

2024

*Biodesign
Challenge*

Program Overview

bdc

Grow the Future

Biodesign Challenge is a global student competition that is shaping the first generation of biodesigners.

Mentorship

We partner high school and university students with scientists, artists, and designers to envision transformational applications in biotech. These mentors expose students to emerging biotechnologies and their social impacts.

Global Network

Each June, teams gather at the Museum of Modern Art to showcase their projects before esteemed judges and audiences from academia, industry, and museums to compete for prizes, including our grand prize—the Glass Microbe.

Transformative Ideas

Student teams prototype new ideas in medicine, textiles, architecture, food, manufacturing, and more. Join us in exploring how biotech could revolutionize the future of industries and production.



Biotech Needs Design

From the environmental crisis to the pandemic to rapid advances in biotech, we are in a period where biology is driving massive change.

Together scientists, artists, and designers are uniquely able to influence society's relationships with the living world. Their collaborations are essential to the ways society wields biotech to confront today's challenges.

BDC bridges art, design, and biology to create a new generation of creators—called biodesigners—who cross disciplines, anticipate promises and pitfalls, engage the public, and innovate.



Program Goals

1. Create a community of collaboration among artists, designers, and biologists
2. Seed the first generation of biodesigners who are fluent in biology and design
3. Inspire innovation that improves social equity and environmental justice
4. Foster participatory public dialogue about biotech and its uses



How it Works

Classroom Support

Throughout the spring semester of the academic year, our organizers work with instructors to design curricula, partner with experts, and mentor students.

Participating classrooms produce 100+ unique projects each year. Each school chooses one team to represent their institution at the BDC Summit.

June Summit

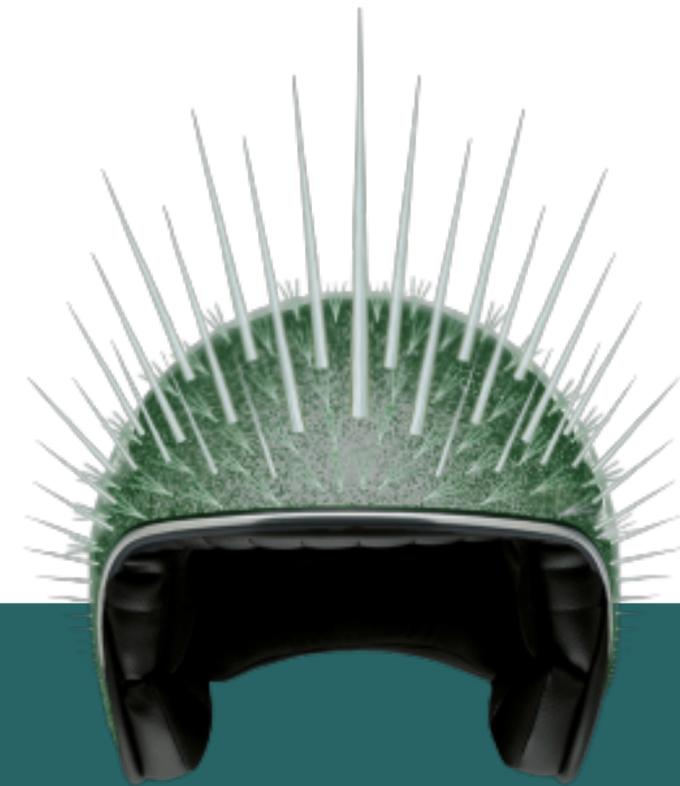
Students present projects onstage at the Museum of Modern Art to leading

thinkers in academia, industry, art, and design. Student teams compete for prizes, including the coveted Glass Microbe.

Growing Careers

As part of our support for alumni, we help propel projects into their next phase of development through opportunities with museums, galleries, investors, and accelerator programs.

BDC projects have become multi-million dollar startups and have exhibited at prestigious venues around the world.



Timeline

2023

Apr - Jan Registration

Schools seeking to participate in the Biodesign Challenge can register through mid-January.

Dec Curriculum Development

BDC collaborates with instructors to develop curricula for the classrooms.

2024

Jan - Mar Class Begins

Classrooms are paired with expert consultants for mentorship.

Mid-Semester Team Projects

Students break up into groups of 3-5 to create projects.

Mar - Apr Webinar Series

BDC hosts an online series featuring pioneers in biodesign.

End of Semester Finalists Round

Instructors choose one finalist team from their class to represent the school at the BDC Summit.

Jun

BDC Summit

Finalists showcase their designs at a summit before leading thinkers in academia, industry, art, and design.

Post-Summit Beyond BDC

BDC alumni receive career support. Alumni have exhibited globally, raised venture funding for their startups, and have been hired at leading companies.



Biodesign

Global Reach

6 Continents
30 Countries
107 Colleges
14 High Schools
247 Finalist Teams



BDC Summit

Panelists,
Speakers,
Audience

Exceptional Community

Over 400 people attend the BDC Summit at MoMA, while 7,000+ have tuned in online.

Pioneering Voices

Judges and speakers include 60+ leading scientists, designers, artists, curators, and entrepreneurs from institutions across the globe, including fashion brand Stella McCartney, biotech company Ginkgo Bioworks, MoMA, and The Cooper Hewitt Museum of Design.

Paola Antonelli
MoMA



Sarah Richardson
MicroByre



Antonio Regalado
MIT Tech Review

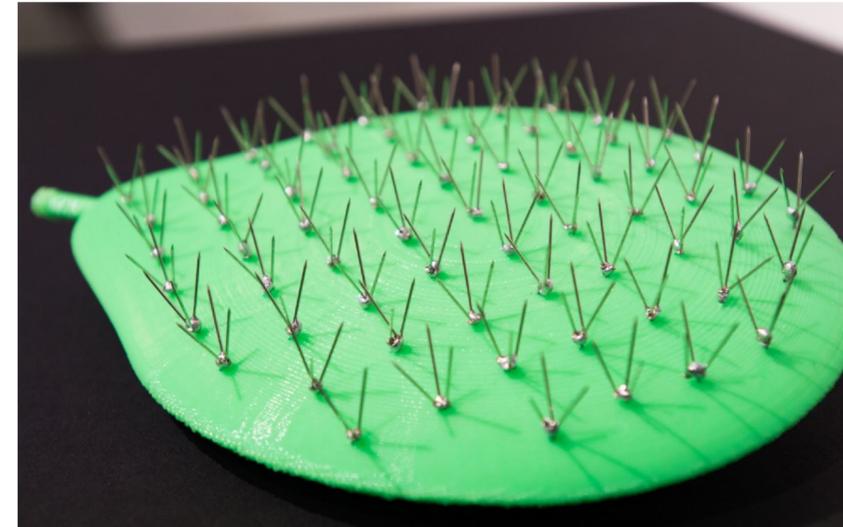
Gallery Show

As a hallmark of the program, BDC hosts a gallery show of student projects at Parsons School of Design, which opens to the public on the first night of the Summit.

Public Engagement

Over 400 guests arrive to see the projects and meet the students.

The Gallery Show is an opportunity for students to discuss their ideas and inspirations more intimately with peers, the public, experts, and judges.



Alumni Honors



Global Change Award

Index
Award
2021



CREATIVES FOR OUR FUTURE
SWAROVSKI FOUNDATION

THE
JAMES
DYSON
AWARD

Conservation X Prize

Index Award

H&M Global Change Award

James Dyson Award

Swarovski Foundation
Fellowship

LVMH Innovation Award
Finalist

Forbes 30 Under 30

IDA Design Awards

2022 Lexus Design Awards

Core77 Design Awards

L'Oréal Women in Science
Award

National Geographic
Chasing Genius Award

Postcode Lottery Green
Challenge Winner

WDCD No Waste Challenge
Winner

2020 Ray of Hope Prize
Finalist

Mills Fabrica Techstyle for
Social Good 2020 Winner

Fashion for Good 2022 Global
Innovation Program

CFDA's Design Scholar K11
Innovation Award

Cumulus Green Award

BDC in Museums

BDC alumni have showcased their projects at museums, festivals, and galleries around the world, including:



- The Gregg
- MIT Media Lab
- Esther Klein Gallery
- Tech Museum of Innovation
- Rhode Island School of Design



- NYC x Design
- Ars Electronica
- Dutch Design Week
- Museum of Modern Art
- London Design Festival



BDC in the News

Seen in:

NETFLIX

hulu

FOX

npr

Le Monde

CORE77

FAST COMPANY

Forbes

Smithsonian

WWD

POPULAR
SCIENCE

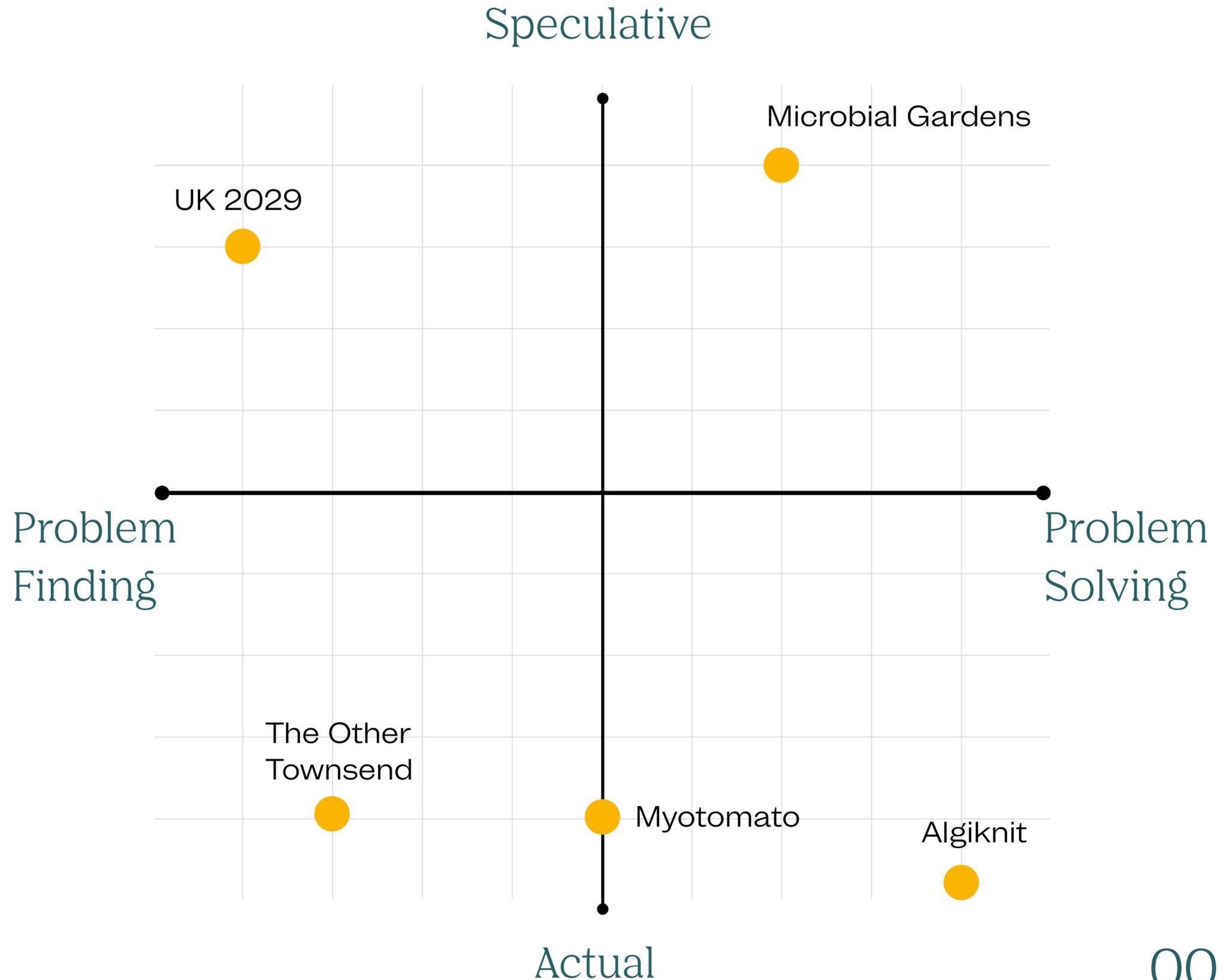
WSJ

“It’s designers, in collaboration with scientists, who are perhaps best suited to envision what the next step in our human evolution ought to look like. – **Fast Company**”

Project Matrix

Student projects reach beyond the expectations of familiar business competitions. Projects exemplify innovative design that spurs dialogue about desires around emergent biotech.

The competition is a forum for experiments in imagination. BDC students not only explore new biotech solutions but delve into technology's inherent challenges. While some projects ask how biotech might be used today, others anticipate how advances in research may allow it to be used 10-20 years from now.



Keel Labs

Series A: \$13 million

Founded: FIT, 2016

Founders: Tessa Callaghan, Aleks Gosiewski, & Aaron Nesser

Summary: Produces renewable fashion materials from kelp, one of the most regenerative organisms on the planet.

Thesis: Kelp grows 10x faster than any terrestrial fiber, and it does so in saltwater. It has potential to be the next cotton.

Modern Synthesis

Pre-Seed: \$4.1 million

Founded: Central Saint Martins, 2019

Founders: Jen Keane & Ben Reeve

Summary: Grows textiles to form using robotic fiber placement and nanocellulose-producing bacteria.

Thesis: *K. rhaeticus* bacteria can convert agricultural waste into made-to-specification fiber and create a circular, carbon negative textiles industry.

Myotomato

Exhibitions: Arizona State, RISD,
NYCxDesign, Esther Klein Gallery

Year: SVA, 2016

Creators: Bioart undergraduates

Summary: Students bioengineered beefsteak tomatoes to express cow proteins—giving a new twist on “beefsteak.” By inserting the gene for cow myoglobin into the tomato’s genome, they were able to grow a new hybrid that mixed a tomato with cow genes.



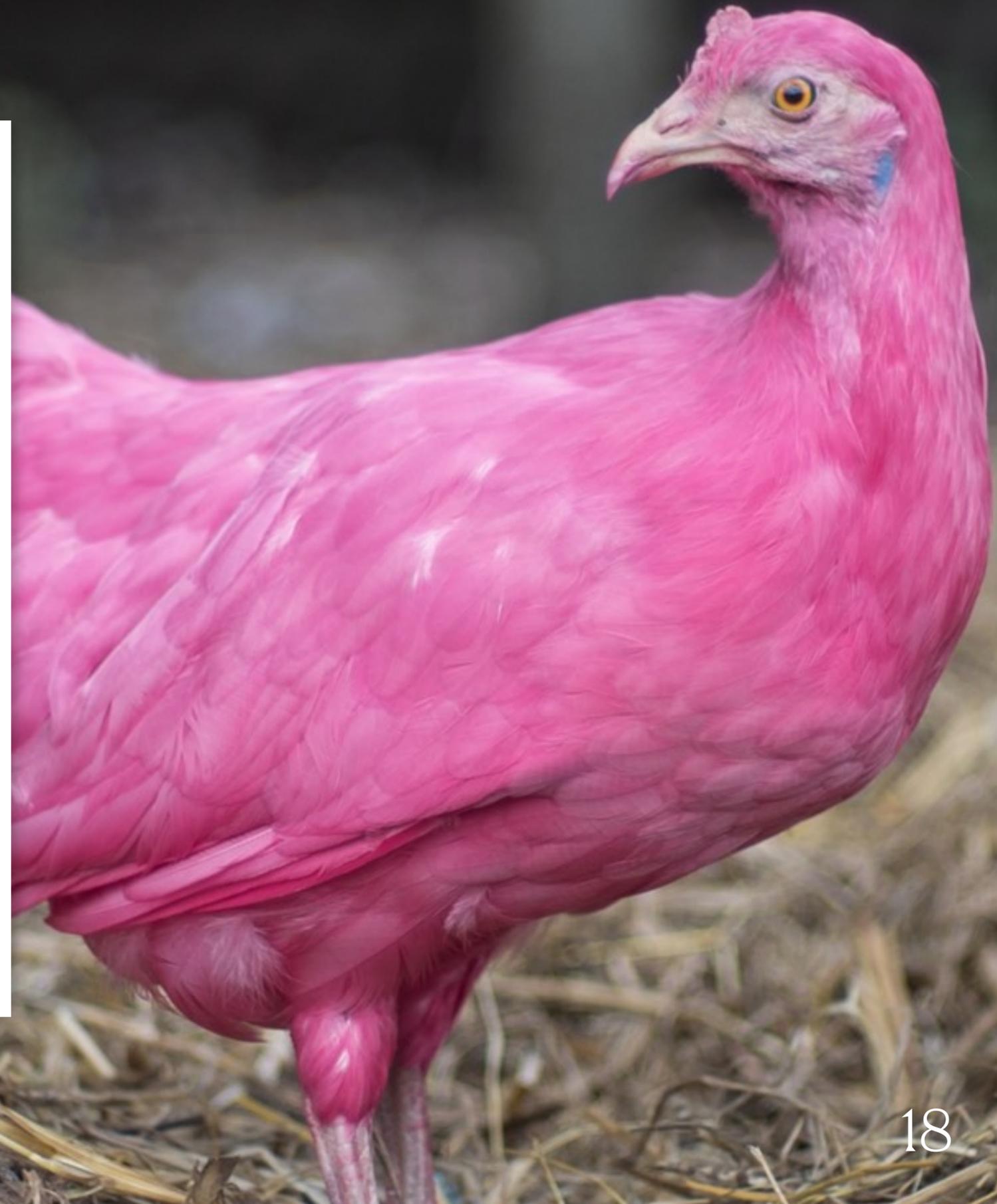
Pink Chicken

Exhibitions: MIT Museum, United Nations COP, Dutch Design Week

Year: Central Saint Martins, 2017

Creators: Leo Fidjeland & Linnea Vaglund

Summary: Pink Chicken is a speculative project that proposes using a gene drive to alter chickens to have pink bones and feathers as a social protest against humankind's misuse of the environment.



REGISTER: BDC 2024

Join an international competition and education program for high schools and universities that introduces students to the intersections of biotechnology, art, and design.

By registering for the competition, your university or high school gains access to our resources and network.

Registration	Cost	Deadline
Early	\$1,400 USD	September 14th, 2023
Regular	\$1,750 USD	December 14th, 2023
Late	\$2,200 USD	January 11th, 2024



**Thank
You**



biodesignchallenge.org



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