

Inflatable textiles

Midterm
Presentation

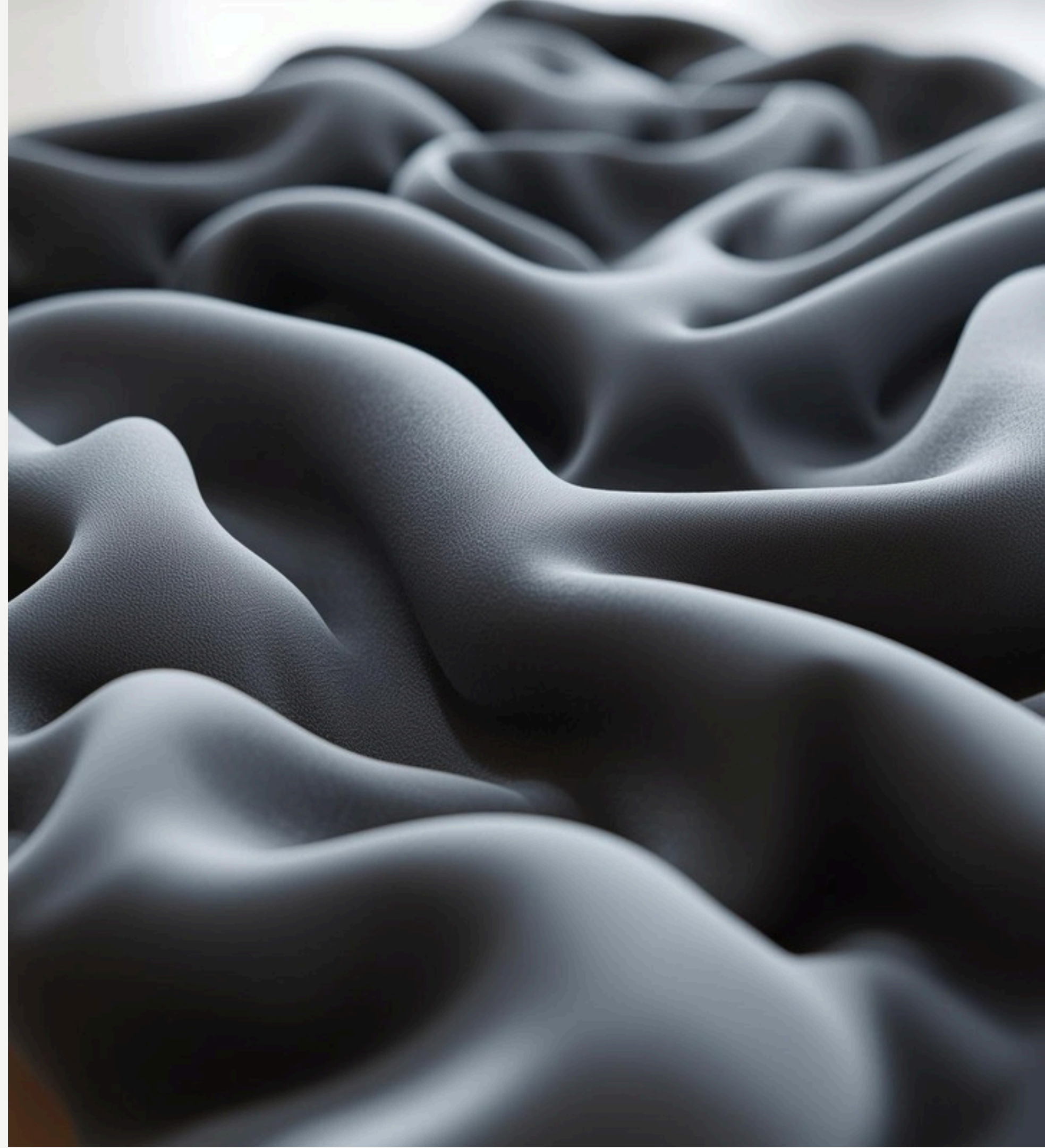
Fabricademy
Alberto Blanco



What?

**Research-driven exploration of
inflatable textiles as adaptative
material systems.**

Knowledge > object



What?

Project scope

- Inflatable textile structures
- Soft actuation and air behaviour
- Wearable-scale applications



Why?

Why rethink textiles?

Clothing is our protection against the elements, yet most garments remain passive in changing environments.

Adaptation > Resistance



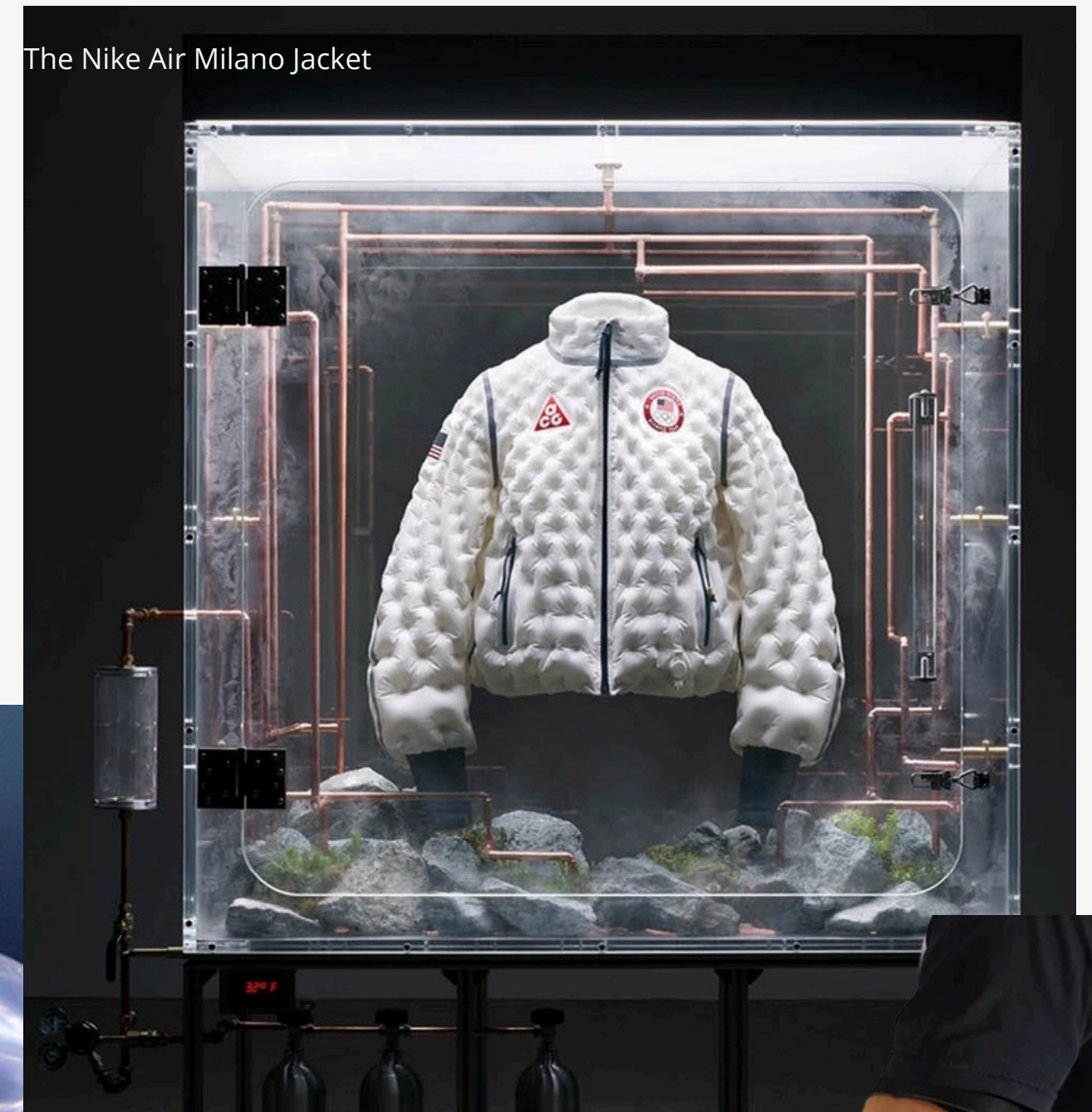
Why? Context & State of the art



Alpha Dance costumes



Nike ACG Inflation Jacket



The Nike Air Milano Jacket



Louis Vuitton Mens | Inflation Puffa | Spring '21



Craig Green | FW '22



Blow Armchair - Zanotta



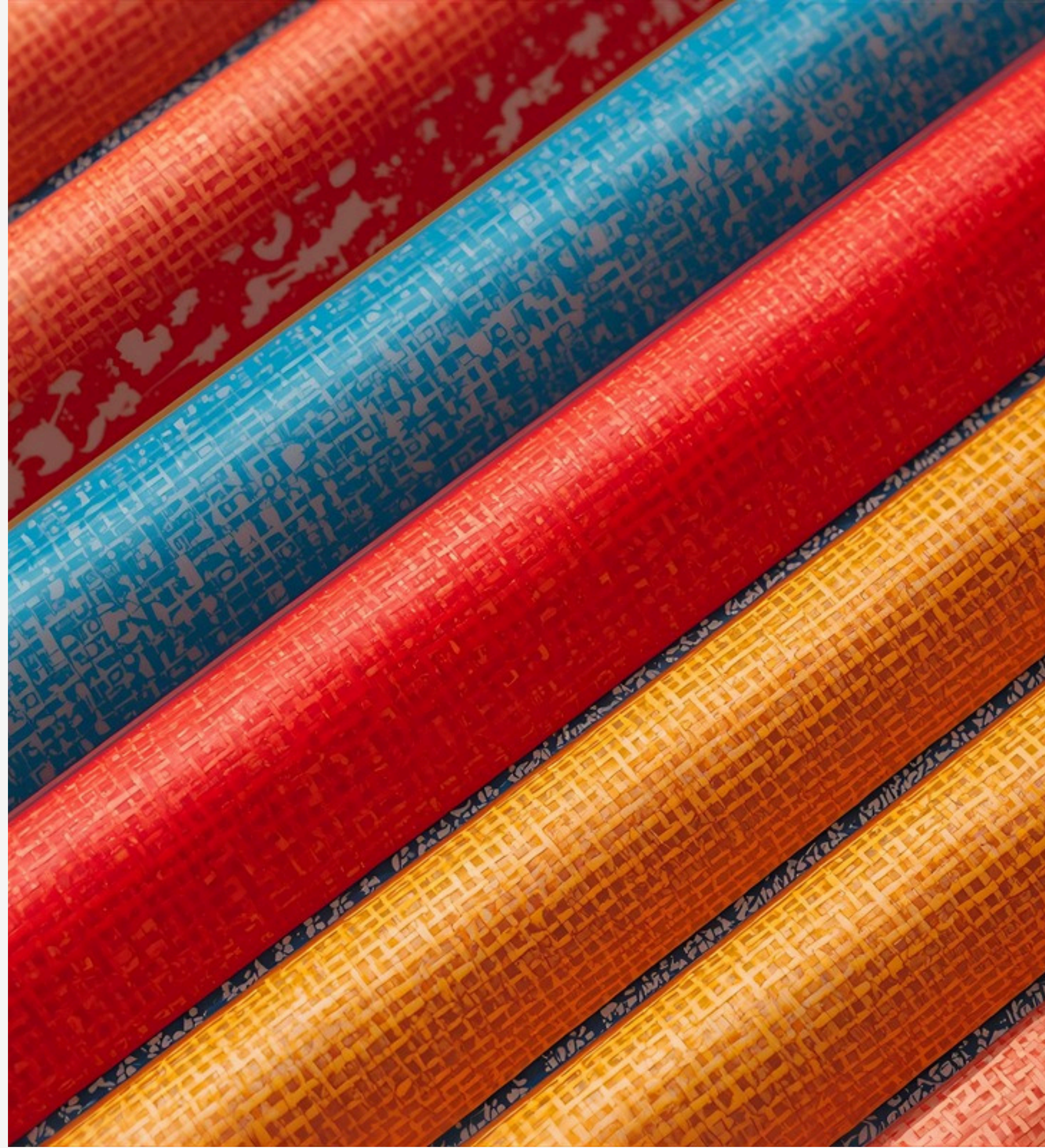
MIT Self-assembly Lab

Why?

Why research, not product?

Existing projects focus on outcomes, this project's purpose is understanding the behavior of materials and techniques.

From product to material system.

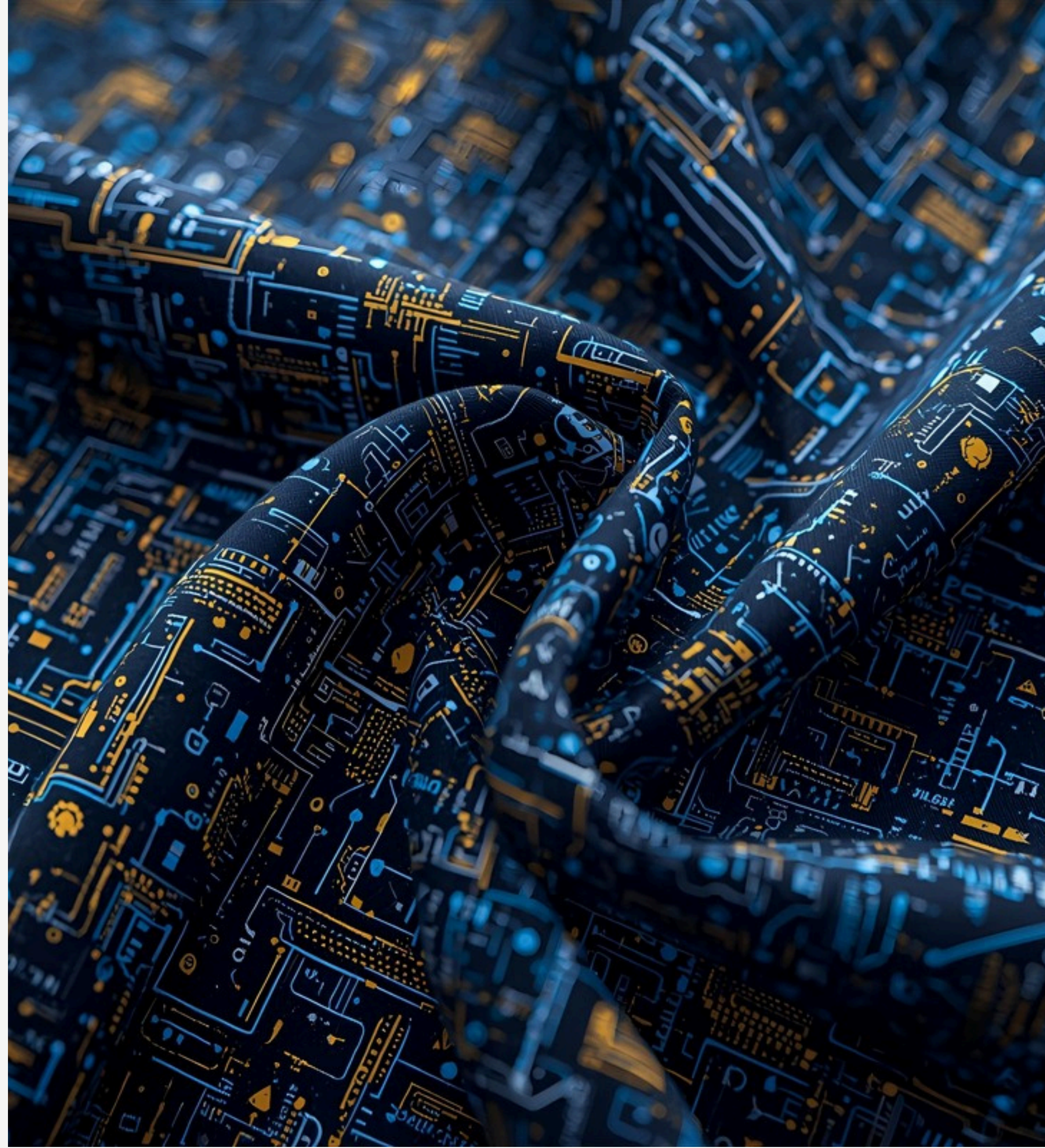


Who?

Who benefits from the knowledge?

Anyone designing adaptive textiles can build upon this research.

- Designers
- Researchers
- Textile innovators
- Wearable technologists
- Medical & health practitioners



For who?

Beyond Fashion

One system, multiple applications

- Wearable thermal regulation.
- Medical compression garments.
- Research & education platforms.



How?

How does this project works?

Through iterative experimentation with inflatable textiles, air chambers, and sensing systems.

- Materials
 - Easy to get
 - Not expensive
- Sealing methods
 - Adhesives
 - Heat sealing
 - Stitching
- Geometry
 - Inflatable chambers shape
- Inflation methods
 - Manual
 - Electronic
- Comfort



How?

Validation & outcomes

- Reproducible experiments.
- Documented failures and successes
- Transferable design knowledge

The outcome is a framework, not a product; I want my Fabricademy website to become a library.



This project
does not end
with a jacket,
but with a
framework for
designing future
inflatable
wearables.



Next Steps

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Thank You

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Fabricademy - 2025

