

STUDENT ROBOTICS

England & Wales · Charity number 1163168

Details

Status Registered

Legal form CIO

Registered 2015-08-18

Register [View on the Charity Commission register](#)

Contact

Address Lytchett House
Unit 13
Freeland Park
Wareham Road
Lytchett Matravers
POOLE

Phone 03000 66 9197

Email info@studentrobotics.org

Website www.studentrobotics.org

Activities

Objects: THE OBJECT OF THE CHARITY IS THE ADVANCEMENT OF EDUCATION AND TRAINING FOR THE PUBLIC BENEFIT, PARTICULARLY IN RELATION TO ENGINEERING, MATHEMATICS, ROBOTICS, COMPUTER SKILLS, COMPUTER SCIENCE, COMPUTER SOFTWARE DEVELOPMENT AND RELATED SUBJECTS.

Activities: Our aim is the advancement of education in relation to engineering, robotics and computer science. We run an annual competition for students aged 16-19, where teams build and program a fully autonomous robot to allow them to take part. Throughout the year, students are supported by our volunteers who mentor the students, organise the competition and develop the core electronics kit.

Classification

- **How:** Provides Services, Provides Advocacy/advice/information
- **What:** Education/training
- **Who:** Children/young People

Geography

- Throughout England

Finances

Period end	Income	Expenditure	Assets	Employees
2025-06-30	£3,004	£6,069	-	-
2024-06-30	£9,428	£11,113	-	-
2023-07-31	£20,938	£13,945	-	-
2022-07-31	£12,585	£7,363	-	-
2021-07-31	£1,378	£10,108	-	-
2020-07-31	£531	£5,362	-	-

Trustees

Name	Role	Appointed
Andrew Busse		2024-09-01
Andrew Paul Csizmadia		2024-09-01
Diane Dowling		2018-03-21
Thomas Scarsbrook		2020-12-01

Accounts

Student Robotics

Trustees' Annual Report 2025

From 1st July 2024 to 30th June 2025

Reference and Administrative Details

Charity Name:

Student Robotics

Charity Registration Number:

1163168

Principal Address:

Student Robotics
Lytchett House
13 Freeland Park
Wareham Road
Lytchett Matravers
Poole

Trustees:

- Diane Dowling
- David Massey (until July 2024)
- Thomas Scarsbrook
- Andrew Czismadia (co-opted July 2024)
- Andrew Busse (co-opted July 2024)

Executive Summary

Student Robotics continues to inspire and empower young people through hands-on STEM education. During the 2024-25 season, we engaged students across the UK and Europe with our hybrid competition, culminating in the successful SR2025 event. Our programme remains free to participants, broadening access to real-world engineering experiences. With a strong community of volunteers, and a focus on continuous improvement, Student Robotics is well-positioned to expand its impact and foster the next generation of engineers and innovators.

Objectives and Activities

Student Robotics exists to advance education and training for the public good, particularly in the fields of engineering, mathematics, robotics, computing, software development, and related disciplines, as set out in its constitution.

Our primary activity is the organisation and delivery of an annual robotics competition for 16 to 19-year-olds. This event challenges students to design, build, and program autonomous robots. Once the game is announced, teams have six months to develop their robots, with support provided through customised kits and mentoring. Participation is completely free of charge, ensuring accessibility - particularly for students who may lack previous exposure to engineering and robotics.

The charity continues to fulfil its aim of inspiring young people towards STEM careers. Many of our volunteers are former participants, and the competition continues to attract new schools and teams. Our vision remains *"to foster a world where engineering and artificial intelligence is accessible to young people,"* and our mission is *"to bring the excitement of engineering and the challenge of coding to young people through robotics."*

Achievements and Performance

The 2024–25 season marked another exciting year, culminating in **SR2025**. This year's game, **Urban Heights**, tasked teams with stacking pallets to own "districts", by building the tallest towers in those areas.

We continued with a hybrid model: a **virtual league** earlier in the year allowed teams to refine their programming skills remotely, culminating in a broadcast competition in February. King Edward VI Grammar School won this stage, in a close competition.

Teams were also rewarded with league points for demonstrating completion of robot-building and robot-testing challenges through the year.

At the physical competition weekend:

- **50 league matches** showcased incredible robot designs and strategies; culminating in a **knockout phase** to determine the competition winners
- Robots demonstrated agility, creativity, and autonomous decision-making.
- The final featured four top teams, with The Highfield School crowned SR2025 champions, followed by the School of St Helen and St Katherine (second place) and Ruthin School (third place).

Additional Awards:

- **Excellence in Engineering:** Queen Mary's College
- **Rookie Award:** The Highfield School
- **Robot and Team Image Award:** The School of St Helen and St Katharine
- **Online Presence Award:** The School of St Helen and St Katharine

Throughout the season, we continued to improve operations, deliver a high-quality livestream at low cost, and enhance team engagement via technical innovation and creative marketing efforts.

We are proud of the achievements of all teams, volunteers, and sponsors who made SR2025 possible, and are excited to build on this momentum.

Structure, Governance and Management

Student Robotics is a **Charitable Incorporated Organisation (CIO)**, registered on 18th August 2015. Our governance is defined by our constitution, which sets out our objectives, powers, and structure.

The Board of Trustees meets regularly to discuss strategy and oversee governance. Our trustees bring professional expertise from engineering and computer science fields, alongside direct experience managing student teams providing valuable insight into the participant perspective.

Trustees are recruited from existing volunteers and, in future, from past competition participants as they progress into their professional careers. Trustees are appointed either by the charity's members or by resolution of the trustees.

We maintain a culture of openness and transparency, supported by a living Operations Manual, which documents procedures, role responsibilities, and delegated powers, and is regularly updated.

Committees oversee day-to-day operations:

- **Competition Committee:** Delivers the annual robotics competition.
- **Kit Team Committee:** Develops and maintains the robotics kit.
- **Infrastructure Team Committee:** Manages the charity's technical infrastructure.
- **Fundraising Team:** Led by trustees, focuses on securing sponsorship.

- **Marketing Team Committee:** Manages social media, the website, and team recruitment.

The charity's structure is designed for future growth, with the flexibility to expand into additional activities beyond the annual competition.

Financial Review

Our financial position remains satisfactory:

- **Year-end bank balance:** £12,039

Two liabilities, totalling £2751, were carried in to the new financial year. These were satisfied in December 2025.

Maintaining reserves enables us to plan and launch future competitions without relying on last-minute fundraising. We always budget based on available funds, and our current reserves are sufficient to support a competition in 2026, although new sources of funding are required to operate beyond then.

A financial statement has been filed alongside this report. Full accounts are available for inspection at any time.

Approval

Approved by the Board of Trustees and signed on its behalf:

Andrew Busse
Trustee (Treasurer)



CHARITY COMMISSION
FOR ENGLAND AND WALES

Student Robotics

1163168

Receipts and payments accounts

CC16a

For the period
from

01/07/24

To

30/06/25

Section A Receipts and payments

	Unrestricted funds	Restricted funds	Endowment funds	Total funds	Last year
	to the nearest £	to the nearest £	to the nearest £	to the nearest £	to the nearest £
A1 Receipts					
Donations	3,004	-	-	3,004	9,428
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total (Gross income for AR)	3,004	-	-	3,004	9,428
A2 Asset and investment sales, (see table).					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total receipts	3,004	-	-	3,004	9,428
A3 Payments					
Accounting and legal	47	-	-	47	35
Bank Fees	60	-	-	60	57
Costs of Competition	2,494	-	-	2,494	6,641
Container Rental	1,373	-	-	1,373	1,258
Digital Infrastructure	91	-	-	91	89
Insurance	483	-	-	483	473
Kit Development	-	-	-	-	474
Mail Services	225	-	-	225	150
Marketing	1,296	-	-	1,296	1,936
Sub total	6,069	-	-	6,069	11,113
A4 Asset and investment purchases, (see table)					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total payments	6,069	-	-	6,069	11,113
Net of receipts/(payments)	- 3,065	-	-	- 3,065	- 1,685
A5 Transfers between funds	-	-	-	-	-
A6 Cash funds last year end	15,104	-	-	15,104	-
Cash funds this year end	12,039	-	-	12,039	1,685

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds		12,039	-	-
		-	-	-
		-	-	-
	Total cash funds	12,039	-	-
	(agree balances with receipts and payments account(s))	OK	OK	OK
B2 Other monetary assets	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
B3 Investment assets	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
			-	-
			-	-
			-	-
			-	-
B4 Assets retained for the charity's own use	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
B5 Liabilities	Details	Fund to which liability relates	Amount due (optional)	When due (optional)
	2025 Competition Costs		2,751	
			-	
			-	
			-	
Signed by one or two trustees on behalf of all the trustees	Signature	Print Name	Date of approval	
	Andrew Busse	Andrew Busse	30/04/26	

Accounts

Student Robotics

Trustees' Annual Report 2024

From 1st August 2023 to 30th June 2024

Reference and Administrative Details

Charity Name:

Student Robotics

Charity Registration Number:

1163168

Principal Address:

Student Robotics
Lytchett House
13 Freeland Park
Wareham Road
Lytchett Matravers
Poole

Trustees:

- Diane Dowling
- David Massey
- Thomas Scarsbrook

Executive Summary

Student Robotics continues to inspire and empower young people through hands-on STEM education. During the 2023-24 season, we engaged students across the UK and Europe with our hybrid competition, culminating in the successful SR2024 event. Our programme remains free to participants, broadening access to real-world engineering experiences. With a strong community of volunteers, and a focus on continuous improvement, Student Robotics is well-positioned to expand its impact and foster the next generation of engineers and innovators.

Objectives and Activities

Student Robotics exists to advance education and training for the public good, particularly in the fields of engineering, mathematics, robotics, computing, software development, and related disciplines, as set out in its constitution.

Our primary activity is the organisation and delivery of an annual robotics competition for 16 to 19-year-olds. This event challenges students to design, build, and program autonomous robots. Once the game is announced, teams have six months to develop their robots, with support provided through customised kits and mentoring. Participation is completely free of charge, ensuring accessibility - particularly for students who may lack previous exposure to engineering and robotics.

The charity continues to fulfil its aim of inspiring young people towards STEM careers. Many of our volunteers are former participants, and the competition continues to attract new schools and teams. Our vision remains *"to foster a world where engineering and artificial intelligence is accessible to young people,"* and our mission is *"to bring the excitement of engineering and the challenge of coding to young people through robotics."*

Achievements and Performance

The 2023–24 season marked another exciting year, culminating in **SR2024**. This year's game, **Final Frontier**, tasked teams with retrieving asteroids while managing intergalactic spaceships - all while avoiding the disruptive "Egg".

We continued with a hybrid model: a **virtual league** earlier in the year allowed teams to refine their programming skills remotely, culminating in a broadcast competition in March. Wisbech Grammar School dominated this stage, though competition remained fierce.

At the physical competition weekend:

- **69 league matches** showcased incredible robot designs and strategies.
- Robots demonstrated agility, creativity, and autonomous decision-making.
- The final featured four top teams, with Gymnasium Markt Indersdorf crowned SR2024 champions, followed by Wisbech Grammar School (second place) and The Ladies' College Guernsey (third place).

Additional Awards:

- **Excellence in Engineering:** Abingdon School
- **Rookie Award:** The Henry Box School

- **Robot and Team Image Award:** Gymnasium Markt Indersdorf
- **Online Presence Award:** Westminster City School
- **Challenges Award:** Royal Grammar School Guildford

Throughout the season, we continued to improve operations, deliver a high-quality livestream at low cost, and enhance team engagement via technical innovation and creative marketing efforts.

We are proud of the achievements of all teams, volunteers, and sponsors who made SR2024 possible, and are excited to build on this momentum.

Structure, Governance and Management

Student Robotics is a **Charitable Incorporated Organisation (CIO)**, registered on 18th August 2015. Our governance is defined by our constitution, which sets out our objectives, powers, and structure.

The Board of Trustees meets regularly to discuss strategy and oversee governance. Our trustees bring professional expertise from engineering and computer science fields, alongside direct experience managing student teams providing valuable insight into the participant perspective.

Trustees are recruited from existing volunteers and, in future, from past competition participants as they progress into their professional careers. Trustees are appointed either by the charity's members or by resolution of the trustees.

We maintain a culture of openness and transparency, supported by a living Operations Manual, which documents procedures, role responsibilities, and delegated powers, and is regularly updated.

Committees oversee day-to-day operations:

- **Competition Committee:** Delivers the annual robotics competition.
- **Kit Team Committee:** Develops and maintains the robotics kit.
- **Infrastructure Team Committee:** Manages the charity's technical infrastructure.
- **Fundraising Team:** Led by trustees, focuses on securing sponsorship.
- **Marketing Team Committee:** Manages social media, the website, and team recruitment.

The charity's structure is designed for future growth, with the flexibility to expand into additional activities beyond the annual competition.

Financial Review

We changed our accounting year to end one month earlier, on **30 June**, to align more closely with our competition cycle. This report covers the period from **1st August 2023 to 30th June 2024**.

Our financial position remains satisfactory:

- **Year-end bank balance:** £15,104

Maintaining reserves enables us to plan and launch future competitions without relying on last-minute fundraising. We always budget based on available funds, and our current reserves are sufficient to support a competition in 2025.

A financial statement has been filed alongside this report. Full accounts are available for inspection at any time.

Approval

Approved by the Board of Trustees and signed on its behalf:

Diane Dowling
Trustee (Treasurer)



Receipts and payments accounts

CC16a

For the period
from

01/08/2023

To

30/06/2024

Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £	Last year to the nearest £
A1 Receipts					
Donations	9,428	-	-	9,428	20,938
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total (Gross income for AR)	9,428	-	-	9,428	20,938
A2 Asset and investment sales, (see table).					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total receipts	9,428	-	-	9,428	20,938
A3 Payments					
Accounting and legal	35	-	-	35	83
Bank Fees	57	-	-	57	60
Costs of competition	6,641	-	-	6,641	7,824
Container rental	1,258	-	-	1,258	1,373
Digital infrastructure	89	-	-	89	78
Insurance	473	-	-	473	457
Kit development	474	-	-	474	3,103
Mail services	150	-	-	150	275
Marketing	1,936	-	-	1,936	692
Sub total	11,113	-	-	11,113	13,945
A4 Asset and investment purchases, (see table)					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total payments	11,113	-	-	11,113	13,945
Net of receipts/(payments)	- 1,685	-	-	- 1,685	6,993
A5 Transfers between funds	-	-	-	-	-
A6 Cash funds last year end	16,789	-	-	16,789	9,796
Cash funds this year end	15,104	-	-	15,104	16,789

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds				
	HSBC	15,104	-	-
		-	-	-
		-	-	-
	Total cash funds	15,104	-	-

		Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B2 Other monetary assets	Details			
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-

		Fund to which asset belongs	Cost (optional)	Current value (optional)
B3 Investment assets	Details			
			-	-
			-	-
			-	-
			-	-

		Fund to which asset belongs	Cost (optional)	Current value (optional)
B4 Assets retained for the charity's own use	Details			
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

		Fund to which liability relates	Amount due (optional)	When due (optional)
B5 Liabilities	Details			
			-	
			-	
			-	
			-	

Signed by one or two trustees on
behalf of all the trustees

Signature	Print Name	Date of approval
<i>Diane Dowling</i>	Diane Dowling	27/04/2025

Accounts

Student Robotics

Trustees' Annual Report 2023

From 1st August 2022 to 31st July 2023

Reference and Administrative Details

Charity Name:	Student Robotics
Charity Registration Number:	1163168
Principal Address:	Student Robotics Lytchett House 13 Freeland Park Wareham Road Lytchett Matravers Poole
Trustees:	Diane Dowling David Massey Thomas Scarsbrook

Objectives and Activities

Student Robotics' purpose, as specified in its constitution, is the advancement of education and training for the public benefit, particularly in relation to engineering, mathematics, robotics, computer skills, computer science, computer software development and related subjects.

The primary activity carried out by the charity to meet its objective is organising and running an annual robotics competition for 16 to 19 year-olds. This competition challenges teams of students to design, build and develop autonomous robots. After announcing the year's game, we give teams six months to engineer their creations. We supply each team with a core, bespoke electronics kit and mentor teams throughout. We do not charge a fee to take part in the competition as we believe that this poses an unreasonable barrier to entry, especially to those who may initially have minimal exposure to engineering and robotics and therefore may not begin with a high level of confidence. There is little exposure to real world engineering in formal education settings for this age group so it is important that there are no barriers to "having a go".

The charity continues to be successful in meeting its aim of providing young people with an introduction to STEM careers. Our vision states that “We want to foster a world where engineering and artificial intelligence is accessible to young people.” The fact that our volunteers are almost entirely drawn from those who have taken part in Student Robotics’ events in previous competition cycles, and that we continue to recruit new schools, demonstrates that we are fostering a lively interest in engineering amongst the students who take part in our competition. Our mission is “To bring the excitement of engineering and the challenge of coding to young people through robotics.” and it is clear that we continue to achieve this.

Achievements and Performance

The 2022-23 robotics competition marked the second year of our return to a physical, in-person format after the challenges posed by the Covid-19 pandemic. This year's competition saw 34 participating teams, with the majority from England, one from Guernsey, and one from Germany. We were excited to welcome an increased number of teams, reflecting our growing community of passionate students and mentors.

Kickstart events, where the game was announced, were held both physically and broadcasted online to accommodate all participating teams. This hybrid approach allowed us to engage with teams both in-person and remotely, ensuring accessibility and inclusivity for all.

We hosted a number of “tech days”, chances for teams to work on their robots under the supervision of our volunteers, at various locations around England this year. Teams that have come along have found these very useful.

Our game this year, "Greed," challenged teams to design autonomous robots capable of stealing small tokens from designated locations within the arena. The robots were required to navigate the arena, identify tokens, and steal them efficiently from other robots while avoiding any obstacles.

In addition to the physical competition, we introduced a virtual segment inspired by our previous virtual competitions. This allowed teams to participate remotely and further develop their coding and problem-solving skills in a simulated environment. The virtual segment also helped to maintain engagement and enthusiasm throughout the competition cycle. For the first time, we introduced new challenges for the teams to compete in, adding an extra layer of excitement and encouraging further innovation in robotics design and strategy. These challenges provided teams with additional opportunities to showcase their skills and creativity while fostering a spirit of friendly competition. We dedicated significant effort to professionalising our event, with a particular focus on operations. This included streamlining processes, improving communication, and enhancing the overall event experience for both participants and spectators.

A key highlight of this year's competition was the professional-grade live stream, which we managed to deliver at a low cost. Building on our experience from previous years, we were able to provide high-quality streaming with engaging commentary, informative overlays, and

interactive chat features. This allowed teams and spectators to enjoy the excitement of the competition, even if they were unable to attend in person.

Our Kit Team had a year of innovation and were able to provide teams with a web interface to their robot to aid in debugging as well as revamping the computer vision library to drastically improve the detection of our fiducial markers in a wide range of lighting conditions. They also introduced a new ticketing system to improve the level of support we provide to competitors at our main event.

The Marketing Team worked towards improving the brand identity of Student Robotics. They also introduced goody bags for competitors at the competition, containing the competition booklet, some stickers and a branded pencil. They also engaged with teams on social media throughout the year, sharing and amplifying the teams' progress.

In conclusion, the 2022-23 robotics competition was a resounding success, showcasing the incredible talents and dedication of our participating teams. We are grateful to our volunteers, mentors, and sponsors for their unwavering support and look forward to another exciting competition in the coming year.

Structure, Governance and Management

Student Robotics is a Charitable Incorporated Organisation (CIO), registered on 18th August 2015. The charity is governed by its constitution which defines its objectives, powers and structure of governance.

Student Robotics is led by a board of trustees that communicate on a regular basis to discuss the direction and policy of the charity. The trustees also meet on a semi-regular basis to fulfil the requirements set out in the constitution.

The board of trustees is made up of engineering and computer science professionals and educators. The specialised knowledge held by the trustees in these subjects is an advantage when meeting the charity's aims and objectives since it ensures the technological content of its activities is both state of the art and relevant to its beneficiaries. Having two trustees who had managed student teams gives a clear insight into how the teams perceive the competition and the benefits they take from it.

Trustees have been recruited based upon their involvement with activities run prior to the registration of the charity and through word of mouth since becoming a charity. It is envisaged that future trustees may be recruited from past beneficiaries of the charity as they enter into the professional world. New trustees are appointed either by a resolution of the members of the charity or by a decision of the existing trustees.

As trustees have had prior intimate involvement with the charity's activities and are actively involved with the day-to-day running of the activities they are already well versed in the running and operation of the charity. To aid with this, the charity has a general approach of openness and transparency with regards to its governance and management, where appropriate.

All trustees are actively encouraged to contribute to and improve the charity's 'Operations Manual'. This manual sets out the operational structure of the charity; the delegation of powers to others in named roles, for the purpose of the day-to-day running of each aspect of the charity; and the processes to be followed by people in named roles. This manual is treated as a living document and is constantly evolving to meet the requirements of the charity.

The structure of the charity is organised with the aim of potentially offering other activities, in addition to the annual robotics competition for 16-19 year olds, at some point in the future. The responsibilities of the day to day running of the charity are delegated to Committees each with a specific focus and overseen by the trustees.

The responsibility of running the charity's primary activity, the annual robotics competition for 16-19 year olds, is delegated to the Competition Committee, a committed group of volunteers who report regularly to the trustees.

The robotics kit is maintained by a team led by the Kit Team Committee who have responsibility for developing and maintaining the kit that is used in the competition. The Kit Team comprises engineers and engineering students who bring a wide range of expertise to the task.

The charity's technical infrastructure and services are managed by the Infrastructure Team Committee who are responsible for ensuring the charity has the technical infrastructure it needs to function. The Infrastructure Team comprises software and DevOps engineers with a wealth of experience and knowledge in the area.

The trustees are responsible for heading up the Fundraising Team, which is responsible for ensuring the charity has sufficient funds to run its programme by reaching out to and working with existing and potential sponsors.

The public image of Student Robotics is the responsibility of the Marketing Team Committee who manage the charity's social media presence as well as its website. The Committee is also responsible for recruiting new competitor teams through these channels.

Financial Review

The financial state of the charity continues to be satisfactory. The bank balance at the end of the year was £16,789. Reserves are necessary to allow the next competition to be planned and launched without relying on having to attract funding to a specific schedule. We always set a budget based on the amount we have in the bank, rather than hoping that we can raise funds during the actual year of the competition. The amount we have will allow a competition to take place in 2024.

A financial statement has been filed alongside this report and the full accounts are available for inspection at any time.

Approved by the board of Trustees and signed on its behalf:

Diane Dowling

Diane Dowling
Trustee (Treasurer)



CHARITY COMMISSION
FOR ENGLAND AND WALES

Charity Name Student Robotics	No (if any) 1163168
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Receipts and payments accounts

CC16a

For the period from	Period start date 01/08/2022	To	Period end date 31/07/2023
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Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £	Last year to the nearest £
A1 Receipts					
Donations	20,938	-	-	20,938	12,585
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total (Gross income for AR)	20,938	-	-	20,938	12,585
A2 Asset and investment sales, (see table).					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total receipts	20,938	-	-	20,938	12,585
A3 Payments					
Accounting and legal	83	-	-	83	40
Bank fees	60	-	-	60	42
Costs of competition	7,824	-	-	7,824	930
Container rental	1,373	-	-	1,373	1,373
Digital infrastructure	78	-	-	78	346
Insurance	457	-	-	457	451
Kit development	3,103	-	-	3,103	2,732
Mail services	275	-	-	275	519
Marketing	692	-	-	692	483
Sub total	13,945	-	-	13,945	6,916
A4 Asset and investment purchases, (see table)					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total payments	13,945	-	-	13,945	6,916
Net of receipts/(payments)	6,993	-	-	6,993	5,669
A5 Transfers between funds	-	-	-	-	-
A6 Cash funds last year end	9,796	-	-	9,796	4,127
Cash funds this year end	16,789	-	-	16,789	9,796

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds	HSBC	16,789	-	-
		-	-	-
		-	-	-
	Total cash funds	16,789	-	-
	(agree balances with receipts and payments account(s))	OK	OK	OK
		Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B2 Other monetary assets	Details			
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
B3 Investment assets	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
			-	-
			-	-
			-	-
			-	-
B4 Assets retained for the charity's own use	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
B5 Liabilities	Details	Fund to which liability relates	Amount due (optional)	When due (optional)
			-	
			-	
			-	
			-	
Signed by one or two trustees on behalf of all the trustees	Signature	Print Name	Date of approval	
	<i>Diane Dowling</i>	Diane Dowling	30/08/2024	

Accounts

Student Robotics

Trustees' Annual Report 2022

From 1st August 2021 to 31st July 2022

Reference and Administrative Details

Charity Name:	Student Robotics
Charity Registration Number:	1163168
Principal Address:	Student Robotics Lytchett House 13 Freeland Park Wareham Road Lytchett Matravers Poole
Trustees:	Diane Dowling David Massey Thomas Scarsbrook

Objectives and Activities

Student Robotics' purpose, as specified in its constitution, is the advancement of education and training for the public benefit, particularly in relation to engineering, mathematics, robotics, computer skills, computer science, computer software development and related subjects.

The primary activity carried out by the charity to meet its objective is organising and running an annual robotics competition for 16 to 19 year-olds. This competition challenges teams of students to design, build and develop autonomous robots. After announcing the year's game, we give teams six months to engineer their creations. We supply each team with a core, bespoke electronics kit and mentor teams throughout. We do not charge a fee to take part in the competition as we believe that this poses an unreasonable barrier to entry, especially to those who may initially have minimal exposure to engineering and robotics and therefore may not begin with a high level of confidence. There is little exposure to real world engineering in formal education settings for this age group so it is important that there are no barriers to "having a go".

The charity continues to be successful in meeting its aim of providing young people with an introduction to STEM careers. Our vision states that “We want to foster a world where engineering and artificial intelligence is accessible to young people.” The fact that our volunteers are almost entirely drawn from those who have taken part in Student Robotics’ events in previous competition cycles, and that we continue to recruit new schools, demonstrates that we are fostering a lively interest in engineering amongst the students who take part in our competition. Our mission is “To bring the excitement of engineering and the challenge of coding to young people through robotics.” and it is clear that we continue to achieve this.

Achievements and Performance

After two years of virtual competitions due to COVID-19, we were delighted that this year we were able to return to an in-person event for our main competition and were able to re-introduce the physical engineering challenge which our competitors and team leaders tell us is so important. The number of teams accepted into the competition was limited by the functioning number of our bespoke robotics kits we could provide. There was some drop out in the number of teams who were able to attend the final event and a total of 26 teams competed over the final competition weekend.

The Kickstart event where the game was announced was held virtually and live-streamed on YouTube through the Student Robotics channel. Competitors were able to post questions directly to the chat alongside the video and these were answered in real time. As well as announcing the details of the game, teams were given information about the structure of the competition and alerted to key problems that they would need to solve. We also released a small series of “Microgames” to allow teams to get familiar with our robotics kits.

Building on the success of the previous year, we created a moderated Discord server for use throughout the competition cycle. Team Leaders and competitors were invited to sign up so they could ask for help, share progress and chat to other participants throughout the year. We observed an increased presence of teams on the server with far more inter-team communication and a higher level of peer support. It was satisfying to be able to foster a sense of community and this is something we will continue to build on in future competition cycles.

Our game this year, This Way Up, challenged teams to collect tin cans from the arena and ensure that they were up the right way for maximum points. When in a team’s scoring zone, correctly oriented cans were worth 3 points, upside down cans were worth one point, and cans lying on their side were worth nothing. However, not all cans were created equal: Tin cans on the arena floor started upside down, but those on the raised platform in the centre were already the right way up, making them harder to get but easier to score points with. Our teams could detect a can’s orientation with an insulating band along the bottom. Teams were scored at the end of the match for collecting the most points.

For the first time we ran some of our Tech Day events virtually. These events are opportunities for our teams to spend a dedicated day hacking on their robots with help from our volunteers. While historically we’ve only run these events in person, due to the distributed nature of our volunteers and the residual covid risk we opted to run these in our

Discord support server. Teams would join voice channels where they could get support from our volunteers and interact with other teams to share ideas.

Our main event of the year was our competition event, which was held at the University of Southampton's Students' Union building. The two-day event was held over the weekend of the 23rd and 24th of April. We had 44 volunteers help us over the course of the event with roughly 250 competitors in attendance. With league matches throughout Saturday and on Sunday morning and a Knockout round on the Sunday afternoon.

We live-streamed the competition to YouTube, using what we learned from the previous virtual competitions to improve our production values for remote spectators. We had voiceovers from arena-side commentators during the matches, and from different volunteers between matches to review the match and provide some filler material.

We rewrote the software stack of our robotics kits to use the latest version of the Python programming language. This helps our competitors as they will be using modern technology that is used in businesses and they may already be learning in college.

We secured the support of the Institution of Engineering and Technology and the Institution of Mechanical Engineers through their Engineering Education Grant Scheme to allow us to update the robotics kits we provide our teams. Plans are in progress to transition to using Raspberry Pi single board computers instead of our current ODroids to provide our teams with the latest in technology.

Structure, Governance and Management

Student Robotics is a Charitable Incorporated Organisation (CIO), registered on 18th August 2015. The charity is governed by its constitution which defines its objectives, powers and structure of governance.

Student Robotics is led by a board of trustees that communicate on a regular basis to discuss the direction and policy of the charity. The trustees also meet on a semi-regular basis to fulfil the requirements set out in the constitution.

The board of trustees is made up of engineering and computer science professionals and educators. The specialised knowledge held by the trustees in these subjects is an advantage when meeting the charity's aims and objectives since it ensures the technological content of its activities is both state of the art and relevant to its beneficiaries. Having two trustees who had managed student teams gives a clear insight into how the teams perceive the competition and the benefits they take from it.

Trustees have been recruited based upon their involvement with activities run prior to the registration of the charity and through word of mouth since becoming a charity. It is envisaged that future trustees may be recruited from past beneficiaries of the charity as they enter into the professional world. New trustees are appointed either by a resolution of the members of the charity or by a decision of the existing trustees.

As trustees have had prior intimate involvement with the charity's activities and are actively

involved with the day-to-day running of the activities they are already well versed in the running and operation of the charity. To aid with this, the charity has a general approach of openness and transparency with regards to its governance and management, where appropriate.

All trustees are actively encouraged to contribute to and improve the charity's 'Operations Manual'. This manual sets out the operational structure of the charity; the delegation of powers to others in named roles, for the purpose of the day-to-day running of each aspect of the charity; and the processes to be followed by people in named roles. This manual is treated as a living document and is constantly evolving to meet the requirements of the charity.

The structure of the charity is organised with the aim of potentially offering other activities, in addition to the annual robotics competition for 16-19 year olds, at some point in the future. The responsibilities of the day to day running of the charity are delegated to Committees each with a specific focus and overseen by the trustees.

The responsibility of running the charity's primary activity, the annual robotics competition for 16-19 year olds, is delegated to the Competition Committee, a committed group of volunteers who report regularly to the trustees.

The robotics kit is maintained by a team led by the Kit Team Committee who have responsibility for developing and maintaining the kit that is used in the competition. The Kit Team comprises engineers and engineering students who bring a wide range of expertise to the task.

The charity's technical infrastructure and services are managed by the Infrastructure Team Committee who are responsible for ensuring the charity has the technical infrastructure it needs to function. The Infrastructure Team comprises software and DevOps engineers with a wealth of experience and knowledge in the area.

The trustees are responsible for heading up the Fundraising Team, which is responsible for ensuring the charity has sufficient funds to run its programme by reaching out to and working with existing and potential sponsors.

The public image of Student Robotics is the responsibility of the Marketing Team Committee who manage the charity's social media presence as well as its website. The Committee is also responsible for recruiting new competitor teams through these channels.

Financial Review

At the end of the financial year the charity had £9,796 in the bank account and no creditors. Reserves are necessary to allow the next competition to be planned and launched without relying on having to attract funding to a specific schedule.

Our fundraising team had a degree of success in attracting new sources of sponsorship and our marketing team has done an excellent job in revamping the web site so that there is

more information about the charity for potential sponsors. They have worked hard to ensure that our social media accounts have been actively used to promote our work throughout the year.

A financial statement has been filed alongside this report and the full accounts are available for inspection at any time.

Approved by the board of Trustees and signed on its behalf:

Diane Dowling

Diane Dowling
Trustee (Treasurer)



CHARITY COMMISSION
FOR ENGLAND AND WALES

Student Robotics

No (if any)
1163168

Receipts and payments accounts

CC16a

For the period from	Period start date 01/08/2021	To	Period end date 31/07/2022
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Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £	Last year to the nearest £
A1 Receipts					
Donations	12,585	-	-	12,585	1,378
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total (Gross income for AR)	12,585	-	-	12,585	1,378
A2 Asset and investment sales, (see table).					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total receipts	12,585	-	-	12,585	1,378
A3 Payments					
Accounting and legal	40	-	-	40	-
Bank Fees	42	-	-	42	33
Costs of competition	930	-	-	930	1,248
Container rental	1,373	-	-	1,373	1,373
Digital Infrastructure	346	-	-	346	338
Insurance	451	-	-	451	430
Kit development	2,732	-	-	2,732	-
Mail services	519	-	-	519	300
Marketing	483	-	-	483	-
Sub total	6,916	-	-	6,916	1,226
A4 Asset and investment purchases, (see table)					
Loan repayment	-	-	-	-	8,882
	-	-	-	-	-
Sub total	-	-	-	-	8,882
Total payments	6,916	-	-	6,916	10,108
Net of receipts/(payments)	5,669	-	-	5,669	8,730
A5 Transfers between funds	-	-	-	-	-
A6 Cash funds last year end	4,127	-	-	4,127	12,857
Cash funds this year end	9,796	-	-	9,796	4,127

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds	HSBC	9,796	-	-
		-	-	-
		-	-	-
	Total cash funds	9,796	-	-
	(agree balances with receipts and payments account(s))	OK	OK	OK
		Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B2 Other monetary assets	Details	-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
B3 Investment assets	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
			-	-
			-	-
			-	-
			-	-
B4 Assets retained for the charity's own use	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
B5 Liabilities	Details	Fund to which liability relates	Amount due (optional)	When due (optional)
			-	
			-	
			-	
Signed by one or two trustees on behalf of all the trustees	Signature	Print Name	Date of approval	
	<i>Diane Dowling</i>	Diane Dowling	09/05/2023	

Accounts

Student Robotics

Trustees' Annual Report 2021

From 1st August 2020 to 31st July 2021

Reference and Administrative Details

Charity Name:	Student Robotics
Charity Registration Number:	1163168
Principal Address:	Student Robotics Lytchett House 13 Freeland Park Wareham Road Lytchett Matravers Poole
Trustees:	Diane Dowling David Massey Thomas Scarsbrook Jimmy Thompson (resigned September 2020)

Objectives and Activities

Student Robotics' purpose, as specified in its constitution, is the advancement of education and training for the public benefit, particularly in relation to engineering, mathematics, robotics, computer science, computer software development and related subjects.

The primary activity carried out by the charity to meet its objective is the running of an annual robotics competition for 16 to 19 year-olds. This competition challenges teams of students to design, build and develop autonomous robots. After announcing the year's game, we give teams six months to engineer their creations. We supply each team with a core electronics kit, which provides a framework on which to build their robot, and our volunteers mentor teams throughout the competition cycle. We do not charge a fee to partake in the competition as this can pose a barrier to entry, especially to those schools that may initially have minimal exposure to engineering and robotics and therefore may not begin with high expectation of success.

The 2020-21 robotics competition was designed to be completed entirely remotely, owing to lockdown restrictions at the time. This followed the successful “virtual competition” devised during the 2019-20 competition year. Aiming to make the most of the opportunity, the challenge set to teams involved remotely-activated sensors which would be hard to replicate in an in-person competition. Similarly, the competition was opened to teams worldwide as we weren’t restricted by the need for robots to end up in the same physical location.

Sadly this virtual competition meant that we did not have a physical engineering challenge for the teams to solve, though to help try and counter this we did extend several kit loans to teams so that they could be used to teach robotics outside of our own programme.

Overall, there were twenty one competing teams for the 2020-21 competition. The majority of these were based in the UK, but we also had teams from Australia, Brunei, France, Germany, and Malaysia. This is fewer teams than previous years, mostly due to schools having difficulty arranging for extra-curricular activities alongside Covid-19 measures.

The Kickstart event where the game is announced was held virtually, live-streamed to YouTube on the Student Robotics channel. Competitors were able to post questions directly to the chat alongside the video which were answered live. As well as announcing the game this event talked teams through the structure of the competition and highlighted key problems they would need to solve.

Our game this year, Radars of the Lost Ark, challenged teams to score points by claiming territories using radios inside a simulated arena we developed. Teams had to navigate the arena scanning for tower transmissions and sending their own transmissions back to claim territories. Taking advantage of the virtual nature of the competition, we changed the structure to run multiple “league” sessions over several months. After each session, we released a new module to the game which added new challenges and features. As with every Student Robotics competition, the robots must be fully autonomous and once the round has begun, no-one is able to interfere with the robots until the end of the round, two and a half minutes later.

While we have offered a support forum for many years, this year we switched to use Discord to host these forums. Competitors and Team Leaders were invited so they could ask for help, share progress and chat to other teams throughout the year. We noticed an increased presence of teams in the Discord server with more inter-team communication and peer support.

Thanks to the relative ease of running matches in a virtual environment we were able to offer “friendly” matches to teams. These were sessions where teams would submit their code to be run against other teams with no awards given. Volunteers also gave advice and guidance as these friendly matches were live streamed to teams. These events proved popular and gave the teams a chance to interact with each other as well as allowing a wider range of volunteers to be shown due to the more informal nature of the commentary.

Taking all our learnings from the previous virtual event we held we invested heavily into the time needed to master the technologies used to broadcast these matches. This helped us increase our production values and helped to make the livestreams more polished. While

these live streams were no match for the atmosphere of an in person event, the high calibre of commentators, our information overlays, and our active livestream chat did provide a spectacle for teams to look forward to.

Achievements and Performance

The charity continues to be successful in meeting its aim of providing young people with an introduction to STEM careers. As our vision states “We want to foster a world where engineering and artificial intelligence is accessible to young people.” The fact that our volunteers are almost entirely drawn from those who have taken part in Student Robotics in the past and that we continue to gather support from new schools shows that we are fostering a lively interest in engineering amongst the students who take part in our competition. Our mission is “To bring the excitement of engineering and the challenge of coding to young people through robotics.” and before participating in Student Robotics 79% of competitors were strongly considering pursuing a career in a STEM related field. After participating, this number increased to 89% showing we continue to achieve this.

In a survey of competitors after the event, 100% of those who responded said they would recommend Student Robotics.

Structure, Governance and Management

Student Robotics is a Charitable Incorporated Organisation (CIO), registered on 18th August 2015. The charity is governed by its constitution which defines its objectives, powers and structure of governance.

Student Robotics is led by a board of Trustees that meets on a regular basis to provide the strategic direction for the charity and to ensure that all financial and legal obligations are met. The board of Trustees is made up of engineering and computer science professionals and educators; two of the Trustees have previously managed student teams, the third is a long standing volunteer. This specialised knowledge and experience is an asset since it ensures the technological content of the charity’s activities is both state of the art and relevant to its beneficiaries.

New Trustees can be appointed either by a resolution of the Members of the charity or by a decision of the existing Trustees. To date, Trustees have been recruited by canvassing team leaders and volunteers for expressions of interest followed by a rigorous selection process. It is envisaged that future Trustees will be recruited from beneficiaries of the charity as they enter into the professional world.

The Trustees are held to account by the Members of the charity. All active volunteers are invited to become Members if they so wish. The register of Members also includes past volunteers who are no longer active but who wish to remain part of the organisation.

The day-to-day work of the charity is delivered by its volunteers. The charity has a general approach of openness and transparency, and as such all volunteers are actively encouraged to contribute to and improve the charity's 'Operations Manual'. This manual sets out the operational structure of the charity; the delegation of powers to others in named roles, for the purpose of the day-to-day running of each aspect of the charity; and the processes to be followed by people in named roles. This manual is treated as a living document and is constantly updated to meet the needs of the organisation.

The responsibility for delivering key aspects of the charity's work is delegated to committees, each with a specific focus and overseen by the Trustees. The primary activity, the annual robotics competition for 16-19 year olds, is delegated to the Competition Team Committee. Most volunteers are members of the competition team. The robotics kit is maintained by a team led by the Kit Team Committee who have responsibility for developing and maintaining the kit that is used in the competition. The kit team comprises engineers and engineering students who bring a wide range of expertise to the task.

Financial Review

Our only income during the financial year was a small amount received from a workplace charitable donations programme. We also received some sums in reimbursement of costs paid out for the previous year's competition (that had been cancelled due to Covid restrictions). As we did not run a physical competition, and had minimal outgoings, we were able to repay a long standing loan that had been made to the organisation from a founding member.

The bank balance at the end of the year was £4,127. This small reserve is necessary to allow us to cover the fixed costs of the organisation for the year ahead without having to rely on the need to attract funding to a specific schedule.

Fundraising continues to be a significant challenge. The Covid-19 pandemic has had a major impact on the activities of the charity. We have now been unable to run a physical competition for two years and potential sponsors have had to tighten their belts and think hard about where to allocate funding. It has been very hard to attract funding in this climate of uncertainty. Fundraising will be a priority for the charity in the coming year.

A financial statement has been filed alongside this report and the full accounts are available for inspection at any time.

Approved by the board of Trustees and signed on its behalf:

Diane Dowling

Trustee (Treasurer)



CHARITY COMMISSION
FOR ENGLAND AND WALES

Charity name

Student Robotics

1163168

Receipts and payments accounts

CC16a

For the period
from

Period start date

1 August 2020

To

Period end date

31 July 2021

Section A Receipts and payments

	Unrestricted funds	Restricted funds	Endowment funds	Total funds	Last year
	to the nearest £	to the nearest £	to the nearest £	to the nearest £	to the nearest £
A1 Receipts					
Donations	1,378	-	-	1,378	531
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total (Gross income for AR)	1,378	-	-	1,378	531
A2 Asset and investment sales, (see table).					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total receipts	1,378	-	-	1,378	531

A3 Payments

Bank charges	33	-	-	33	17
Insurance	430	-	-	430	488
Mail services	300	-	-	300	67
Meeting costs	-	-	-	-	82

Web services	338	-	-	338	850
Container and kit storage	1,373	-	-	1,373	1,630
Competition costs	- 1,248	-	-	- 1,248	1,851
Kit updating	-	-	-	-	339
Marketing costs	-	-	-	-	38
Sub total	1,226	-	-	1,226	5,362
A4 Asset and investment purchases, (see table)					
Loan repayment	8,882	-	-	8,882	
	-	-	-	-	
Sub total	8,882	-	-	8,882	
Total payments	10,108	-	-	10,108	5,362
Net of receipts/(payments)	- 8,730	-	-	- 8,730	- 4,831
A5 Transfers between funds	-	-	-	-	-
A6 Cash funds last year end	12,857	-	-	12,857	17,688
Cash funds this year end	4,127	-	-	4,127	12,857

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds	HSBC	4,127	-	-
		-	-	-
		-	-	-
	Total cash funds	4,127	-	-
	(agree balances with receipts and payments account (s))	OK	OK	OK
		Unrestricted funds	Restricted funds	Endowment funds

B2 Other monetary assets

Details	to nearest £	to nearest £	to nearest £
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

B3 Investment assets

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-

B4 Assets retained for the charity's own use

Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-
		-	-

B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
		-	
		-	
		-	
		-	
		-	

Signed by one or two trustees on behalf of
all the trustees

Signature	Print Name	Date of approval
<i>Diane Dowling</i>	Diane Dowling (Treasurer)	20/04/22