

Wearkit

Empowering artists
with wearable tech

Residency #1

Deadline: Sunday, February 11th 11:59 PM

1 Performer, 1 Designer & the Wearkit Team.
A 5 days collaborative residency to question the
future of body & technology.



Wearkit is a non-profit organization hosted at thecamp, Aix-en-Provence.
The project has been initiated as part of the HIVE program.
[> What is thecamp?](#) | [>What is the HIVE?](#)

Who we are

We enable wearable tech for performing arts.

Wearkit is a nonprofit organisation whose mission is to **develop an open-source kit of wearables modules for performing arts**. We provide a family of sensors and actuators with a mobile app for dancers, choreographers, circus artists, musicians. With a versatile and intuitive design approach, without the need to have programming skills, Wearkit makes it easier for performers to use technology that seamlessly blends with the motion of the body.

Wearkit is also a constantly growing european and international **community of makers, coders, artists and designers** who take part in the collective development of an open-source toolkit.

The core of Wearkit strategy is to work **at the intersection of the maker movement, fashion design and performing arts**; thus, creating a synergy of three approaches and opening new doors to explore the future of human-computer interaction. Augmented performance, interactive costume, and interaction with the public are some scenarios made possible with this generic modular toolkit.

The number of imaginary futures is countless. We believe that relevant and thought-provoking performances, can push the reflexion further and drive us to ask ourselves the right questions about our use of the technology. We want to help performers to explore new narratives on stage, **engaging curiosity about the future of body and technology**, and potentially disrupt the way we think about the interaction with the machines in our environment.

The project we are working on right now is about **shape-changing garments**. We believe that soft-robotics and dynamic pieces of garments have the potential to bring wearables to a new era, with numerous applications in the industry. Our approach is to design wearables modules in collaboration with artists of diverse backgrounds, through an iterative process of prototyping and development with several **residencies exploring interaction of technology with the body**.

What we do

1. MODULES FOR KINETIC EXPRESSION

Modules for Kinetic Expression generate motion through pieces of garments. A module consists of an embedded actuator whose purpose is to animate a shape-changing material. Its design allows a versatile usage and it can be set wherever on the body with a bracelet band fixation. It is wireless and works on battery. It is connected : it can receive live data from other modules or from an API to determine its behavior.

2. MODULES FOR BODY METRICS

Modules for Body Metrics measures physiological data and shares it to other modules. A module consists in embedded sensors whose purpose is to measure physiological data such as muscle electrical activity or pulse rate variations.

3. THE APP

The app allows the user to set the interaction parameters between modules in an intuitive way. It works on a smartphone and act as a dashboard to control the state and behavior of each module.

1+2+3 : A KIT FOR PERFORMING ARTS

Wearkit introduces a unique kind of interaction with the body and its motion, tailored for performing arts. It enables the exploration of a not-so-far future where technology extends human capabilities for perception and expression, in a disruptive way. We expect new forms of performances to be invented where the system becomes part of the speech, raising questions about the nature of our relationship with the machines.

SHAPE-CHANGING MATERIAL

In our first prototype, we're integrating actuators in wearables modules. These have two functions: support garments, and generate motion through them. Coupled with wearable sensors for physiological data or connected to external data, they can react to the body or to the environment.

What can we do with these modules?

Here is an indicative application example. A dancer wears a dynamic piece of garment that moves according to his heartbeat. The artist can use this technology to explore a phenomenon of amplification: what is usually invisible is now a tool for body expression and awareness.

Functional prototype #1: <https://www.youtube.com/watch?v=Ai1n57mO3sU>

What is the residency?

The residency is a time for collaboration and creation with our prototype. You will join a team composed by **one fashion designer** and **one artist** from performing arts, during 5 days at [thecamp](#). We are going to explore together the possibilities that the prototype offers in terms of interaction. The goal is to create a live performance with an interactive costume, in synergy with the body of the performer. As a deliverable, a short film (ca. 3 min) of a performance will be produced, demonstrating the potential of Wearkit.

Who are the residents?

One costume designer / interaction designer, whose role is to craft a costume by integrating Wearkit modules with its own technique dealing with fabric or various materials.

One artist of any domain of performing arts (circus, dance, theater, opera, etc), whose role is to generate feedback and directions on best approaches for movement and body expression, in the design process of the costume, and to prepare a short performance for the video (3 min) at the end of the residency.

They will work in collaboration with the Wearkit team.

Theme of the residency

"It seems to me, Golan, that the advance of civilization is nothing but an exercise in the limiting of privacy."

Isaac Asimov, *Foundation's Edge* (1982)

The theme for the first residency is "**Privacy: Body & Technology**". Whistleblowers & surveillance, control & empowerment, data protection & transparency ... the topic of privacy is one of the biggest challenges we face in the technological society we are living now.

Data is gathered and used on a massive scale in the economy as the new digital gold. It brings huge promises and big leaps forwards in many fields: personal healthcare, market finance, advertisement, energy production, social innovation. Meanwhile, massive data consumption raises critical questions and concerns about privacy, with recent leaks about dangerous practices from government and unknown entities.

If data is *power*, does privacy provides *freedom*?

Two decades ago, it was uncommon to use your real name or photo on the Internet. Nowadays, anyone can know where we are in real-time, what we eat, where we go running on weekends, who our friends are or even our relationship status. Even if you have nothing to hide, it may seem strange not to share anything on social networks. We have turned our lives into a public showcase, and it became the norm.

The distance between the body and the technology gets blurrier and blurrier. It may translate in huge concerns about privacy. In a near future where sensors are everywhere, how physiological and behavioral data of people are going to be used? Will we be able to choose what we want to share? What does privacy and transparency mean in a hyperconnected world? What consequences may it have in terms of relationship between the body and the technology?

We invite the artists to come experiment with the Wearkit prototype to create a short performance addressing the theme of "Privacy: Body & Technology". The residency consists in 5 days of exploration of this theme, in a hackathon mindset, through the prism of performing arts and fashion design.

During the residency, we will exchange and discuss remotely with advisors of the Wearkit community, which are experts in their respective fields, related to industrial design, fashion design, new media art.

The design process and the final act will be documented in video, in order to share the results with the community.

The residency will be run in English and French.

There is no competition, winner nor loser. Only one common objective: to produce a performance that tries to challenge our vision of body and technology.

What resources?

thecamp provides us with a workplace during the residency, with access to the fablab, with laser-cutting machine, sewing machine, 3D printers (resin & PLA), thermoforming machine, CNC, and conventional workshop tools for manufacturing and electronics.

For the shooting session at the end of the week, we'll move in a photo studio during half a day.

We provide you with:

- material and fabric expenses (up to 300€)
- travel expense refund for the roundtrip (up to 200€)
- private room in the campus & food - breakfast, lunch, dinner - during the whole residency (equivalent to a total of 600€)
- exclusive communication in thecamp network and Wearkit community

The residency will be run in English and French.

Apply now!

Send us your portfolio (pdf or website) and short bio to hello@wearkit.org

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	SUNDAY 25 FEB	MONDAY 26 FEB	TUESDAY 27 FEB	WEDNESDAY 28 FEB	THURSDAY 01 MAR	FRIDAY 02 MAR
Morning		INTRODUCTION We discuss around the theme, share expectations, ideas and references. > <i>Note of intent for the performance</i>	PROTOTYPING 1 Experimentation and research	PROTOTYPING 4 Experimentation and research > <i>Fashion proof of concept</i>	FINALIZATION 1 Crafting costume. Performance experimentation.	SHOOTING A short performance in a studio for the film. > <i>Video rushes</i>
Afternoon		GETTING STARTED Hands on prototype, modules and costume materials	PROTOTYPING 2 Experimentation and research	PROTOTYPING 5 Experimentation and research	FINALIZATION 2 Crafting costume. Performance experimentation	CONCLUSION Feedback and discussions. Apéro :)
Evening	WELCOME Arrival at thecamp	IDEATION We agree on a design idea to realise in the residency. > <i>Design proposal following the intent</i>	PROTOTYPING 3 Experimentation and research > <i>Technical proof of concept</i>	PROTOTYPING 6 Crafting costume. Performance experimentation. > <i>Performance proof of concept</i>	FINALIZATION 3 Crafting costume. Performance experimentation	

> : Deliverable