



5 – 13 July
Valletta Design Cluster
Malta

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welcome to steam

STEAM is a 9-day intensive summer school in science communication. We introduce an innovative form of education that includes Arts into the classical STEM (Science, Technology, Engineering, and Mathematics). Interactive experiments and informal learning with the use of creativity and arts are the key ingredients of our approach. Our ultimate goals are to improve science awareness and develop informed opinions, increase student uptake of STEM careers for high-level jobs, stimulate the socio-economic wellbeing of partner countries, and enhance the transferable skills of current researchers.

The Host: Valletta Design Cluster

The Valletta Design Cluster is a community space for cultural and creative practice situated in Malta's capital city of Valletta. It was developed as a legacy project of Valletta's European Capital of Culture 2018, with modern, air-conditioned classrooms, meeting and conference spaces, studios and a beautiful roof garden. STEAM has been using the cluster to host

our summer school since 2022 as it provides our participants the creative space they need, whilst also giving access to the busy heart of Valletta. During our breaks you will be able to step outside directly onto historical streets with cultural attractions, shops, restaurants and the coast only minutes away. ✨



The roof garden of the Valletta Design Cluster, in the heart of Malta's capital city.

Malta: Islands of Culture

Made up of three islands, (the main island and the smaller islands of Gozo and Comino), Malta spans a total area of 316 km². Despite its small size, it boasts a population of over 400,000, making Malta the 4th most densely populated country in Europe. Located in the centre of the Mediterranean, between Italy and Africa, the archipelago experiences a typical Mediterranean climate with an average of 300 days of sunshine per year.

Malta has a rich history with many rulers, including the Romans, Normans, Knights of St John and the British. In 1964 it became an independent state and it joined the EU in 2004. The official languages of Malta are



Luzzu boats - traditional fishing boats of Malta.

Maltese and English and you will find English is commonly spoken. Turn to pages 26-27 to find out more about modern Maltese culture. ✨



speakers

The STEAM consortium brings together outstanding higher education institutions, science communication organisations, artists and freelancers. Through the exchange of best practice, an intensive study programme has been developed to train students and researchers to engage with the public.



Edward Duca

University of Malta
Science in the City (Malta) Festival Manager, Science and
Innovation Communication Lecturer, EU Project Leader

Dr Edward Duca is a Science and Innovation Communication Lecturer at the University of Malta, co-runs the science communication STEAM Summer School, involved in several large EU funded projects, and has created and managed several science communication events through the NGO the Malta Chamber of Scientists. The largest activity being the national science and arts festival Science in the City attracting 6% of Malta's population annually. He's recently

been appointed as Rector's Delegate for STEM Popularisation (Engagement) and EUSEA board member. His aim is to continue developing transdisciplinary research and activities to develop evidence for the effective communication of research that will encourage a scientifically aware society leading towards an informed democracy and active citizenship. Edward wishes to embed a culture of public engagement and research that benefits society. ✨

Amanda Mathieson

University College Dublin, Ireland
BiOrbic Head of Education, Public Engagement and
Communications



Amanda has been working in the area of public engagement for 7 years. In that time she has managed a number of EU projects focused on combining the arts with STEM, including STEAM Summer School and CREATIONS, a project that brought the arts into the formal science classroom. She has worked as a public engagement professional in a variety of institutions across Europe and draws from this experience in the delivery of her science communication training. These institutions include the University of Malta,

Imperial College London, the University of Manchester and University College Dublin. Amanda has always been an advocate of bringing the arts and science together as it often leads to impactful engagement with broader audiences and can resonate on new levels. Her speciality is the design of STEM escape rooms but her interests also lie in science theatre, storytelling, festivals and other science games. Amanda was the creator and host of the SciComm Stories Podcast until 2021. ✨



speakers



Frederike Oetker

University of Amsterdam
PhD Student (Computational Science Group)
and STEAM Summer School Facilitator

Freddie Oetker is a PhD student at the University of Amsterdam working on criminal computational models, specifically in the field of cocaine networks in the Netherlands. Within the Computational Science Group, she is working closely with the Amsterdam police to model network dynamics as well as intervention strategies and tie relations using Agent Based Models. With a master's

degree in Forensic Science and a bachelor's degree in Science Communication and Bionics she has a diverse background and a special interest in connecting disciplines in the realm of criminal computation. Freddie has been involved with STEAM Summer School since 2016 and is currently one of the organisers as well as lecturing on Science Communication. ✨



Ciara Lynch

University College Dublin
Post-Doc (BiOrbic)
and STEAM Summer School Facilitator

Ciara has always focused strongly on outreach and engagement of the public in the course of her studies in science, even as an undergrad student in Genetics. While currently in the final year of her PhD in Biotechnology, she has been enthusiastically involved in many outreach activities, from extracting DNA from a banana in Irish primary schools, to touring Ireland with a science sustainability themed escape room as an on-site researcher for audience questions! She places a strong emphasis in teamwork within all her

work, as science becomes increasingly more interpersonal in the age of technology, and this means that all scientists have to know how to work together more effectively. In terms of other science events she has been involved in, this includes workshops on coding games for secondary school children, talks on what science research is like as a career, and training newer science researchers on how to speak to crowds and design posters. ✨

Sean Briffa

Performance Artist
Sean Briffa Entertainment, Malta



Sean Briffa is an actor and a performing artist. Apart from his work on stage, he also performs on the streets with puppet shows and fire shows all around Malta. He even enjoys bringing puppetry and theatre together, taking his home-made puppets

and his skills in poi to Maltese pantomime and other plays at The Manoel, Malta's most established theatre. The shows closest to his heart are the ones he puts up from scratch, creating entirely new concepts in theatre and experimenting with improvisation. ✨



Grace D'Arcy

Engagement Programme Manager
Smart Docklands and STEAM Summer School Facilitator

Grace is the Engagement Programme Manager of Academy of the Near Future, a smart cities engagement programme in collaboration between CONNECT Research Centre at Trinity College Dublin and Dublin City Council. She aims to bring young people into the

conversation about new technologies in our communities through interactive workshops and hands-on activities. She leads on the development and delivery of programmes as well as developing the strategy for what Academy of the Near Future does next! ✨

Guest Speakers

During the summer school we'll be joined by a few guests from STEAM's extended science communication family in Malta. These local experts will join as speakers or as consultants for you to test out your STEAM activities on. They may also join us during some of our social events, providing a great opportunity to meet new people and expand your science communication network.

the programme

SESSION	TIME	TUE 1	SAT 5	SUN 6	MON 7
Morning Session	9:00 am				
	10:00 am		Icebreakers & Aims	Performance Skills	Teambuilding & Planning
	11:00 am				
Lunch	12:00 pm				
Afternoon Session	1:00 pm				
	2:00 pm		Event Design	Open-Mic Prep	Event Prep
	3:00 pm				
	4:00 pm				
Evening Social Programme	5:00 pm	Pre-School Introduction (Online)			
	6:00 pm		Dinner in Valletta		Salsa Dancing Class & Pizza
	7:00 pm			Open-Mic Night	
	8:00 pm				
	9:00 pm				
	10:00 pm				
	11:00 pm				

Where should I go?

Every day transport will be provided from the 5-Senses Apartments in Msida. The coach will leave at 8:30am each morning unless stated otherwise on the schedule. Those making their own way should head to Valletta Design Cluster at 25, Bull Street II-Belt, Valletta. If you are lost or need information contact [details in printed booklet only].

	Course Sessions	Practical Work	Social Events		
	*Times in CEST (Maltese time)				
TUE 8	WED 9	THU 10	FRI 11	SAT 12	SUN 13
Audiences & Logistics	Science Theatre		Event Prep		Post-Event Evaluation
		Trip to Comino		STEAM Event Schedule TBC	Goodbye Lunch
Communications & Branding	Event Prep		Event Prep & Rehearsals		
Tour of Valletta & Dinner	Escape Room			Wrap Party	

icebreakers & aims

5pm - 7pm
Tue 1 July

9am – 12pm
Sat 5 July

focus

introduction
ice breakers
science communication aims

speakers

Edward
Duca



Amanda
Mathieson



Ciara
Lynch



Frederike
Oetker



Grace
D'Arcy



Pre-school introduction

Flights can be tricky so we'll conduct our first session online on the Monday before the school to make sure no one misses it. We'll start with an introduction to STEAM, the programme content, what to expect from the 9 days and how to prepare to for your trip to Malta.

Icebreakers and aims

On Saturday we'll meet in Malta for the first time and after orientation we'll kick things off with some icebreaker bingo. After getting to know each other a little better, we'll explore some critical questions related to our aims. What are the benefits to communicating science and which ones matters to us most, both as individuals and as a group? From there we will start to identify an aim for the STEAM event you will deliver as a group at the end of the programme.

Relevant online modules

Introduction to science communication



event design

1 pm – 5 pm
Sat 5 July

focus

SMART aims
audience profiling
audience targeting
evaluation
logistics

speakers

Amanda
Mathieson



Event design

Running a STEAM event involves a lot of logistics and chaos. Considering things in detail in advance will not only ensure things run as smoothly as possible but it will also prevent you drifting away from those vital aims you started with. That's why it's important to plan out the various aspects of your event and have this documented to refer to as the project develops. Therefore, in the afternoon we'll look at how to plan a STEAM event from start to finish. Each participant will create their own individual aim for the event and go through the steps of making an event plan.

We'll start by turning our aims into SMART aims, allowing our project to be more focused. Then we'll look at some audience profiling to explore our chosen audience in more detail. The more we know about our audience, the better equipped we'll be to target our event to them. From there we'll consider some formats and content choices for our event. What is both appealing to our audience but also logistically possible? These choices will also raise other important questions such as where the venue will be, the timing and where we will acquire our resources.

This workshop will take participants through this process step by step so that by the end, you will all have your own unique event plotted out. It will then be up to the group to decide what ideas to take forward into your real event!

Relevant modules

Evaluation



performance skills

9 am – 5 pm
Sun 6 July

focus

confidence building
improvisation session
individual science skits

speakers

Amanda
Mathieson



Frederike
Oetker



Grace
D'Arcy



Ciara
Lynch



Performance skills

As our STEAM event will involve the arts, performance skills are going to be key. However, we recognise that for many of us, this can also be one of the more intimidating parts of science communication. For this reason, our main goal in this session is to build up your confidence and comfort in performance spaces. Whether you are completely new to performance or want to try something new that you're unsure of, we will provide the ideal, safe space to step out of your comfort zone and explore your own creativity and talent.

The session starts by easing everyone in slowly with the kinds of public speaking you are most used to: introducing yourself to a group. Then we'll graduate to a game of slide roulette, where you will present a randomised powerpoint presentation. This takes us one more step into an unknown creative space, while still allowing us to rely on our old crutch: the slide deck. From there, with your confidence growing we'll try some full-blown improvisation, performing made-up skits completely on the spot. If this sounds scary don't worry, it's usually one of the most fun parts of the school!

Open-mic night

In the afternoon, you should feel much more creative, confident and excited about the idea of performing. We'll ask you to develop a small, 5-minute skit to deliver to the group at an open mic-night that evening. This is your opportunity to push your own boundaries among friends and of course we will be on hand to help you workshop whatever you come up with! There will also be a bonus public speaking session run by Ciara and Grace.

Relevant online modules

- Audiences
- Presentation skills
- STEAM



teambuilding & planning

9 am – 5 pm
Mon 7 July

focus

psychometric testing & team
building
event planning

speakers

Ciara
Lynch



Edward
Duca



Amanda
Mathieson



Teambuilding

In this session, Ciara will lead us through some psychometric testing so we can get a sense of our own individual strengths and preferences. You'll also consider your own goals for what you personally want to get out of this programme. Have you always wanted the chance to take the lead on a project but never had the opportunity? Or maybe you are used to leading projects and prefer to take a backseat, exploring a creative avenue you haven't had chance to in your day-to-day role?

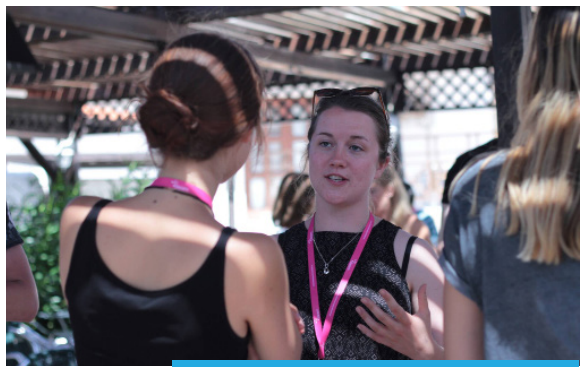
Based on this foundation, we will have an inclusive discussion on the types of work each team member could be responsible for and assign some roles.

Planning

After our teambuilding session we'll start to plan our event as a group. Edward will introduce you to some of the resources we've prepared to help you prepare your event efficiently, including our production document and Mural templates. Amanda will then refresh us on the event plans we designed on Saturday and will facilitate a discussion on which ideas we take forward. Once an event is decided, the work will be divided and in smaller teams we'll get to work developing each aspect of the project. You'll have access to all our facilitators to help you in each area.

Relevant online modules

Dialogue



audiences & logistics

9 am – 12 pm
Tue 8 July

focus

independent event
preparation
refined audience tailoring
props & logistics

speakers

Grace
D'Arcy



Frederike
Oetker



Independent event preparation

The rest of the week will be dedicated to preparing for your STEAM event. By this point you will all have specific roles and tasks to work on. You might be developing your performance, creating a survey for your evaluation, posting about the event on social media or sourcing and making props for set dressing. Whatever it is, you will have the next few days to workshop things as needed and really refine them. Your chosen leader will be responsible for organising the group and running any group meetings. However, you will have access to the STEAM facilitators for the rest of the week and can pull them in whenever you need additional support.

Audiences

As we discussed earlier, once you get into the nitty gritty details of organising a STEAM event and are forced to make decisions based on logistics or available resources, it can be easy for your project to drift away from the aims and the audiences it was originally intended for. That's why we will run a short session where the group can reflect on our audiences and make sure we're still on track.

Props & logistics

In another targeted session, the group will make a list of the props and materials needed for our specific event. Our STEAM facilitators will give you a small budget and access to the STEAM inventory as a foundation. We will then help you procure any materials you need to buy specifically.



communications & branding

1 pm – 5 pm
Tue 8 July

focus

brand identity
communications
social media promotion
campaign strategy

speakers

Edward
Duca



Frederike
Oetker



Communications & branding

By this point we will start to have a clearer picture of what our event is going to look like, which means we can start to promote it. This is one of the most important steps as no matter how great our event is, if no one attends then no one will be able to enjoy it! Therefore, we have to put some careful consideration into where, when and how we communicate about it. This will not only help it reach the right people but also ensure they can decide whether this is an event that's relevant to them and worth their time.

For this reason we'll first spend some time thinking about our brand identity, which will dictate the way we communicate to our audience and what they think about us. For example, if our event is for kids, does our branding communicate that? Does it give off the playful, humorous impression we want? Does it look like it a quality event to the parents and worth their time? Through this workshop, we can tease out these decisions, referring back to our audience profile and our aims. We can then make a plan for how we will promote the event and assign some tasks to this.

Don't worry, STEAM will have promoted the event beforehand and we will be able to leverage our networks in Malta, so we won't be starting completely from scratch. We never fail to have an audience for our final event!



Relevant online modules

- Communications and branding
- Writing
- Online and social
- Videography

science theatre

9 am – 5 pm
Wed 9 July

focus

science theatre introduction
STEAM event content

speakers

Sean
Briffa





Science theatre

More often than not, our STEAM event will involve some form of theatre. Whether we put on a traditional performance, a comedy routine, a science tour, or even street performances, there are elements of theatre holding it all together. This includes developing a script, set-design, setting up a stage, planning out stage locations, lighting, sound and other technical aspects.

By this point in the programme we will know our audience and format well and may even have some content that we can pull from the open-mic night we did earlier. It will now be time to start developing or expanding our content into a full event and ironing out the particulars around it. For this purpose we'll be joined by science theatre expert Sean Briffa who will give an introduction to educational theatre and will guide you in developing your content. He will be able to workshop ideas with you and give advice based on his many years of experience putting on different kinds of productions. Whether its developing your characters, tips for performing or ideas for using the space and props available to you, Sean's advice will be invaluable.

He will also join us again during our rehearsals to help you develop your content event further.

Relevant online modules

- Audiences
- Presentation skills
- Science and art

rehearsals & event

9 am - 5 pm TBC
Fri 11 July Sat 12 July

focus

event preparation
dress rehearsals
event delivery

speakers

Edward
Duca



Amanda
Mathieson



Frederike
Oetker



Ciara
Lynch



Grace
D'Arcy



STEAM event rehearsals and performance

Outside of event preparation, we will have a couple of dress rehearsals to give you the opportunity to receive some feedback and incorporate it. We will be inviting some guests from our science communication network in Malta to take part in your rehearsals and give you advice from an outsider's perspective. One dress rehearsal will take place Wednesday afternoon, just before our day off. The day off should then give you some time to relax, reset and let new ideas percolate before we come back for serious tweaking and final rehearsals on Friday. Our Friday rehearsals will involve performing for some local SciCom experts, including Sean Briffa who ran the science theatre workshop. Their feedback will be highly valuable for some last minute refining of the event and also to give you confidence that your event is ready for a real audience!

While we plan for the STEAM event to take place on Saturday, exactly when and where will depend upon the decisions we make as a group for our specific needs. Keeping things slightly flexible gives you more freedom to try out something innovative, so don't forget to come with all your crazy ideas!

Relevant online modules

All





open-mic night

As well as the large group event you will deliver at the end of the programme, we will run a science open mic night. While this is part of the main programme, it's also a social event as there will only be STEAM participants in attendance. As individuals you will perform a short piece that could be anything from a talk, song, sketch or even comedy routine. It may be something that becomes part of your group event, so it will be a good opportunity to try things out. The idea is to practice running a relaxed, informal event in a pub environment where you can explore your science communication skills and creativity among friends!



STEAM social calendar

As well as the public engagement events you will organise, we will also enjoy some social events over the nine days. These will be ad-hoc events that you are free to come and go from and will run on most evenings. As they are not part of the official programme, we will not always provide a coach or arrange other expenses but will be delighted to show you a good time! Our schedule will look something like:

Saturday (€) - an informal dinner at a local Maltese restaurant to get to know each other.

Sunday* - our open-mic night (STEAM family only) gives you the opportunity to deliver a small skit in front of a friendly audience.

Monday - a salsa workshop hosted in a seaside bar delivered by a professional teacher!

Tuesday (€) - a free tour of Valletta, exploring its history (provided by Ed!), and follo-

wed by dinner at a local restaurant.

Wednesday (€) - an escape room, where teams are locked in a room and must solve puzzles to escape within the time limit.

Thursday (€) - a full day excursion to the beautiful island of Comino for swimming (transport provided).

Final Saturday - a final wrap up dinner and party to celebrate the success of our event!

Final Sunday* - evaluation plus a goodbye brunch to enjoy one last celebration together.

At the start of the programme there will be the opportunity to discuss some of these events and we can adapt them based on the interests of the group. ✨

* Compulsory events

(€) Some paid elements are not covered

useful info

Shopping & Activities

Gzira coast, which is close to the 5-Senses apartments, boasts numerous shops including ticket centres where you can book diving sessions, various tours and other experiences. Within walking distance is Manoel Island, home to Fort Manoel and built in the 18th century by the Order of Saint John. Further up is the city of Sliema where you can find shops, bars, restaurants and Tigné Point – Malta's largest shopping mall. Sliema coast is a popular spot for sunbathing on the rocks and is one of the few areas you can BBQ without a permit. The sea just off the rocks is also great for snorkelling with calm waters and plenty of fish to be seen!

You can take the Sliema ferry to Malta's capital city of Valetta every half hour. Valetta is the capital of Malta and has numerous tourist spots, museums, galleries and quaint restaurants. It is also a central travel point and you can go anywhere else on the island from Valetta. For those happy to travel, we recommend Mdina, the original capital of Malta. A fortified city with a population of less than 300, Mdina is home to St. Paul's Cathedral and nearby in Rabat you will find St. Paul's Catacombs. It's also where you will find the famous Crystal Palace – a café serving up the 'best pastizzi in Malta!' ✨

Malta's coast has numerous diving sites and is great for snorkelling.



Culinary & Nightlife

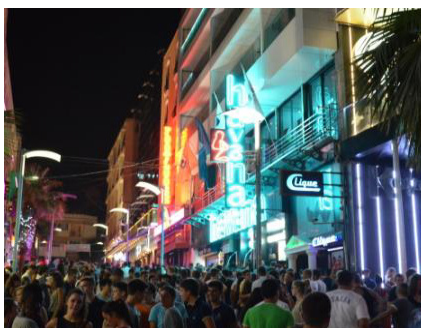
As you can expect from its location, Malta's cuisine is an interesting mix of Italian and North African influences. You may be interested to try the rabbit stew, the aljotta (traditional fish soup) or the fried gbejna (crispy balls with molten sheep's cheese). For a quick lunch you'll find plenty of pizza and pasta places as well as the iconic pastizzi, a filo-like pastry stuffed with a cheese or pea filling. And at 30-40c each, they are a bargain!

When it comes to drinks, Malta has its own unique soda known as Kinnie. With a faintly aniseed-like flavour, it can be drunk on its own as a soft drink or mixed with alcohol. It is made by Farsons, the same company that distributes Malta's national beer: Cisk. Cisk is a refreshing lager with a low carb version as well as those flavoured with berry, lemon and ginger lime. With its Mediterranean climate, Malta is also a producer of delicious wine, steeped in tradition that dates back to the Phoenicians. There are many varieties produced in both Malta and Gozo but they are not widely distributed, so take the opportunity to try them while you're on the island!

And if you're looking for night-life you won't need to go very far as the coast is packed with bars, pubs and clubs that are great for casual socialising. We recommend checking Facebook for daily events such as live music, open-mic nights, stand-up comedy, karaoke and more. For the more intense






Aljotta (left), a fish stew and pastizzi (right).



Paceville is Malta's prime spot for nightlife.

clubbing experience you can try Paceville, Malta's nightlife hub and a destination for many tourists and party-goers. ✨

Main Venues

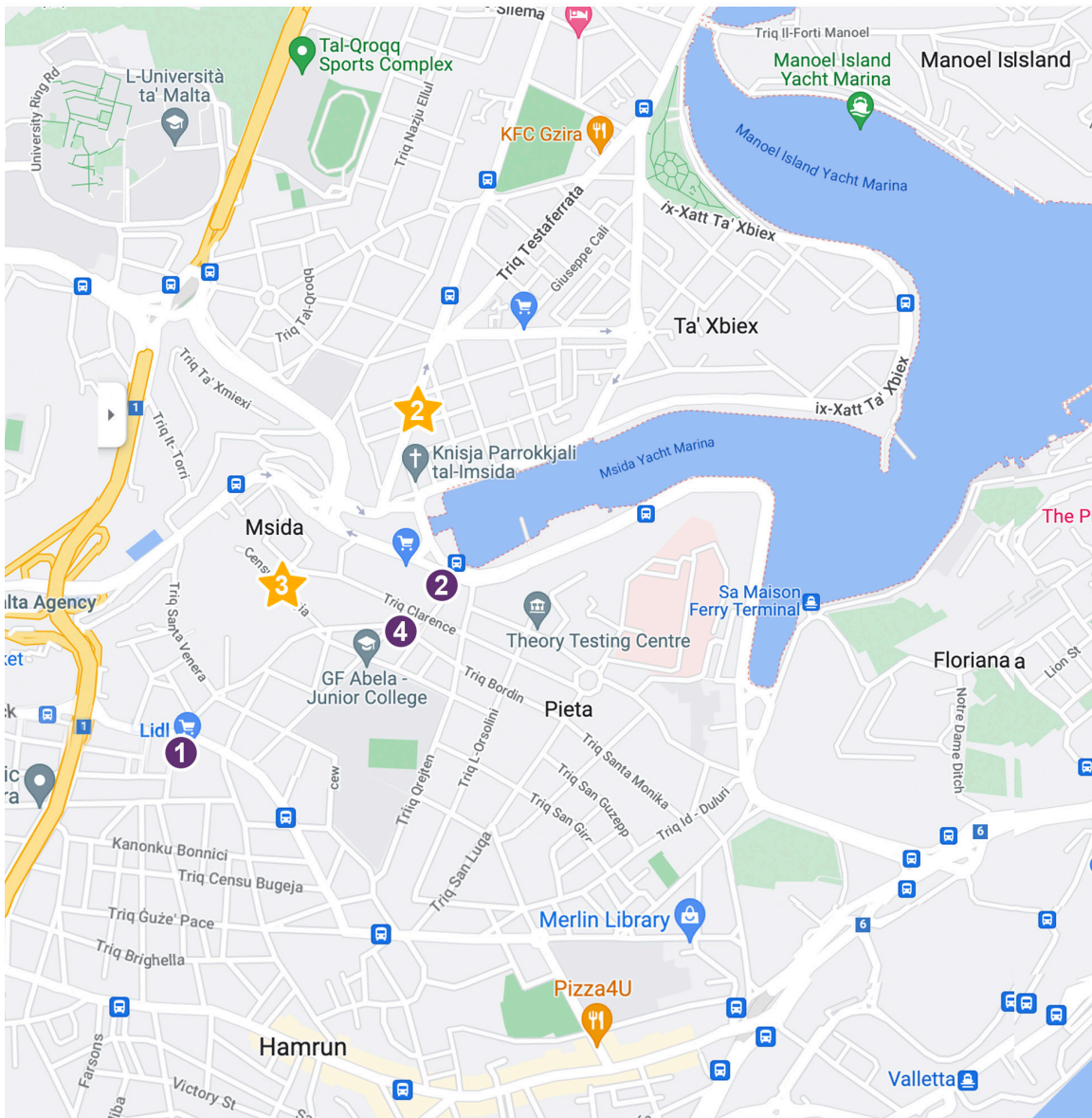
-  Valletta Design Cluster
-  Down The Rabbit Hole
-  5-Senses, Msida

Social Venues

-  Nenu Artisan Baker
-  Maori Bar
-  YUM Restaurant

Handy Loc

-  Lidl II Super
-  Kulllegg B
-  Food Mark



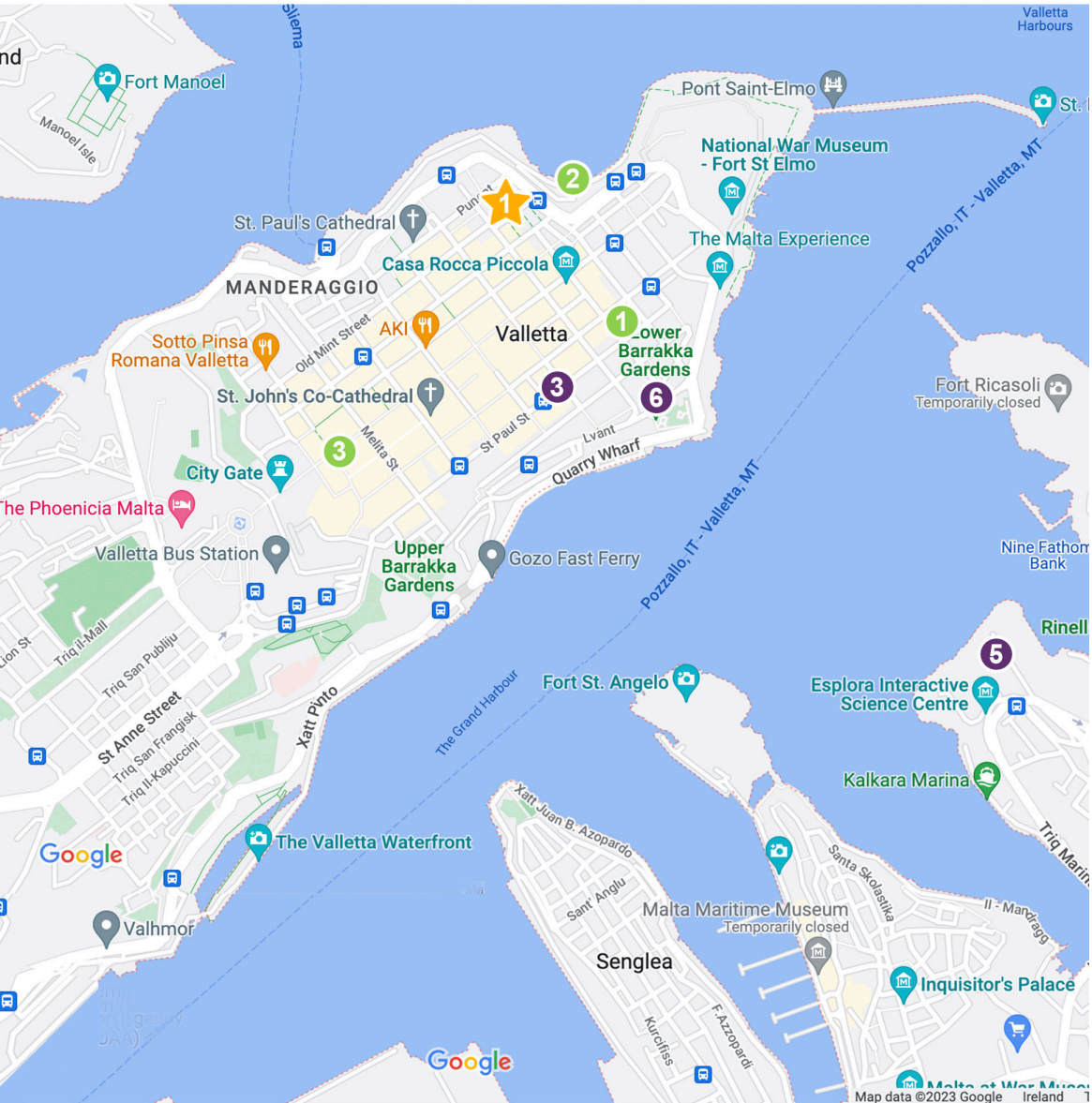
Locations

Supermarket
Bus Stop
Market

- 4 Pharmacy
- 5 Esplora Science Centre
- 6 Lower Barrakka Gardens

Phone Numbers

Ed [Printed version only]
Amanda [Printed version only]



Notes

