

A Short Guide to Creating a Synthetic Biology Art Exhibition

Step by Step Protocol by Vilnius-Lithuania
iGEM 2017 Team

INTRODUCTION

Although, “science-meets-art” exhibitions are quite popular around the globe and help the society to familiarize with many fields of science, synthetic biology exhibitions are unicorn-rare. This is mostly due to the fact that synthetic biology is a very complex branch of science, which is also rather young and not properly introduced to the society. Art is a universal mean of communication by which iGEM teams can not only explain their projects but also present synthetic biology to the public.

Therefore, we set an interactive synthetic biology exhibition entitled “SiNbiosis” with a focus on our SynORI project and prepared a step-by-step protocol for other iGEM teams to help them in preparing their future exhibitions if needed.

STEP 1: THE VISION

Developing a synthetic biology art exhibition is challenging, therefore take at least eight to twelve weeks before you open the exhibition, to plan the following first steps.

- Develop your purpose. Why are you interested in presenting synthetic biology to your local community? Is it because:
 - You want to present your project and synthetic biology in order to enhance the *overall* scientific literacy of your community?
 - You see a deficiency of knowledge in a *specific* field, i.e. genetic engineering, GMOs, bioethics, etc.
 - You simply want to fulfill some medal criteria? (Not the best purpose, indeed).
- Decide on your audience. Will you make the exhibition for the general public or will you focus on specific age groups or specialties? You might want to adjust your exhibits according to the audience to engage them more.
- Create a preliminary title for the exhibition and write a brief summary of your idea: document the purpose and include community interests you want to explore. The purpose and interests usually correspond to your main project idea, because in iGEM competition they are both driven by the community.
- Find partners from arts to support and guide your proposed exhibit and serve as advisors on the project. I.e. Vilnius-Lithuania iGEM has collaborated with experienced artists from the DIYBio Network, who guided our exhibits-

manufacturing process, consulted on esthetics and helped with setting up an exhibition.



Fig. 1. Timeline of exhibition planning: Vilnius-Lithuania iGEM “SiNbiosis” example

- Pick your dates. It is the most efficient to keep the exhibitions open for five to 10 days. Always include one weekend.
- Throughout your planning process, look for partnership opportunities. It would be best to involve more art specialists. The extra time it takes to collaborate pays off in a broader audience and valuable new relationships.

STEP 2: FINDING A SPACE

- It should not be remote from any other public attraction areas. It is clear that synthetic biology is still an undiscovered and rather unknown field, therefore you should not depend on its mere power to attract audience.
- You might want to find a professional art gallery that is willing to host your exhibition. The owners will be used to hanging and moving things and there will definitely be special lighting installed. In addition, publicly known galleries attract more visitors.
- Exhibition space should also correspond to the exhibits. I.e. exhibitions demonstrating fundamental projects and knowledge may be displayed in loft-type, not integrally installed spaces.

STEP 3: PREPARING YOUR EXHIBITS

Carefully think about your exhibits.

- There should not be too much of them. Having a lot of exhibits is usually not a great idea, because of the complexity of synthetic biology itself. Let your visitors acquaint themselves with the exhibits carefully instead of forcing them to experience too much.

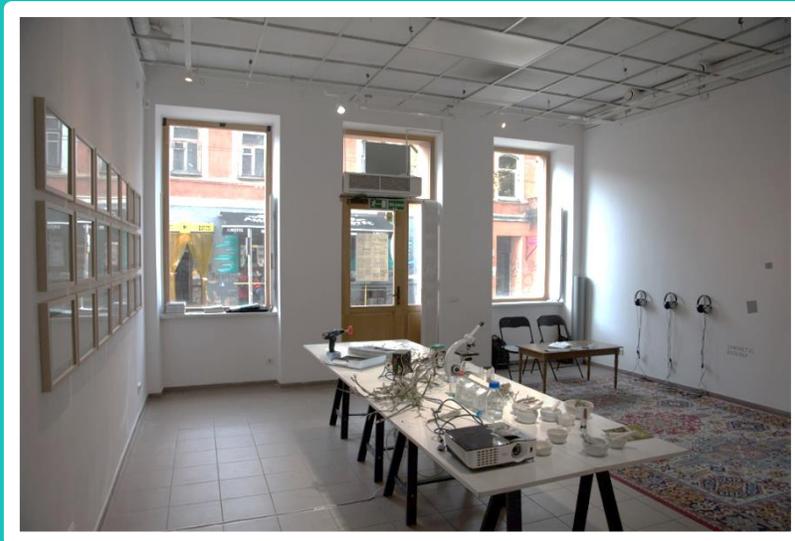


Fig. 2. The exposition space and planning: Vilnius-Lithuania iGEM “SiNbiosis” example

- Always keep esthetics in mind. Consult with professionals to find a visually appealing method to engage with the public.



Fig. 3. Esthetics: Vilnius-Lithuania iGEM “SiNbiosis” example

- All exhibits must be connected and tell a common story, picture your main idea. Once again – less is more, if it is enough to depict your project in a concise and understandable manner.
- Involve interactive exhibits. Synthetic biology is all about discussing and engaging the community. Let the people interact and alter the exhibits throughout all the exposition time. This will provoke them to think and feel more.



Fig. 4. The exposition space and planning: Vilnius-Lithuania iGEM “SiNbiosis” example

STEP 4: SETTING UP THE EXHIBITION

- Spend a decent amount of time for preparing and hanging exhibits to make them look professional and inviting. This is a creative opportunity to help communicate the meaning of the work. Remember – synthetic biology is not easy to understand for a random person, therefore not only the exhibits, but their setting and communication should form a common message for the audience.
- Visit the exhibition site in advance. This will help to visualize the potential setout of the exhibits. Evaluate the exhibit space with approximate dimensions of each wall area. You might need extra space for furniture that you will use for interactive exhibits.

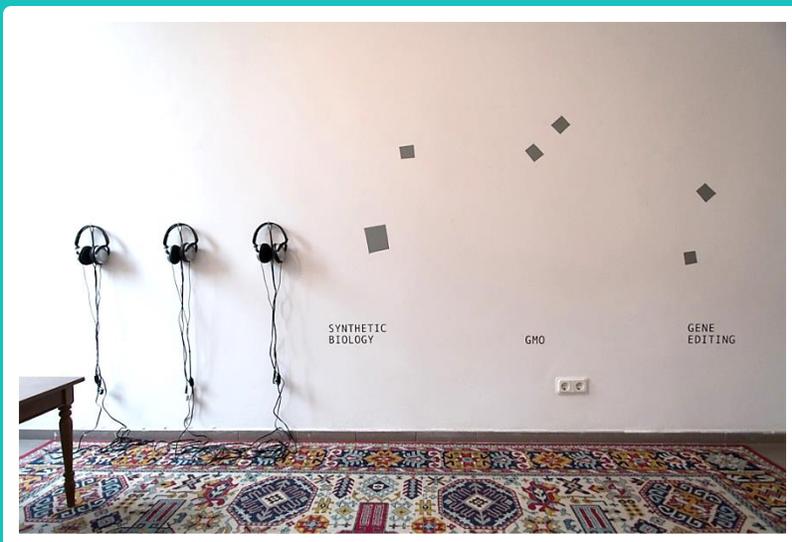


Fig. 5. Interactive exhibits: Vilnius-Lithuania iGEM “SiNbiosis” example

- We suggest having prepared extra pieces of synbio art and taking them along. You might need some alternatives in case something does not work or look as good as expected. Do not worry to make new exhibits when setting up. Just as synthetic biology is constantly developing, your exhibition might also gain its final form just before the grand opening.
- Not only exhibits matter. Create a handout with a statement about the exhibition. This can be based on your earlier statement of purpose, but directed to the visiting public. Why this exhibit? What does it communicate? Who made the art? How does synthetic biology or your project relate to art and daily life?
- If none of your exhibits collect the feedback of the audience, put out a guest book for people to record their comments and impressions. You want to approximate synthetic biology to the public.

The Opening

An opening reception serves several purposes. It welcomes the public, deepens the viewer's experience of the work and makes connections between the artists and the community.

Specify the community connections for your exhibition. Invite key people from academic departments, research centers and other organizations on campus to attend the reception. Ask one or two of them to contribute with a short introductory speech. Present the exhibits yourself as well.

The Closing

Take down your exhibits on the day assigned.

- If you did not gather any feedback through your exhibits, carefully study the guest book. It will provide honest audience feedback and maybe will spark new ideas for future bioart projects.
- Document the process. You may want to do it again.

We hope that this short guide will help future iGEM teams to create more synthetic biology and art interactions. We truly believe that synbio art exhibitions are a powerful tool for community engagement and public education on synthetic biology and iGEM competition.

The art exhibition was created and protocol established by

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