

**CODE
<FOR
LIFE>**

Impact Report 2023

Dear Code For Life Community,

As we reflect on the past year, we are thrilled to share the incredible achievements of *Code For Life*, our not-for-profit initiative, from *Ocado Group*. With a steadfast commitment to empowering educators and students worldwide, we have seen remarkable growth and impact. Our free coding and teaching resources, including two engaging games supported by comprehensive lesson plans, assessment sheets, and progress tracking, have reached over 265,000 active users across 180 countries.

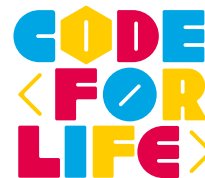
Code For Life's presence in schools has been transformative, with our dedicated volunteers and team delivering career talks, attending career fairs, on-boarding teachers, and inspiring the next generation of technologists.

Collaborations with partners such as *Barclays*, *Barefoot Computing*, *BCS(The Chartered Institute for IT)*, and *CS in Schools* have enabled us to create even more free tools for educators.

Our community, made up of dedicated teachers, tutors, students, and volunteers, has played a vital part in *Code For Life's* growth. In 2023, the number of users increased by 20%, and over 2,000 schools and 8,000 classes were registered, resulting in 2.1 million levels of Rapid Router being successfully completed.

As we celebrate these achievements, we express gratitude to every individual who has contributed to *Code For Life's* success. Your dedication is driving positive change and fostering a love for coding in classrooms worldwide. Together, we are making coding education accessible across the globe.

Here's to another year of impact and growth!



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What do you like most about our products?

Motivates students*

Easy to use*

Progressive development*

* Data source: UsabilityHub Satisfaction survey 2023

Who we are

Code for Life is part of *Ocado Group's 'Skills for the Future'* initiative which provides tools that empower everyone to shape technology. Since its inception in 2014 by *Ocado Technology* volunteers, we've been on a mission to support the teaching of coding skills, catering to all ages and abilities, from Key Stage 1 to 4 and beyond.

Our free, user-friendly educational platform has grown organically, reaching over 600,000 users in 180 countries. Alongside two coding games, we offer engaging teaching materials for teachers, including editable slides, assessments, and lesson plans, fostering an interactive learning experience.

The *Code For Life* code base is open source, enhancing opportunities to work with universities and students on our live industry projects. This also gives opportunity to contributors from all over the world to gain experience working with a software team whilst making a real impact to tech education.

All our contributions to the project are recognised on our Github and Gitbook accounts where they can see their names amongst tens of other software engineers, designers and teachers since 2014.

We reach out to schools, bringing technology careers into classrooms through events and graphics such as; [presentations](#), school assemblies, [printable posters](#), guest speakers, career fairs, [STEM events](#), and newsletters, with a focus on diversity.

Prioritising security, we align with the *ICO's Age Appropriate Design Code*, working closely with the *Ocado Group Data Protection Team* to meet the [Children's Code](#) requirements, ensuring *Code for Life* remains a secure and child-friendly space for free coding resources.



Behind the scenes of Code for Life

Laura Cumming Engineering Team Lead

My work routine is filled with product management, team management, graphic/UX/UI design and research, business management, data reporting, and collaborations with businesses, teachers and schools. I love seeing the smiles on students' faces when they successfully complete our challenges, the positive impact of our products, and contributing to the development of the next generation of technologists by supporting teachers. In my spare time, I like exploring nature, hanging out with my niece and nephews, and building Lego.



Florian Aucomte Senior Software Engineer

In the six years I've been with *Code for Life* I've had the opportunity to help improve the *Code for Life* website and games as a full-stack engineer - by improving the functionality and efficiency of the app and adding new shiny features and content. I also make sure the website is secure and follows data regulations. To me, creating games and applications is very creative and artistic, which is one of the aspects I love about my job, just like what I look for in my hobbies like playing the piano and the violin, performing on stage and singing!



Stefan Kairinos Senior Software Engineer

I'm a software developer at *Code for Life* and my key responsibilities are translating the team's product requirements into technical requirements, breaking down development tasks and leading development efforts. I'm a born puzzle solver and love the challenge of piecing together a complex system. Some of my hobbies include reading and visiting museum exhibitions.



Darcie Gomer User Researcher

I joined the *Code for Life* team in September as a User Experience Researcher as part of my graduate scheme rotations. My focus is working with teachers and students in schools to understand what can be improved with our teaching resources, website and games. In my free time I love to travel, most recently I went to India! Here's a photo of me in Mumbai wearing a dress I bought in Kerala.



Code for Life Statistics 2023*

>100k
Registered users

NEW **>290k**
new visitors

LEVELS COMPLETED
2.1MILLION

2,000
SCHOOLS REGISTERED

Top countries with number of schools:
UK, USA
CANADA
AUSTRALIA

8,000
CLASSES REGISTERED

>265k
Active users

DO YOU THINK RAPID ROUTER HAS HELPED WITH LEARNING?
100%

HOW EASY TO USE ARE THE TEACHING RESOURCES?
75%
VERY EASY TO USE

91%
SATISFIED
WITH RAPID ROUTER

* Data source: GA/GA4 (users that accepted cookies) Sept 2022-2023, Database: Those that logged in. Sept 2022-2023, illustrations from Freepic on [Flaticon](https://www.flaticon.com/)

Your feedback made a difference

A selection of new features over the last 12 months

You told us...

The levels in Rapid Router can be too repetitive.

We did...

We changed the problem space by introducing cows with their own behaviour, and we added new python challenges.



You told us...

The gap between Rapid Router and Kurono is too hard to bridge.

We did...

We have been working hard to close the gap between the two games and teaching materials by introducing new Python teaching material using an online IDE. Keep a look out for access to early releases in 2024!

You told us...

Students become distracted by the animated game in Kurono whilst working on their code.

We did...

We added a pause button to allow the students to focus on their code whilst they worked out the challenge response.



You told us...

The levels in Rapid Router were hard to navigate.

We did...

We introduced previous and next buttons into the pop-ups on rapid Router to help preview levels and we remember where the user navigated from on the levels page.

Case study

Chris Lovell, Ashfold School

The Problem

At Ashfold, children begin tackling computational thinking challenges and puzzles from Year 1. I use *Code for Life's Rapid Router* Blockly-based code to support the development of our Year 5 and 6 computational thinking skills, and we utilise the python-based challenges for our years 7 and 8. I have found that children enjoy the challenges and seeing the animation of the delivery vehicle exploding! I have found that *Code for Life's* activities are nicely progressed through KS2 to KS3, and the activities fit in well with our other coding activities. The *Rapid Router* activities are scaffolded to support all learners in the classroom. *Rapid Router* allows us to extend our more able learners in KS2 with the python challenges, and our KS3 learners with a variety of complex puzzles to solve and create for others.

The Method

I use *Rapid Router* for a 6-week unit of work. Each activity has instruction videos that we watch as a whole class. At Ashfold, pupils support each other through the challenges, and I utilise the "three before me" approach in lessons – firstly pupils will think through the coding challenge set; if they are unsure, they will read the help tools and guidance from the *Rapid Router* tools. If they remain unsure how to solve a problem, they will discuss the

“We find that Rapid Router engages all learners with computer science.”

challenge with their neighbour. At this point, I will then support the pupils by encouraging them to explain their steps to solve the problem so far. By talking through the puzzles, I often find that children are able to find a solution without my direct support. As the challenges progress, we may have whole class feedback and discussion where, as a class, we discuss the merits of the different solutions proposed. In class, pupils are guided to make use of the 'algorithm feedback' tool in *Rapid Router* to assess the efficiency of proposed solutions, and I have found that the tool helps pupils articulate why one solution algorithm is better than another.

The Impact

We find that *Rapid Router* engages all learners with computer science. Over the years, we have used the *Code For Life* tools with hundreds of children with a balanced mix of boys and girls. While I consider the focus of *Rapid Router* to be computational thinking and puzzle based, learners do have an opportunity to create their own puzzles for others to solve. This is an aspect that I have found children have enjoyed through setting puzzles for their friends to solve. I encourage children to set challenges that have a variety of algorithmic solutions.

Case study

Melanie Moore, Worsbrough Common Primary

The Problem

(*The problem was...*) Initially, my lack of confidence with terminology and the requirements of coding. I was able to learn alongside the pupils exploring the coding process and differing elements as we went along. On seeing how engaged our pupils were I knew this would enable them and it did challenge them (and myself!).

The Method

I used *Rapid Router (RR)* following a basic introduction to coding using ScratchJr at Year 2/3, so using *RR* from Y3: I found that demonstrating it then allowing them to choose (within a certain criteria i.e.: any level up to nine for this session) worked, as they had a sense of control over what they thought they knew, as they needed/requested support I would advise them to go back to earlier levels to find solutions/learn... I would then stop at certain points in the class and ask them what they had found/learnt, we would then work through to find solutions.

The Impact

The kids enjoy it, get frustrated by it, those that are inspired and challenged by it want to use it at home by choice. I feel they get loads from it. I have taught a number of classes over the years using it, so, thinking about 30 in a class approx maybe 7/8 classes over about 3 years.

“I was able to learn alongside the pupils exploring the coding process and differing elements as we went along.”



Case study

Sian Kerr, Head of ICT, Cottesmore school



The Problem

There is a wide divide in children's attitudes to Computer Science. Those who are keen on gaming and IT are easy to engage but those who have little interest or interaction with tech need a lot more support. *Rapid Router* is a fun way for them to learn the basics of programming with visual language and appealing effects - especially when they crash. I use this quote from Edison to reinforce the message of resilience and trying alternative methods - "I have not failed, I've just found 10000 ways that won't work".

I also find variety helps increase the appeal and gives them a sense of accomplishment when they can use knowledge from one coding platform on a different one, showing how much they have actually learnt.

The Method

I found *Code For Life* invaluable for remote tutorials during lock-downs. The tutorials helped children work at their own pace and move on as quickly as they liked. Working in an independent school meant smaller class sizes so it was easier to bring them all together to go through common misconceptions - the most frequent one being unable to spot repetition to make their code more efficient and understand how the 'call' function worked.

Something that might aid the need for a repeat block is limiting the number of blocks that can be used sooner to push the students to look for efficient problem solving (Levels 51-60).

The Impact

As a timetabled subject, I was able to use *Rapid Router* as part of the curriculum so all students were given access to it - an even mix of boys and girls. During lock-down, I used it with pretty much across the whole school and the stars and levels showing their progress were great for encouraging competitive students to work harder.

"I also find variety helps increase the appeal and gives them a sense of accomplishment when they can use knowledge from one coding platform on a different one, showing how much they have actually learnt"

Careers in technology

Inspiring young students with technology

Code for Life has been working closely with volunteers and schools to develop its career offer in collaboration with *Ocado Technology*.

Assemblies and career fairs

- We attended 3 Career Fairs
- Spoke at 2 school assemblies
- Hosted 1 coding club and 2 volunteer sessions
- Spoke at 1 STEM Event
- Mentored 3 Students

Under the spotlight

We interviewed 3 new colleagues and featured them in our newsletter, one of them being our Chief People Officer, Claire Ainscough.

Newsletters and research emails

In 2023, we sent over 18k emails out of which over 12k were opened and nearly 4k were clicked on. We only received 80 unsubscribes, so thank you for being so dedicated to our cause.

Volunteers

We recruited 10 new Volunteers.

Under the Spotlight

Claire Ainscough, Chief People Officer, Ocado Group

"My four years here have been a whirlwind - like all tech organisations, no day is ever the same. My role is responsible for Ocado's employees- basically ensuring this is an amazing place to work regardless of your background."

The best thing about my job is when I see people grow and develop - here you can do this through your role, through professional courses and by volunteering internally. One great example of this is through **Code for Life** which benefits the skills and wellbeing of our volunteers, and inspires people to a future career in tech. This combination of learning, wellbeing, diversity and inspiring young people is one of the best ways Ocado builds a stronger organisation for the future."

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Videos

A page about Careers in Technology

The Code for Life Team Lead, Laura Cumming asked other women at OcadoTechnology to help inspire the students at St Albans Girls School. It was a fantastic experience.

What do teachers think about Code for Life?

"I really appreciate the access to this programme and my students all get very engaged."

"Please keep providing these wonderful resources."

FREE
forever

"It was all straightforward enough that the pupils at our SEND school were able to pick it up after I did the first few together with them on the board, and my technophobic colleague was able to run the sessions without me when my schedule changed."

"Great - keep up the good work!"

Raising wellbeing through volunteering

The *Code For Life* team and volunteers reached out to the community, by holding engagements in schools, on-boarding teachers, delivering career talks and inspiring the next generation of technologists. Each engagement accumulated positive feedback from teachers, parents and students.

Beyond the metrics, we recognise the invaluable contributions of our team and volunteers. From our colleagues that volunteered to visit schools and events with us, 86% reported improved wellbeing, and 100% expressed a desire for more opportunities like these. This collective effort, fuelled by passion and dedication, has driven positive change and fostered a love for coding in classrooms worldwide. As we celebrate these achievements, we express gratitude to every individual who has contributed to *Code For Life's* success. Together, we are making coding education accessible and impactful across the globe.

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Partnerships - Developing new relationships to expand our reach

The collaboration partnerships with organisations extend beyond borders, contributing to the development of innovative educational content. *Code for Life's* presence was strengthened globally, particularly in India and Australia, leading to significant improvements and expansions in the programme.

In2Science

[In2Science](#) offers young individuals from low-income and underprivileged backgrounds the chance to acquire practical insights into the STEM sector, along with the knowledge and confidence needed to advance to university.

We tendered projects from our backlog and selected three participants from eight applications, that were supported with regular mentoring through an 8-week programme. The goal was to gain three code submissions as contributions to *Code For Life* features. So far, one student has completed the challenge, meaning they will feature on our contributors list.

Barclays Digital Eagles

The [Barclays Digital Eagles](#) are dedicated to assisting individuals at every stage of their digital journey. We ran a coding workshop for ages 7-10 at the *Eagle Hub* in Cranfield University during IET's

Engineering Open House week. We built new relationships with [Barclays Eagle Labs](#) and gained insights into the home learning community in the Milton Keynes area. We continue to grow our relationship with the Digital Eagles and look forward to more events together in 2024.

CS in Schools

[CS in Schools'](#) mission is to assist schools in establishing pertinent and impactful educational experiences. They achieve this by fostering industry connections with schools, offering a comprehensive DigiTech pathway for all secondary students, and enhancing teacher confidence in imparting digital technology education.

We worked with *CS in Schools* to align Rapid Router to the Australian curriculum. Partnering presents a chance to enhance our resources and establish a stronger presence in Australia, which ranks as our fourth-highest user country.

The collaboration has already achieved the release of a [Beta module](#) with more modules planned later next year.



CS IN SCHOOLS

The year ahead

We celebrate 10 years of Code for Life in 2024

Looking ahead, we are excited to embrace the opportunities for growth with a motivated, leaner team. Comprising two full-time software engineers, a dedicated designer, and a part-time teaching consultant, we are approaching 2024 with a strong commitment to providing empowering resources for our teachers. Our goal is to continue supporting our students through engaging games and challenges, fuelled by our volunteers, determination and drive.

We will be looking for ambassadors and volunteers to help us spread the word, deliver our clubs and contribute to our resources within and outside *Ocado Group*. Volunteers can contribute in many ways, including delivering clubs, creating worksheets, giving feedback, testing resources, contributing to our Open Source code base, creating UX and UI design, or even just running teachers through the products in a continuing professional development.

So, if you feel you can dedicate some time to a fantastic cause, get in touch and we will equip you with everything you need.

We are proud to announce that we will be celebrating our 10 year anniversary in 2024. This is a fantastic achievement and we are planning to celebrate throughout the year. Follow us on social media or get in touch directly to find out what we are planning for the year ahead.

If you want to suggest an event using our resources, we would love to hear about that too.

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