

**PLAYING
WITH OPEN
DATA—
To discover
Plymouth**

DATA Play

In the next four years Plymouth City Council are facing cuts from £44.5 million to just £9.5 million. That's a reduction of 79 per cent.

The Council has been proactively addressing these financial challenges through a major programme of transformation, which is focused on delivering services in entirely new ways and raising income by growing Plymouth's economy.

In this context DATA Play is exploring a more collaborative way of working with local talent and tech companies to explore how data and technology can help address these challenges.

The Council are excited about DATA Play and would like you to join in.

This book tells the story so far, a bit about our approach to DATA Play Days and what is happening next.

#dataplay

DATA Play journey so far...

DATA Play Day 1 was an experiment to test whether the Council opening up data could help understand the city, better support innovation and new ideas and create opportunities for the Council to work with the local tech community.

DATA Play 2 developed these opportunities further by offering financial rewards for ideas, the support of a panel of experts and leaders in the city and a range of workshops to build skills and great ideas.

This work is supported by the Department for Communities and Local Government through Delivering Differently in Neighbourhoods funding and Local Planning Reform funding.

Who was involved

Andy Mantell Ltd / Dartmoor National Park / Dave Kilroy / Delt Services / Devon County Council / Drifting Space/ Elixel / GOSS / Library Coding Club / Marine Biological Association / ODI Devon / The Data Place/ ODI Training / Our Way Tech / Pixalytics Ltd / Plymouth City Council — Libraries, Green Infrastructure, Neighbourhood Planning and Transformation services / Plymouth College of Art / Plymouth Community Homes / Plymouth Cubed / Plymouth Culture / Plymouth Marine Laboratory / Plymouth University — Interdisciplinary Centre for Computer Music Research, Architect Department and Geography GIS / i-DAT / Public Health / Real Ideas Organisation / SAHFOS / THINQTANQ / West Country Rivers Trust



The data

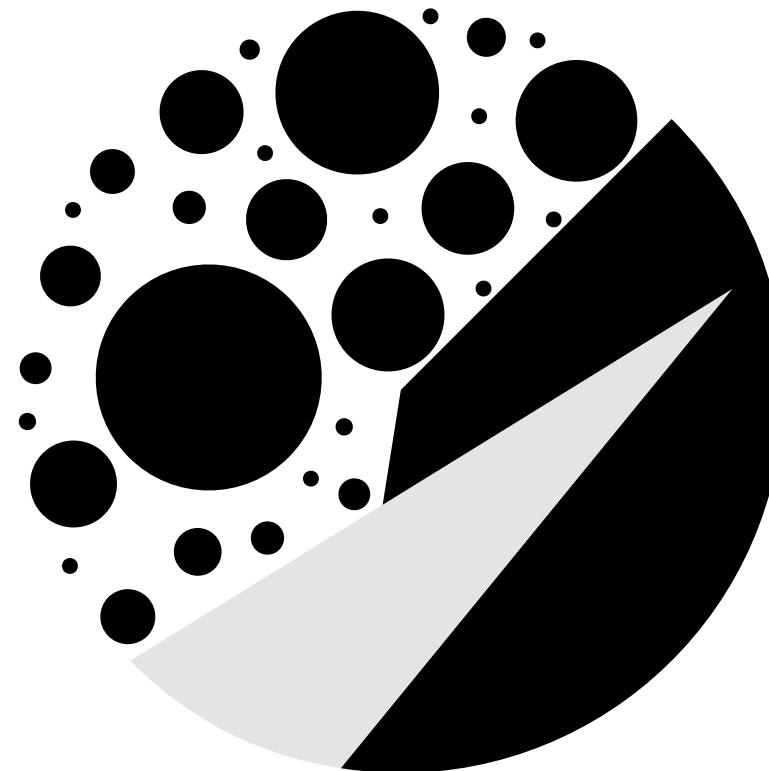
This is the list of data open so far

- Library location
- Wellbeing survey
- Buoy data from Plymouth Sound
- Public rights of way
- Licensed premises
- Listed buildings
- Schools
- Plymouth Pear trees
- Council spend over £500
- Ancient trees
- Food standards agency ratings
- South west coast path route
- Play spaces
- Neighbourhood boundaries
- Council land ownership
- Car parking fines
- Resident parking areas
- Public toilets
- Planning applications

Support from ODI Devon / Data Hatch

Thanks to The Data Place who came to the first DATA Play day, we have a new and easy way for you to access the data we are opening, share your projects and read the DATA Play blog. The Data Place is setting up as a social enterprise.

dataplay.org.uk



HACKER

— **Good
or bad?**

“The data says I should go to a car dealer and get a mauve car and I’ll never get a parking ticket!”



The space

Establishing a fun and creative environment is key to DATA Play Days and helps great ideas and experimentation to happen. We have used spaces at the Red House and Thrive Hubs and added in retro gaming, soft play, idea stations, toys, gadgets and scribble spaces in to the mix.





“I have spun up a free server on azure. I’m going to see if I can push my **#dataplay** project to it.”
@TSHSmith

DATA Play panel

To guide DATA Players and decide the winners, a panel of local experts took part in DATA Play 2.



Adrian Hollister

Adrian is the Head of Strategy & Architecture at Plymouth University. He is a digital innovator and strategist with more than 20 years experience, has worked for IBM, Lotus and a wide range customers across public sector, HE and utilities. Adrian won his first industry award in 2002 and has been adding to the tally ever since. He is also a member of the Marine Academy Plymouth Board of Governors; the Digital Plymouth Steering Group; the All-Party Parliamentary Group on Smart Cities, and more.



Dom Jinks

Dom is an arts professional with over 15 years experience. He was previously Head of Arts and Culture Services at the University of Exeter, responsible for establishing a new team and service. Whilst in Exeter Dom was Chair of the Exeter Cultural Partnership and led on the development of a 5 year cultural strategy

for Exeter. Before this Dom enjoyed 7 years at Arts Council England and was a member of the Senior Management Team in the East Midlands. Dom's professional training is in theatre and specifically Shakespeare. He was Director of Education and Development for Shakespeare 4 Kidz UK Ltd, an Associate of The Globe Theatre and was founder and Director of The British Touring Shakespeare Company.



Sabrina Simpson

Sabrina is the co-founder of THINQTANQ, Plymouth's first coworking space for microbusiness owners, freelancers and those who want to work for themselves, but not by themselves. This is her third start-up business; her first professional consultancy was sold to a large US national company, and the second grew from 6 people to over 100 in 6 years, and is now about to celebrate its 20th year anniversary. Originally from California, Sabrina is delighted to call Plymouth home, and enjoys supporting the growing digital business scene.



Rob McCarthy

Rob is Chief Executive Officer of Plymouth-based GOSS Interactive, a leading web content management and digital platform company. GOSS was founded by Rob in 1999 and was recently placed in the UK Digital Leaders 100 list and has also been recognised as Best Creative Company in the South West. Rob is a technology evangelist having developed the GOSS intelligent Content Management system (iCM), and led the development of the GOSS Self-Service Platform, both leading edge technologies for the public sector.



Kelechi Nnoaham

Kelechi is currently Director of Public Health for Plymouth's 261,000 residents. He qualified with a medical degree in 1999 and practised in general medicine and infectious diseases before pursuing public health training in Oxford. He researched women's health and chronic disease prevention for a PhD in Public Health and Epidemiology at University of Oxford. In Plymouth City Council, he has additional responsibility for public protection and civil protection services, a duty he combines

with academic roles as honorary Professor of Public Health in Plymouth University. Since joining the Council in April 2014, Kelechi has gone about articulating a city-wide agenda for tackling health inequalities ('Thrive Plymouth') which has at its heart a focus on social change, population, prevention and multiple risk behaviour modification.



Chris Penberthy

Councillor Chris Penberthy (Labour and Co-operative, St Peter and the Waterfront) is Plymouth City Council's Cabinet Member for Cooperatives, Housing and Community Safety. Chris is Vice-Chair of the Plymouth Borough Co-operative Party, chairs the Plymouth Fairtrade Network and the CCIN Values and Principles Board as well as being an active board member of local social enterprises and cooperatives including Plymouth Energy Community, Plymouth Energy Community Renewables and the Millfields Community Economic Development Trust CIC.

These are
 just a few
 examples
 of what
 DATA Play
 can do

EXAMPLES

A £2,000 reward went to...

Our Way Tech

Our Way Tech have been awarded £2,000 for their idea to get younger people engaged in the heritage of Plymouth. The team is made of four students from Plymstock School who worked with Real Ideas Organisation to set up their student led social enterprise. They will set up a virtual reality experience using Google Cardboard to guide people through Plymouth's history using images from Plymouth's archives.

As well as getting younger people engaged in the past, the project will also aim to get young people thinking about the future. This project hopes to make local heritage look cool and intrinsically connected to technology.

This funding will enable Our Way Tech to play with and test different technology and to work with developers to create a digital map that collects and shares memories and historical data.

The digital map and the data that they will be collecting could go on to support Mayflower 400 or the new History Centre.
@OurWayTech

Plymouth Tree Database

Trees are an important part of any city and well-chosen and well-grown trees have been proven to increase both the prosperity of an area and the health of its citizens. There is no database showing exactly where our precious trees are, their health and species etc.

Plymouth Tree Partnership is working in partnership with i-DAT who will pilot a database which is accessible through the internet and populated with live data. It will include a method of alerting registered users when information within their areas of interest changes. The database will be capable of uploading pictures with GPS location from mobile devices and linking to other tools. This will test some ideas for later expansion and additional functionality such as links to other citizen-science databases.

The Plymouth Outdoors Team and Elixel

The family team of Jenson (10), Kitiana (13), Robert and Lavinia have been paired up with the technology know-how of Elixel to develop their idea for an app that helps you find your nearest sports facility, club or event.

The app for mobile devices will enable users to locate their nearest sports facilities along with useful information. Plymouth has a wide range of sports facilities, many of which are free, but it is not very easy to find information about them, especially if a resident is not sure what sports they want to try out.
@elixelofficial

“–I have been attending events of a similar nature for over 20 years (Hello, IBM and Microsoft) and none came close in facilities, friendliness and enthusiasm.–”

but it isn't just about rewards...

DATA Play is all about bringing people together and developing great ideas.

As a council, we like to hear about these ideas so we can celebrate them and use them to influence how we work. We are also exploring how we can invest or partner with local companies that are developing good ideas.

If you've done something with Plymouth data, let us know by contacting GISplanning@plymouth.gov.uk or check out our blog dataplay.org.uk

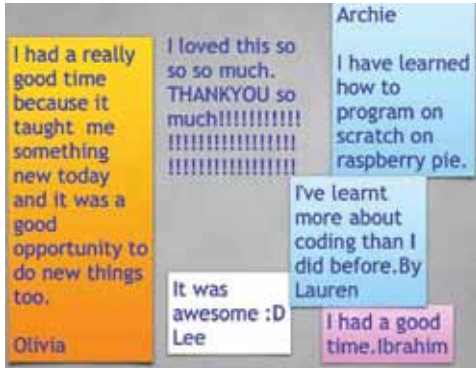


Minecraft Plymouth

It was a great day. Personal PC projects like this are a by definition a little solitary and you often wonder why you are doing it or whether it is truly worthwhile. The dozens of nice people I met at DATA Play certainly proved both points to be true. I have never encountered such friendliness and enthusiasm. In the months since I attended, I have remained in touch with many of the people I met and called

up on them often for freely-given and valuable advice. In turn, those people have put me in contact with people all over the world. The Minecraft Community is a fascinating, friendly place and without DATA Play, it's unlikely I would have been involved with them.

Created by
[@dyrms86](https://twitter.com/dyrms86)



“The great work that the code club has demonstrated has inspired us to start our own PCC officer coding club!”

**Hello World —
Coding in Plymouth Libraries**

Our library service is helping to create the next generation of computer programmers.

Code Club is a nationwide network of free volunteer-led after school coding clubs for children aged 9-11.

The Central Library's Code Club meets every Saturday morning and members learn how to program by making computer games, animations and websites. The students work through the projects provided by Code Club, starting with Scratch, a basic visual programming language and move onto website development with HTML, CSS and Python.

Volunteer Dave Kilroy **“I enjoy making things and getting tech to work - but I had forgotten just how much fun it can be getting kids coding and making - Code Club is one of the funniest parts of my week.”**

The library is planning more coding and digital making activities, including a weekly after school club. If you want to know more or can spare an hour a week to help get kids coding, get in touch. library@plymouth.gov.uk

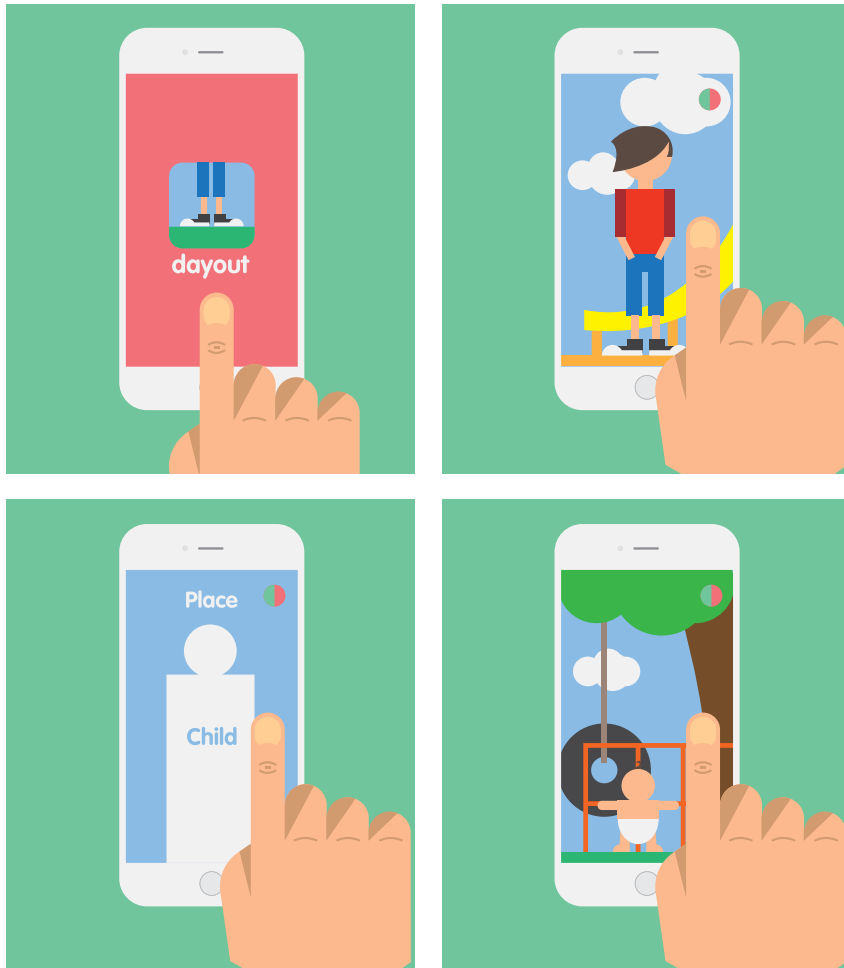
www.codeclub.org.uk



Plymouth map of crime

Inspired to make data more accessible to children, I used crime data to educate what children should do when faced with a crime. Here was a simple Google API, I plotted places to be careful according to the data.

**Created by Megan Owens
@Digital_Rose_**

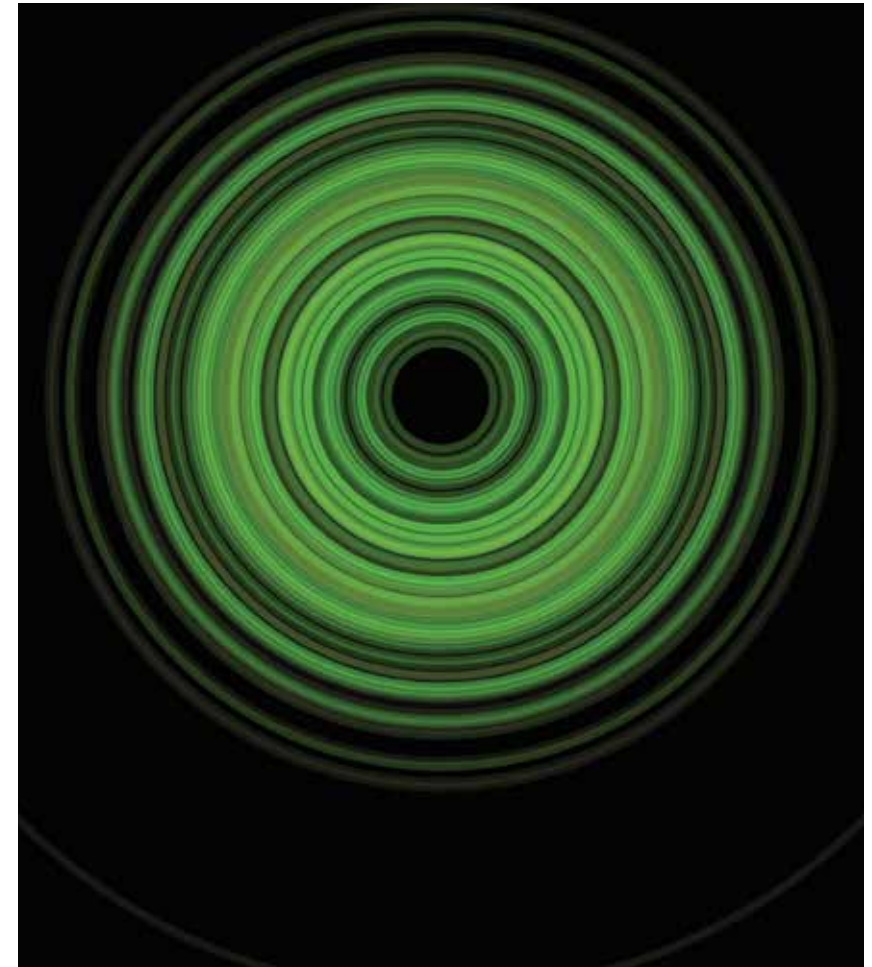


Dayout Application

51 Studio hosted a lecture at Plymouth College of Art using open data from Plymouth City Council.

One of the outcomes from the lecture was a conceptual app using geo-data of Plymouths parks. The app was based on demographics and could be used to find your nearest park and rate it, creating an on-line community of park users and lovers.

Created by Max Wylde
adesignersnightlife.com



Heartwood

Using the ancient trees data that Plymouth City Council released, this amazing visual was created. The size of circle is age of tree and brightness of green is an indicator of health.

Created by i-DAT
digitalartandtechnology.co.uk/lock/HeartWood.apk
i-dat.org

What else happens at DATA Play?

Young people from the Library coding club showed off the games they had created.

Chris Hunt from i-DAT ran a workshop looking at how to use open data and opportunities for the future.

Katherine Willis from Plymouth University ran a workshop exploring how open data can support understanding how people use spaces.

Lucy Knight from ODI Devon, tested data visualisation, using Minecraft.



“You’re talking in socks — no shoes”

i-DAT and natural space visitor counters

Two students from i-DAT at Plymouth University are working with the Council's Natural Infrastructure Team to develop bespoke visitor counters to trial in 6 city parks and woodlands.

Plymouth City Council manages 1600 hectares of public green space. Visitor usage information can be really useful to shape the design of a space and determine the impact of usage on a space after improvements have been made. But we currently have very limited information on the usage of our green spaces: freely accessible with numerous entrances points it is very hard to gauge how many people use them and when. In addition, people counters available to buy on the market can be a costly investment.

Students are taking on the challenge to create an affordable solution using new technology and recycled components. They will be using the open source electronics platform Arduino to create a simple and cost effective device which will be housed in bespoke wooden posts. It will be trialled in 6 green spaces in Plymouth and the data collected and displayed in creative and user-friendly formats.

At the end of the project, the University and Council aim to share the learning, making it available for free through the creation of online tutorials for other land managers facing the same problem.

EnvITE (Environment, Information Technology, Education)

The Council's Natural Infrastructure and Public Health staff have teamed up with start-up tech company TruVision to identify the potential of virtual reality (VR) in the natural world. A few research papers have looked at VR and leisure and have shown that 'volition' (that is the desire to participate in an activity) amongst participants was increased after using VR and they were more likely to want to participate in leisure activities in the real world. VR has also been used extensively in the rehabilitation of patients following trauma; especially injury from accidents or from stroke.

This new partnership aims to create a tool that transforms a local green space into an immersive virtual reality experience using a headset and computer or mobile phone. We will explore the effectiveness of the tool in two contexts: firstly to improve the well-being of patients/carers who are unable to access the outdoors and secondly as an engagement method to enable communities to participate in the design and development of a new natural space, helping to resource ongoing maintenance, improve health and encourage active lifestyles

We've put in a bid to the Nominet Trust to take this forward and will know by Summer 2016 if successful.



“It’s all about connections. People. Data. Tech.”

What is Digital Futures: Engage?

The main purpose of the Digital Futures/Open Data Play Days is to give young people a chance to have meaningful conversations and to explore – what’s going on in their city and the world that’s relevant to them, what could spark a new idea and potentially a new direction for their future, what’s happening in industry that will influence young people’s futures in a big way, what contribution they could make now, not just in the future. Digital will play a major part in their future so we have a responsibility to make sure young people know about it, are curious about it and want to help shape it.

“It’s been fantastic watching our students working together; I’m hoping that you’ve seen from the different pods and the different way of coding and digital technology how this can help you now and in the future”
Debbie Collins,
All Saints Academy Plymouth

We provide space to explore; we enable, empower and guide without it feeling like we’re on a tight schedule. We also provide connections ...the likes of RIO’s very own truly inspirational Jonathan who’s passion is for young people’s ideas and a better future, Jules who is totally amazing at unpicking a problem and unearthing brilliant ideas; Simon and Jack from Digital Arts and Technology who bring fancy kit to be played with, pulled apart and turned into something different (with a real ‘wow’ and ‘could we really do that’ factor) and Blue Screen IT who bring their own hackers, set up a business network in about 30 seconds and show young people not only how vulnerable businesses are but also how to protect against the bad guys – it’s like cowboys and Indians in cyber-sphere; and the incredible planning team at Plymouth City Council who have access to oodles of data, knowledge and expertise but also the big picture challenges that, together, help make ideas a reality.

Young participants said:

“It’s amazing, I’ve learnt a lot about Tech”, “It’s intriguing, not what I expected!”



in happy Digital Plymouth

Market Hall

Once refurbished Devonport Market Hall will be a digital centre for arts, community activity, enterprise and visitors. With funding secured to begin work, the project is due to start on site this summer, with completion planned for the autumn 2017. The project is led by local social enterprise, RIO (the Real Ideas Organisation), in partnership with Plymouth City Council, the Institute of Digital Arts and Technology (i-DAT at Plymouth University), City College Plymouth, Devonport High School for Boys and seven of the brightest tech companies in the region.

In addition to providing office, lab and teaching space for the partners, the Market Hall will also offer space for events and meetings, a range of education programmes and a digital arts visitor centre.

themarkethall.co.uk



Digital Plymouth

Connecting Plymouth's Digital Community

Digital Plymouth runs a quarterly meetup - with three speakers, plus plenty of time for networking and general socialising. The intention is to bring together our diverse and talented community of digital businesses and organisations and enable us to recognise and celebrate how many of us there are!

In addition, by coming together, we can share knowledge and learn about the amazing things that are being created right here in Plymouth. Once every season Digital Plymouth hosts an evening meetup where talks start at 7 and finish when everyone has had their fill of creative goodness.

www.digitalplymouth.com

Digital Plymouth is a collaboration between — THINQTANQ, Elixel, Plymouth Cowork, Tin Digital and SONIC DC



There is more data to open up

Traffic counts, housing stats, library books on loan, energy from solar panels, children in care, child poverty, empty homes, planning application decisions, investment in infrastructure, parks, sports, community facilities, volunteering, buses, parking.

AND MORE, AND MORE, AND MORE!

If there is some data that you think would help your idea, contact —
GISplanning@plymouth.gov.uk



“I was amazed at the skills in the room, it opened up a whole new world to me”

Get the data ready a month in advance and ask people to check it so we can iron out any easy to fix issues.

Latitude longitude are the key things to include on data sets.

Crowdfund Plymouth

If you are looking for funding to kick start your idea check out Crowdfund Plymouth.

The Council are pledging £180,000 on community and business projects that help improve Plymouth as it grows.

GAIN, Plutus Energy, Plymouth University, Plymouth College of Art and many other local businesses have also pledged to support great ideas in Plymouth.

Have a go...
www.crowdfunder.co.uk/plymouth

What's happening next

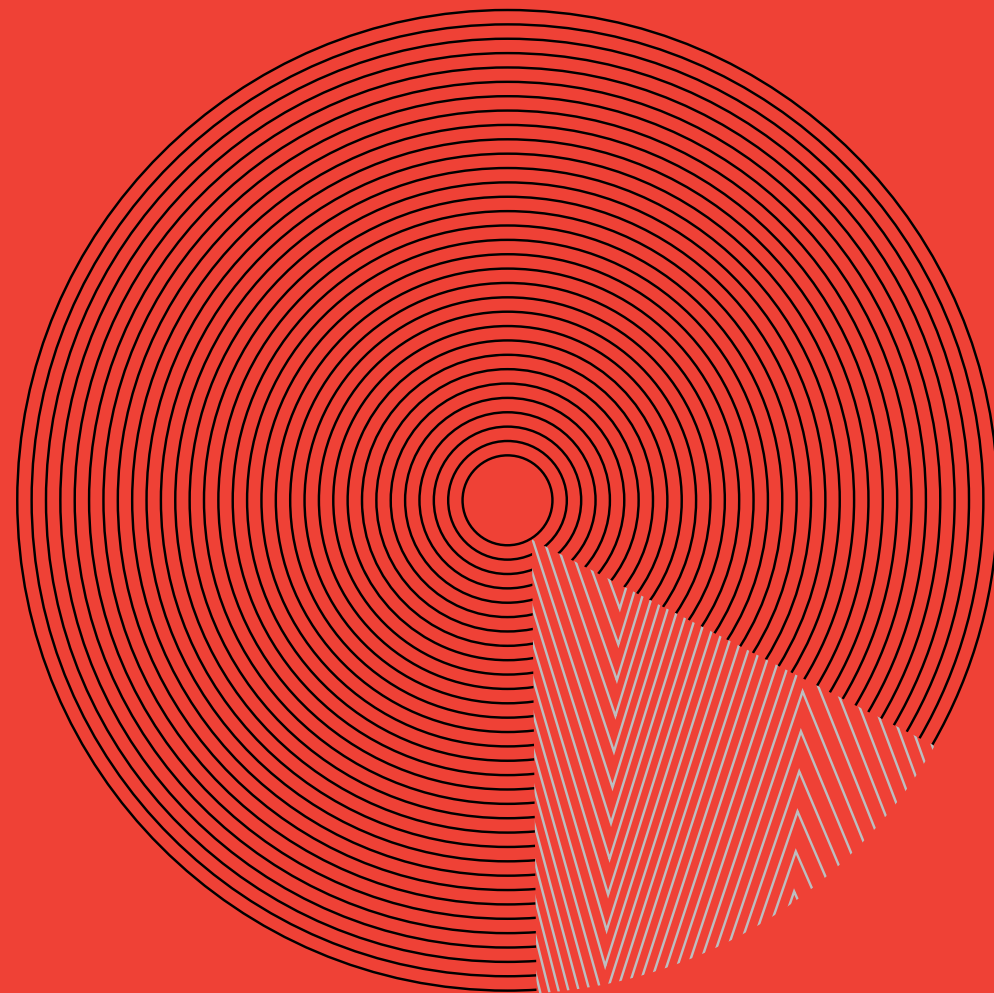
More DATA Play Days are planned with rewards and challenges. Check out www.dataplay.org.uk for the next event.

We are looking for people who would like to come into the Council and work alongside officers to experiment with data — is that you?

The Council will open more data and we would like other organisations to join in. The Council are interested in investing and supporting business ideas that support the city and communities.

Talk to us!

**[@plymccplanning](https://twitter.com/plymccplanning)
GISplanning@plymouth.gov.uk**





For more info —

Visit our website to view the data we have released so far:

www.dataplay.org.uk

Keep in touch —

GISplanning@plymouth.gov.uk

[@plymccplanning](https://twitter.com/plymccplanning)

[#dataplay](https://twitter.com/plymccplanning)

Thanks to —

51 Studio

BASED Traveller

Dom Moore

i-Dat

Plymouth Cowork

RIO

The Red House

Thingtanq