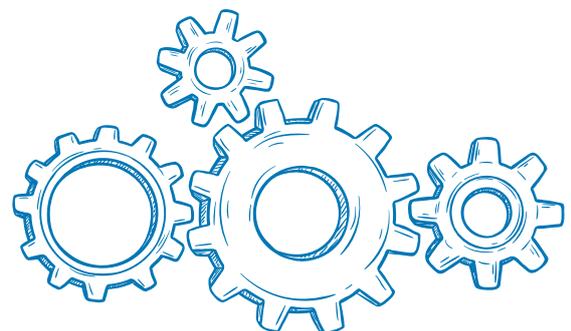


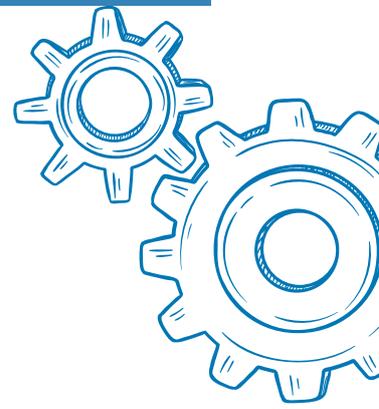
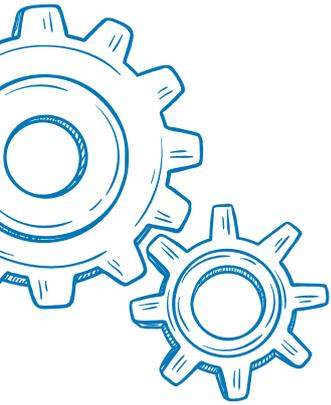


e-core

"We are a consulting and technology services partner focused on digital innovation and business transformation. We combine our global expertise across diverse industries with cutting-edge technologies to help our clients transform and accelerate their business models, develop innovative digital solutions, scale technology capabilities and sustain their growth. We are e-Core, your partner to evolve and go further."

e-Core supports our team financially and also in the creation of future projects to take robotics even further.





Oöo

odd.studio

"We co-create with partners and clients to combine design, data and technology to develop data product prototypes. We research, plan and teach society-oriented projects. We study context, resources and technology to plan, design and test fresh and familiar data solutions."



This partnership brings us many exchanges of experiences and learning experiences, especially in non-technical and design areas. Odd's employees are always very willing to help.

Odd helped us in enhancing the team's branding and graphic design. We collaborated on the creation of the team uniforms design for the 2023 season, with weekly meetings and frequent contact, exchanging ideas and feedback.



FLUIDIC

automação industrial

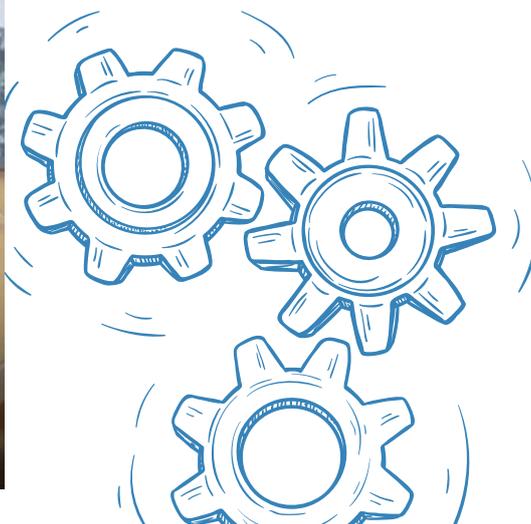
"For over 25 years, FLUIDIC has been a reference in the industrial automation market in southern Brazil, providing medium and large companies with creative, functional solutions, with proven effective performances. The industry moves Brazil. We move the industry."

Fluidic supplies us with pieces and equipments for all of our robot's pneumatic system needs, besides supporting our team financially.

Pneumatics is the science that deals with the behavior of gasses and their use for the transmission of energy.



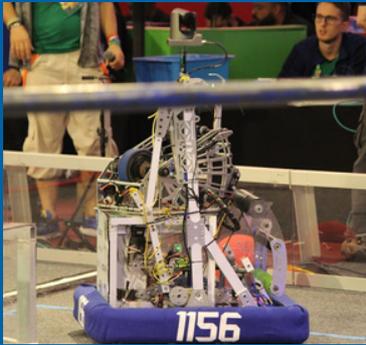
This video was made by our team to introduce people to pneumatics and also get to know more about the products Fluidic provides us.





"Ondazul has been present in the swimming pools and accessories segment since 1994, committed to the quality of the products it represents and the work it develops, taking customer respect first."

Ondazul provides us with pool noodles, which are an essential materials to compete in FRC, composing the maj part of the robot's bumper.



MAGNÓLIA MOVELARIA

"The beauty and durability of this century-old tree inspired us. Thus was born Magnolia MoveLaria. The result of a credible work carried out by Carmem Design, a reference in carpentry for over 25 years."

Magnolia supports our team by painting parts of our robot, its carrying cart, and our driver station.



CYPRESS

TURISMO

"Create unforgettable memories. Explore the traveler in you."

Cypress always gives us the necessary support for our trips, helping us with visas, passports and tickets. They have been with us since the beginning of the team.



"It is a startup that was conceived with the purpose of developing cross-cutting engineering and information technology solutions using data collected through sensors as its core business."

UpSensor supports us financially.

Nowadays, upsensor has

10

employees, with

10

of those being 1156 alumni.





**WITH THOSE,
WE ARE ABLE TO
COMPETE EVERY
YEAR,**

**HAVING
EVERYTHING
UNDER CONTROL**

1156



JOHN DEERE



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