



# THEFABLAB

## MAKE IT REAL

Giulia de Martini - 16 Maggio 2019

# Giulia de Martini

*Head of Research*

Laurea in Fisica e Master in Comunicazione della Scienza. Durante la sua esperienza al Museo Nazionale della Scienza e della Tecnologia di Milano ha approfondito studi di ricerca sui visitatori e sviluppato progetti educativi per diversi tipi di pubblico. Dopo un'esperienza decennale nel mondo della ricerca clinica, ha fondato SPARK Art&Science, per studiare le relazioni tra tecnologia, scienza, arte e società. Oggi lavora al TheFabLab dove gestisce le attività di ricerca e sviluppo, conciliando management, creatività e curiosità.



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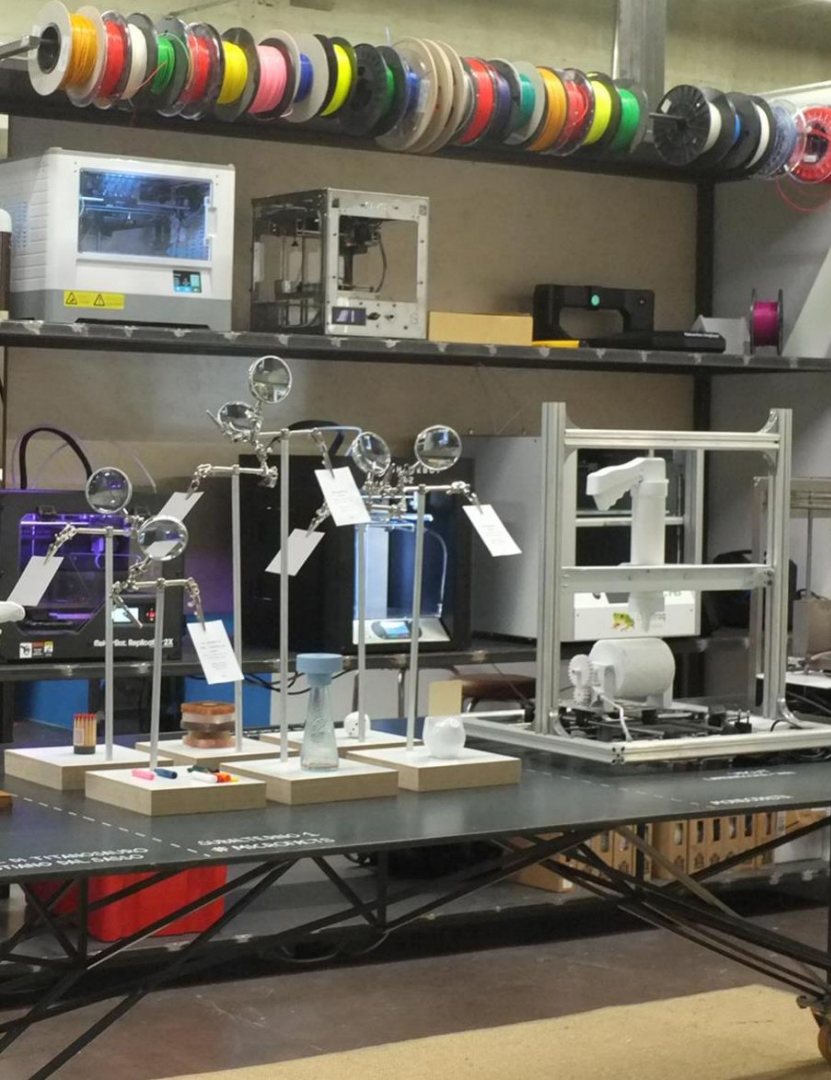
[@giuliademartini\\_official](https://www.instagram.com/giuliademartini_official)



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Torino Via Giacosa 36

Bologna Via Bassi 7



“La nostra missione è offrire a professionisti, creativi e aziende gli strumenti e le competenze essenziali per supportarli nel loro percorso di trasformazione verso l’Industry 4.0”.

# LA NOSTRA STORIA

2014

TheFabLab si costituisce con sede a Milano presso SIAM.

2015

TheFabLab diventa start-up innovativa.

2016

Inaugura il nuovo laboratorio di Milano presso il main campus di Talent Garden

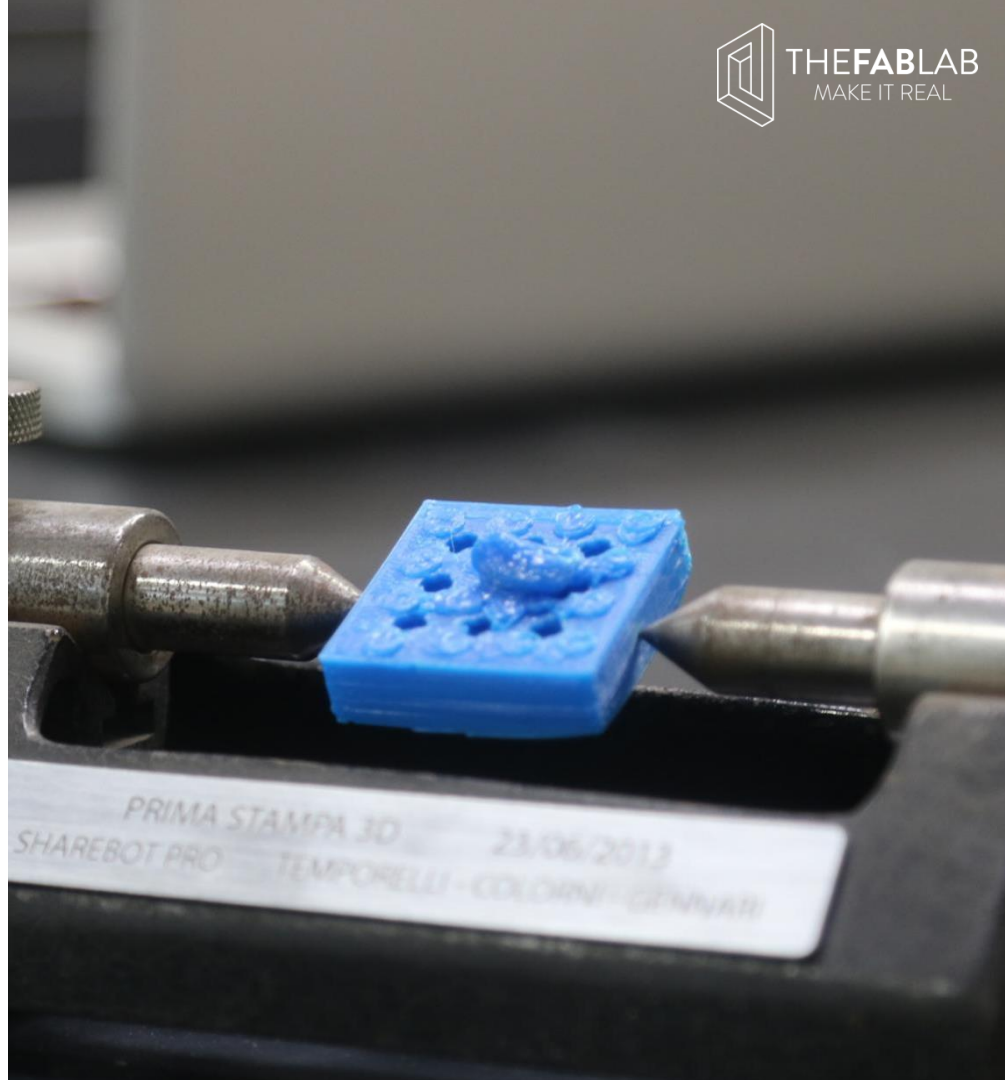
2017

TheFabLab contribuisce allo sviluppo di un nuovo fab lab presso "Milano Luiss Hub for Makers and Students"

2018

Inaugurano le nuove sedi di Torino presso Talent Garden Fondazione Agnelli e Bologna presso Net Service Digital Hub

*Il piano di crescita di TheFabLab prevede l'apertura di nuovi laboratori in Italia e in Europa*





## Open Tools

*I laboratori di TheFabLab sono accessibili a chiunque desideri sperimentare e innovare i propri prodotti utilizzando tutte le tecnologie della digital fabrication.*



## Design & Consulting

*TheFabLab supporta le idee del cliente dalla definizione del brief al prototipo, fino alla realizzazione del primo lotto di produzione.*



## Research & Education

*TheFabLab studia i processi e gli effetti della trasformazione digitale in diversi settori del sistema economico e propone percorsi formativi attraverso il TFL Learning Centre.*



# INDUSTRY 4.0

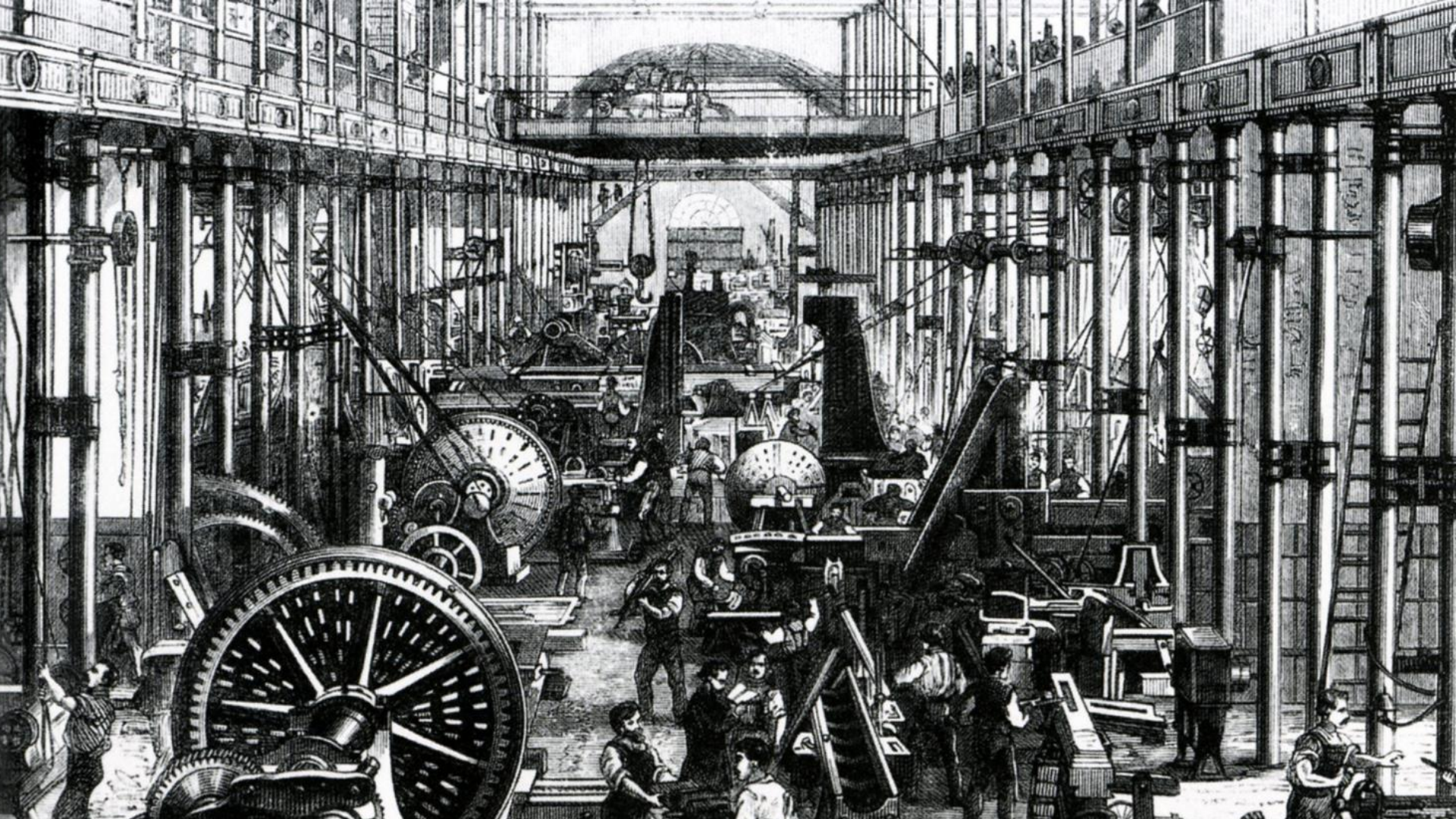
*Less engineering, more biology*

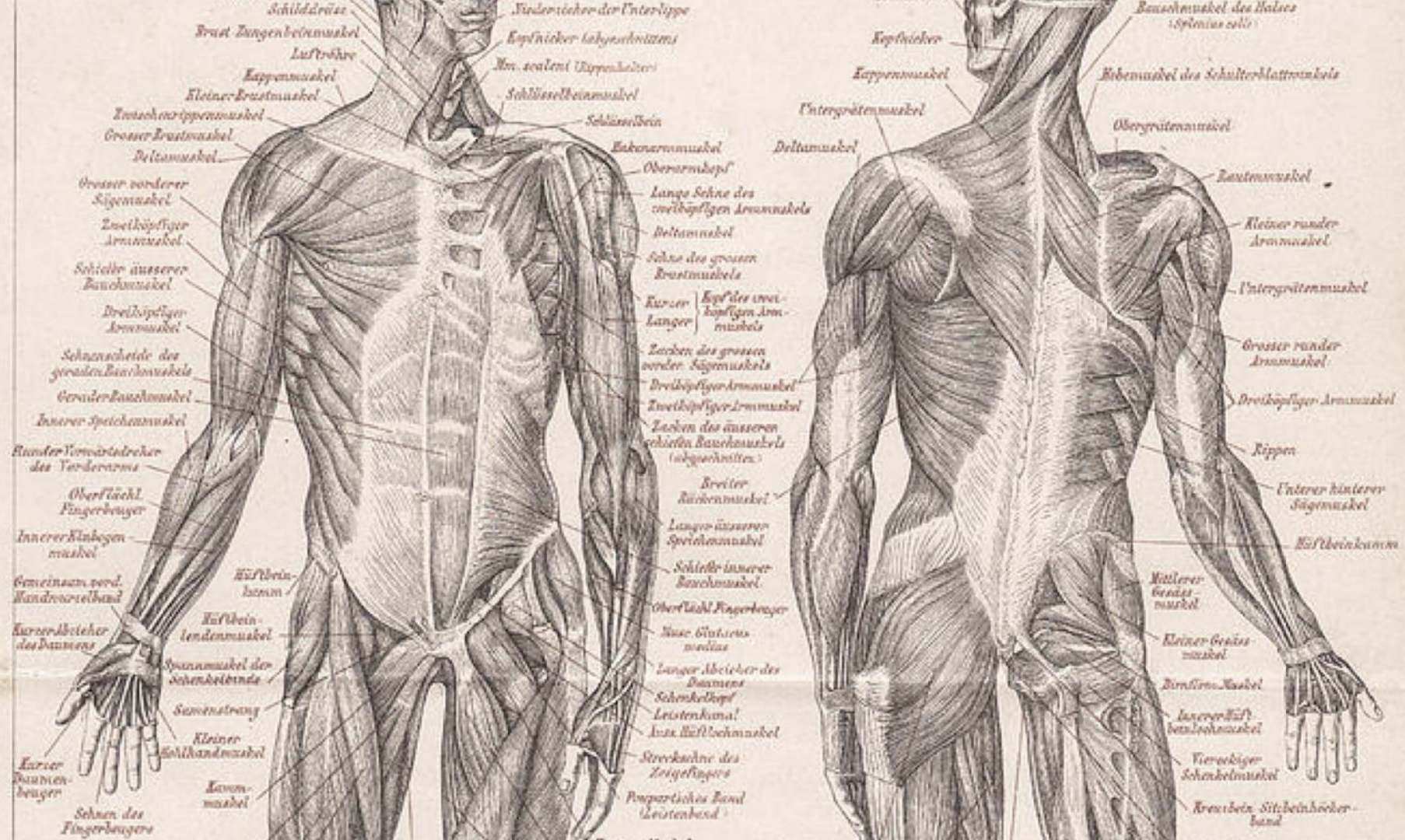
# Prima rivoluzione industriale











Schilddrüse

Brust Zungenbeinmuskulatur

Lufttröhre

Kappmuskel

Kleiner Brustmuskel

Zwischenrippenmuskel

Großer Brustmuskel

Deltamuskel

Großer vorderer Sägenmuskel

Zweiköpfiger Armmuskel

Schleife innerer Bauchmuskel

Dreiköpfiger Armmuskel

Schleife des geraden Bauchmuskels

Großer Bauchmuskel

Innere Speichermuskel

Runder Vorwärtstrecker des Vorderarms

Oberflächlicher Fingerbeuger

Innere Krümmungsmuskel

Gemeinsam vord. Handwurzelband

Kurzer Abzieher des Daumens

Kurzer Daumenbeuger

Schne des Fingerbeugers

Hüftbeinbein

Kniebeinbein

Spannmuskel der Schenkelbinde

Saronestrang

Kleiner Hüftbeinmuskel

Kammmuskel

Stirnlücke der Unterlippe

Kopfnicker (Larynxknorpel)

Man. scaleni (Hauptknorpel)

Schlüsselbeinmuskel

Schlüsselbein

Erkerarmmuskel

Oberarmbeuge

Lange Sehne des zweiköpfigen Armmuskels

Deltamuskel

Sehne des großen Brustmuskels

Kurzer Kopf des zweiköpfigen Armmuskels

Langer

Zacken des großen vorderen Sägenmuskels

Dreiköpfiger Armmuskel

Zweiköpfiger Armmuskel

Zacken des inneren schiefen Bauchmuskels (abgewandt)

Breiter Rückenmuskel

Langer innerer Speichermuskel

Schleife innerer Bauchmuskel

Oberflächlicher Fingerbeuger

Inter Glutaeus medialis

Langer Abzieher des Daumens

Schenkelkopf

Leistenkamm

Inter Hüftbeinmuskel

Strecksehne des Zeigefingers

Popliteales Band (Leistenband)

Kopfnicker

Kappmuskel

Untergrätenmuskel

Deltamuskel

Bauchmuskel des Halses (Spinotransversarius)

Rückenmuskel des Schulterblatttrapezius

Obergrätenmuskel

Leistenmuskel

Kleiner runder Armmuskel

Untergrätenmuskel

Großer runder Armmuskel

Dreiköpfiger Armmuskel

Rippen

Unterer hinterer Sägenmuskel

Hüftbeinbein

Mittlerer Gesäßmuskel

Kleiner Gesäßmuskel

Sirringmuskel

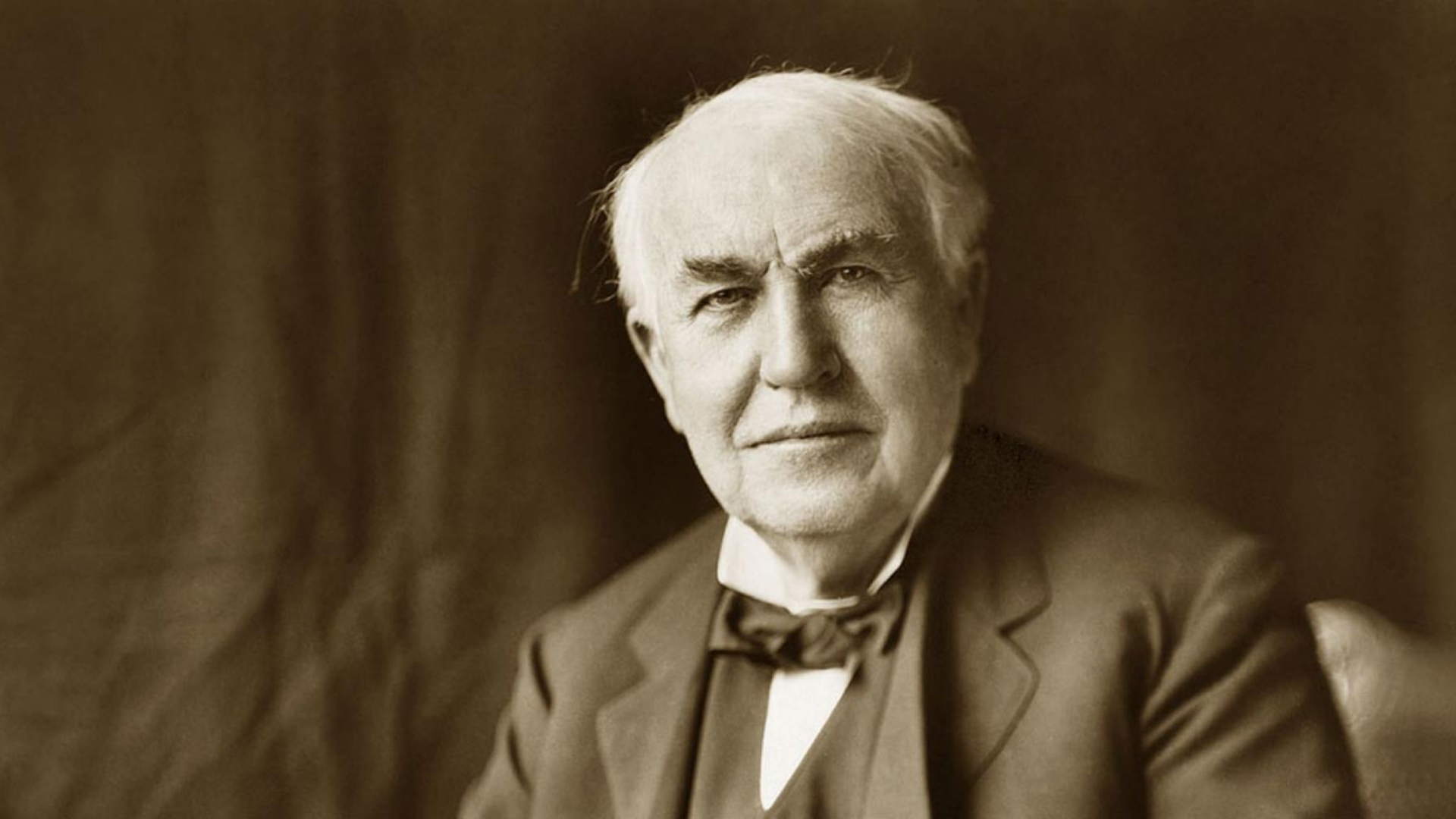
Innere Hüftbeinbein

Vierköpfiger Schenkelmuskel

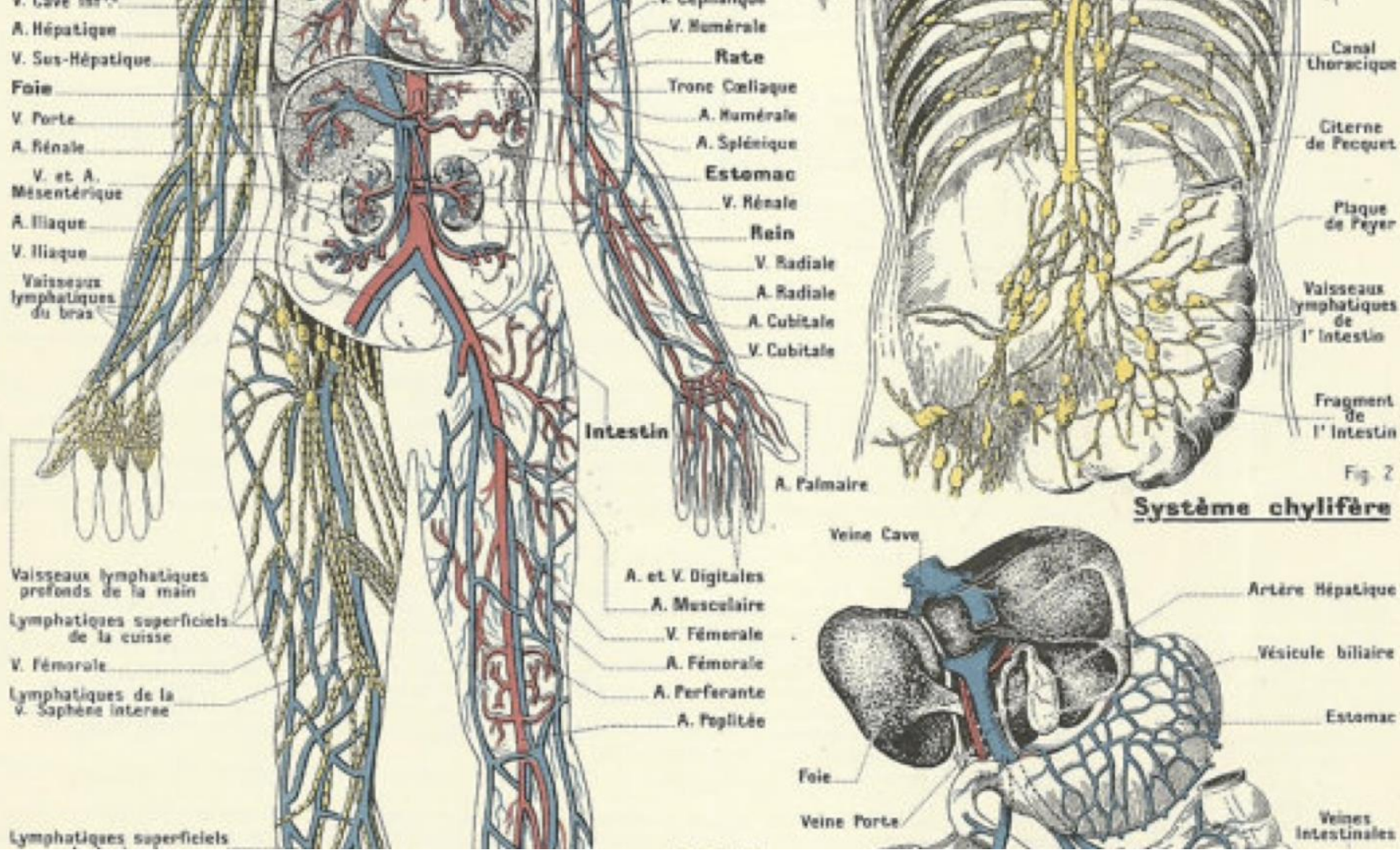
Armsbein, Sitzbeinbeinband

# Seconda rivoluzione industriale









**Sistema muscolo-scheletrico**

**Sistema cardio-circolatorio**

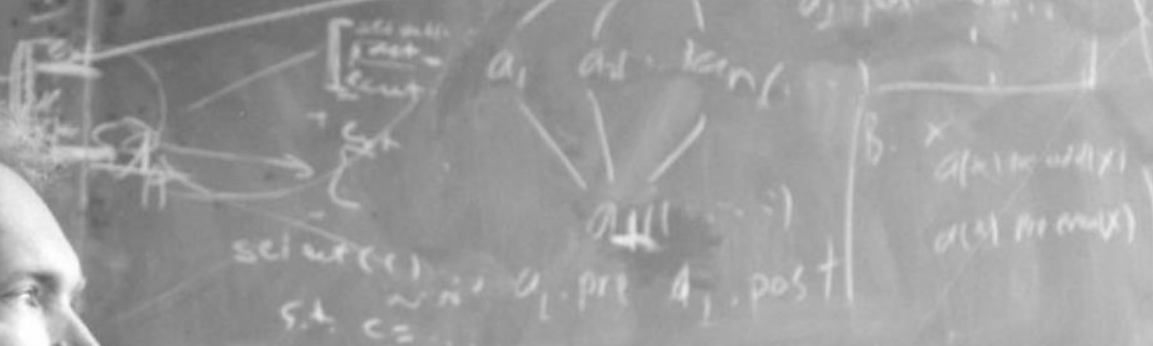


# Terza rivoluzione industriale

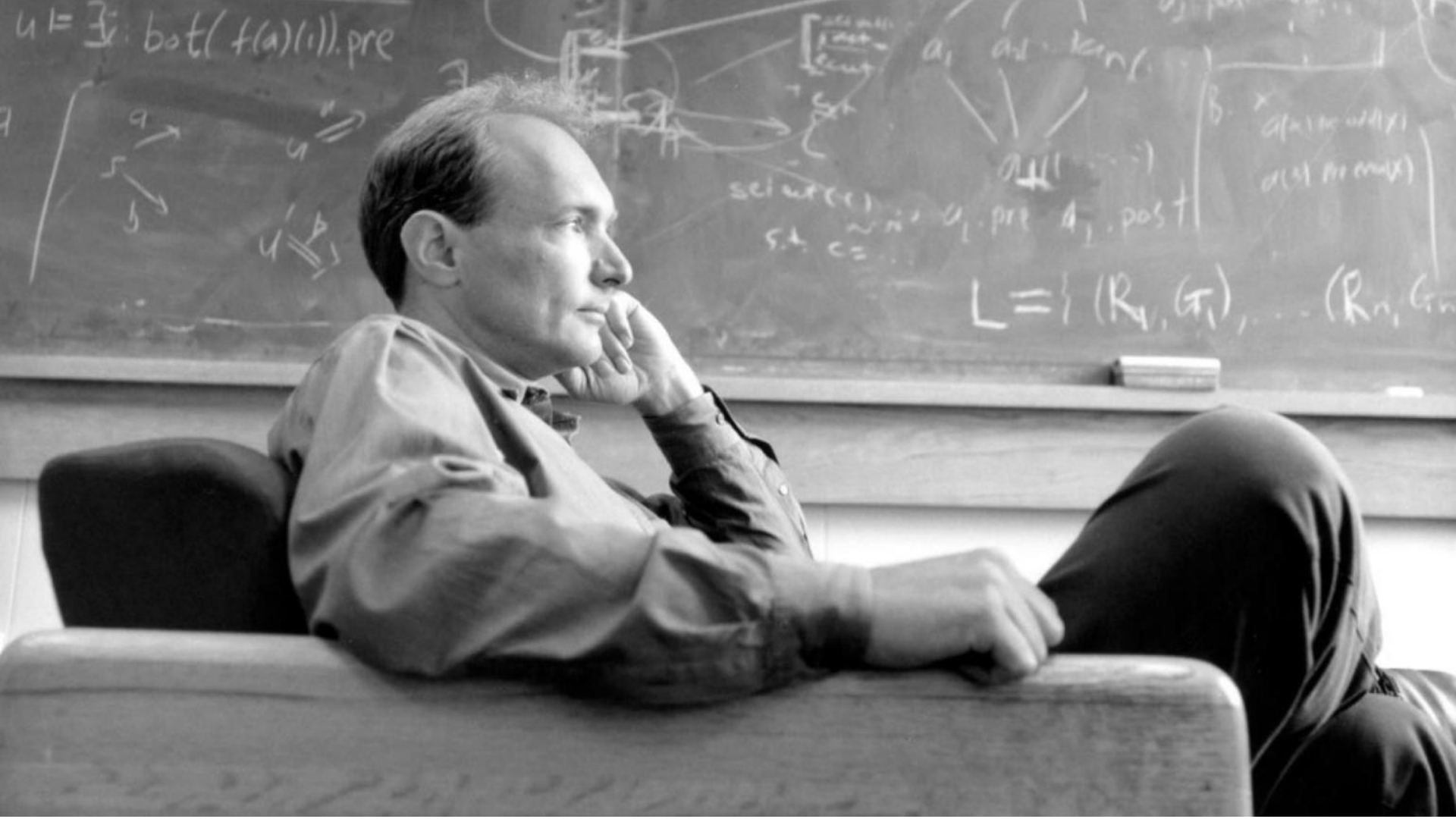




$u = \exists i. \text{bot}(f(a)(i)).\text{pre}$

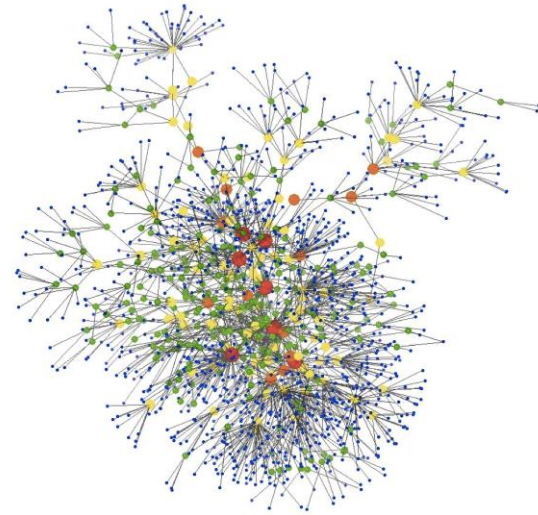
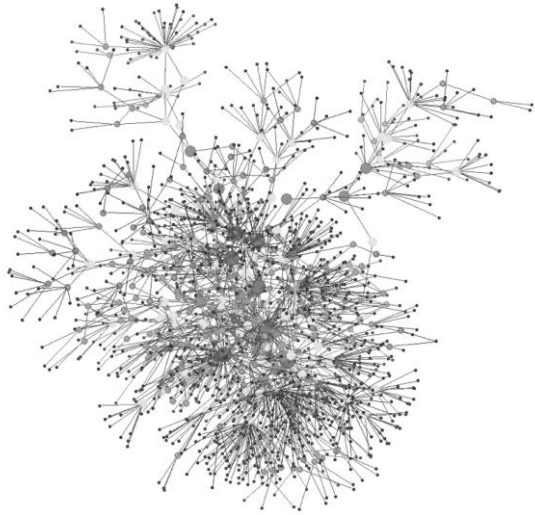


$L = \{(R_1, G_1), \dots, (R_n, G_n)\}$









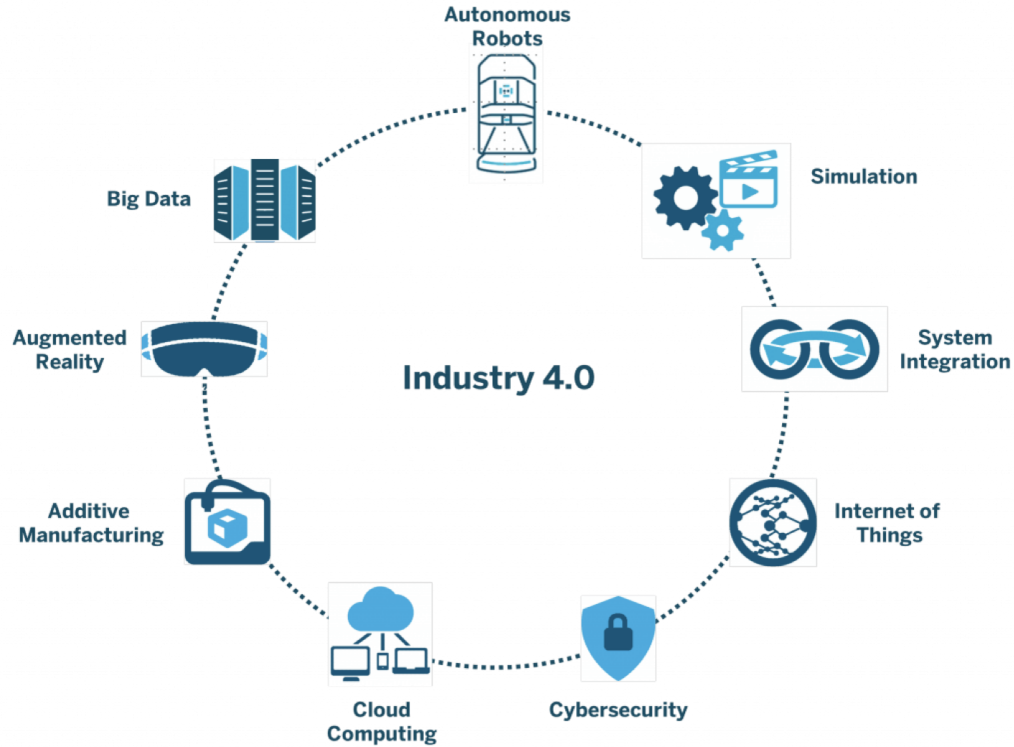
# Quarta rivoluzione industriale







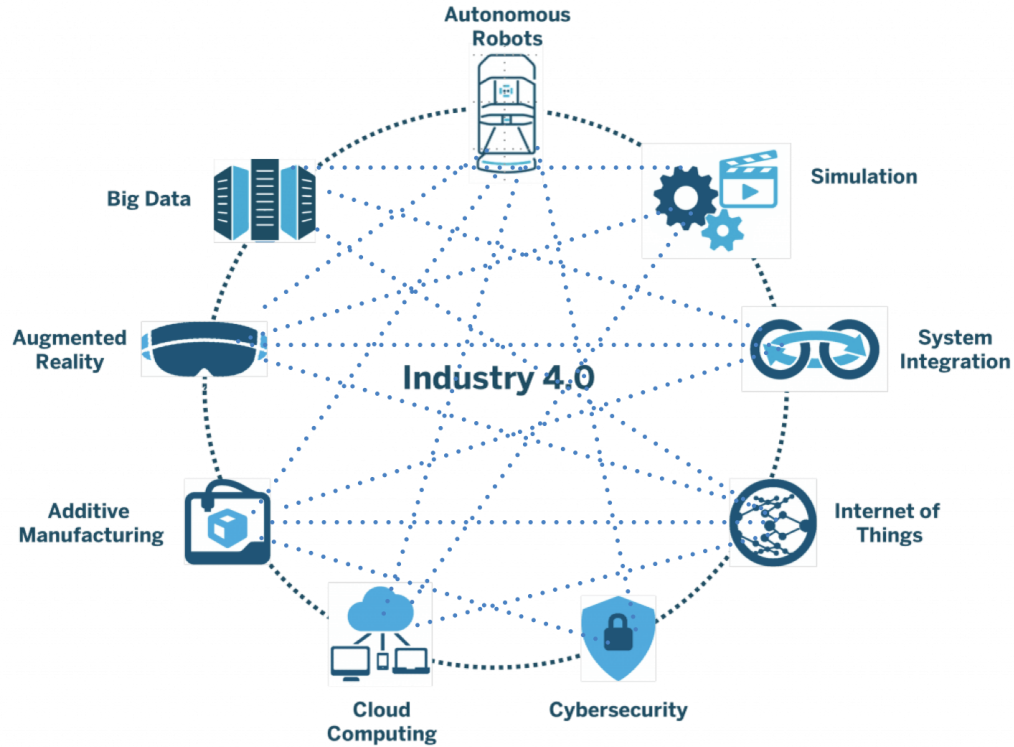
# Ecosistema



Internet of Things  
Additive Manufacturing  
Big Data  
Autonomous Robots  
Simulation

...





Internet of Things  
Additive Manufacturing  
Big Data  
Autonomous Robots  
Simulation

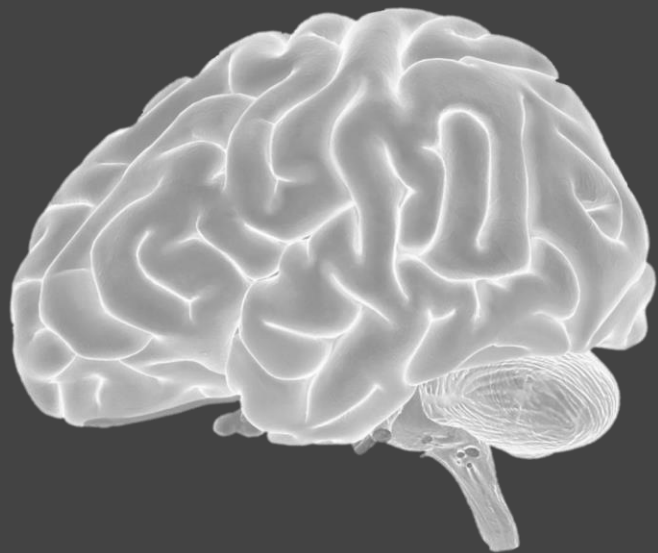
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# FAB LAB E OPEN INNOVATION

*Making by sharing*



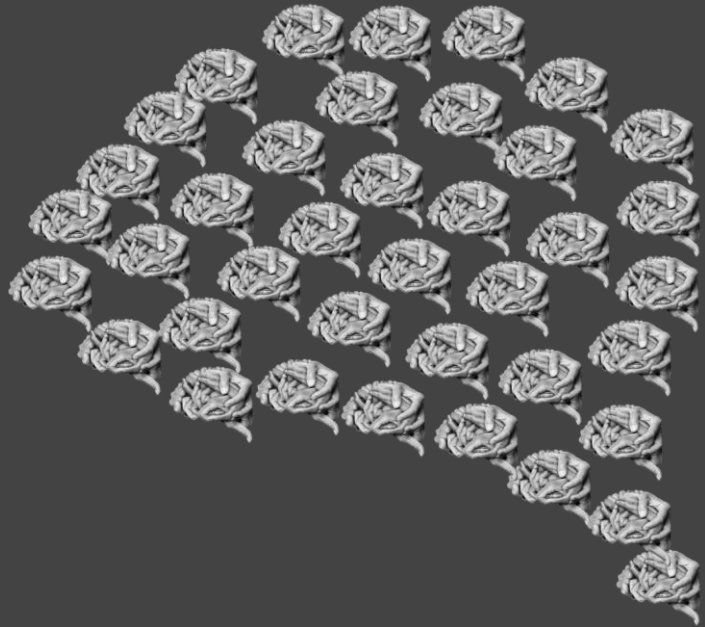


“Cogito, ergo sum”

René Descartes, *Discours de la méthode*, 1637

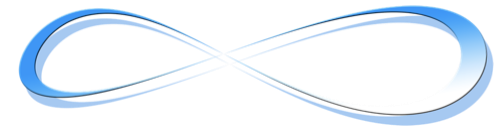


Facio, ergo sum



Facimus, ergo sumus







THEFABLAB  
MAKE IT REAL

WELCOME TO  
THE FUTURE.  
FROM BITS TO ATOMS.

ENGINE ROOM

UMARELLIFICIO

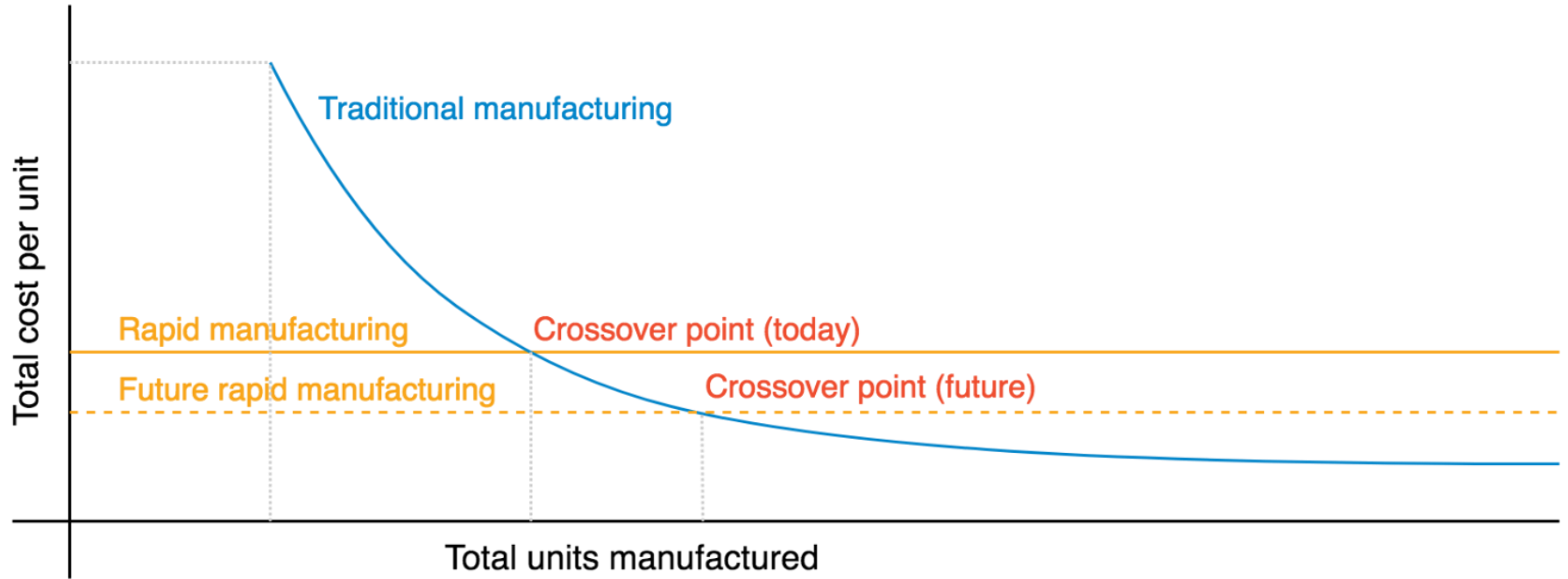


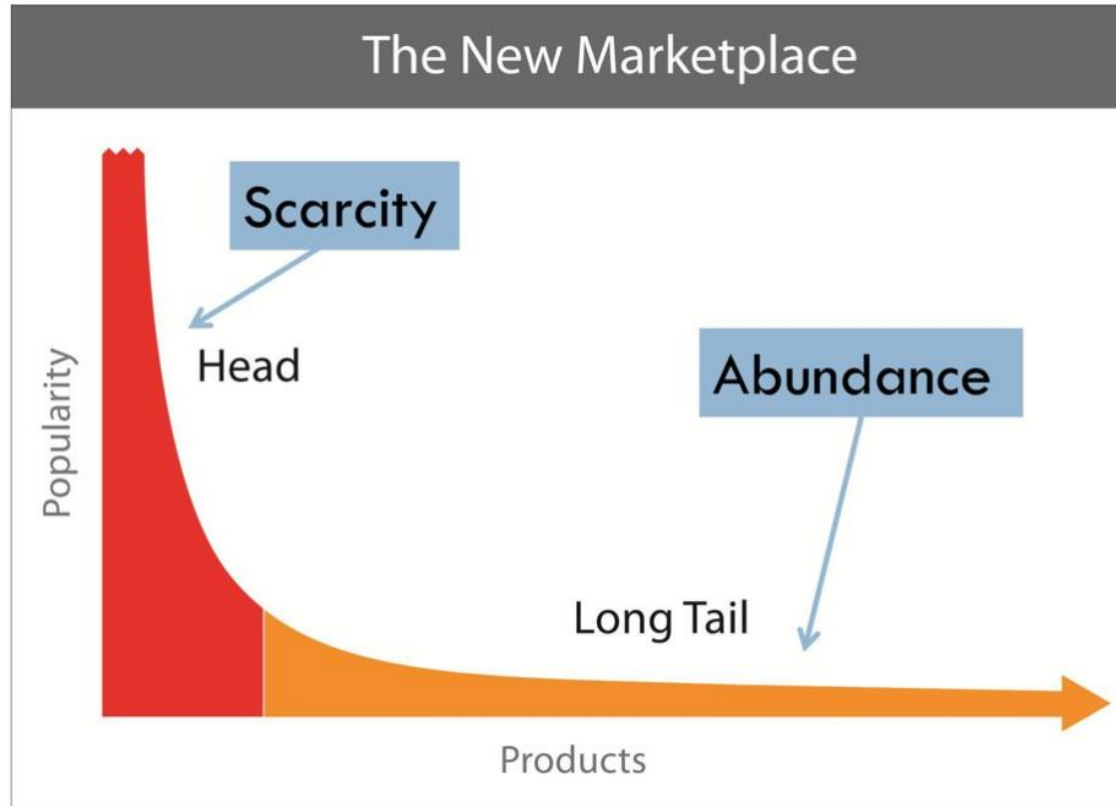


What is this stuff good for?

Not to make what you can buy in stores,  
but to make what you can't buy in stores.  
It's to personalise fabrication.

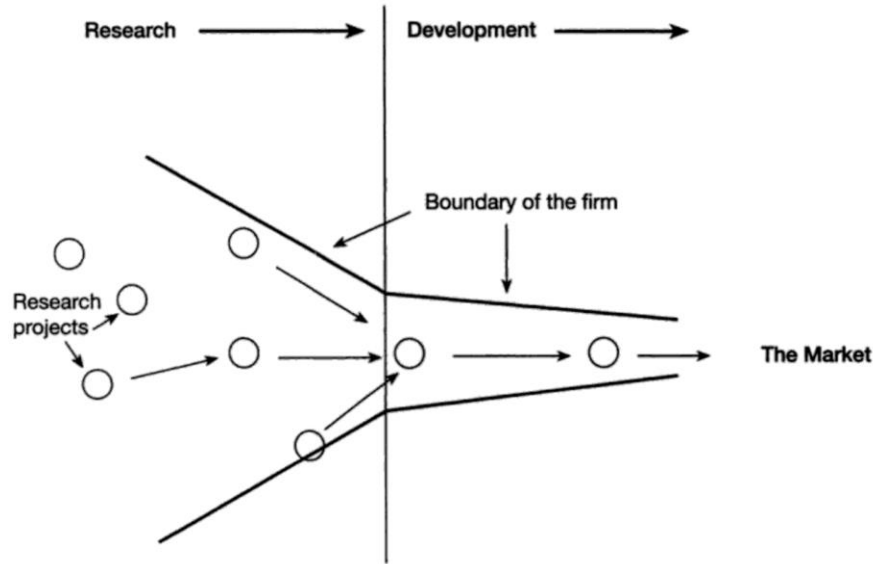
*Neil Gershenfeld*



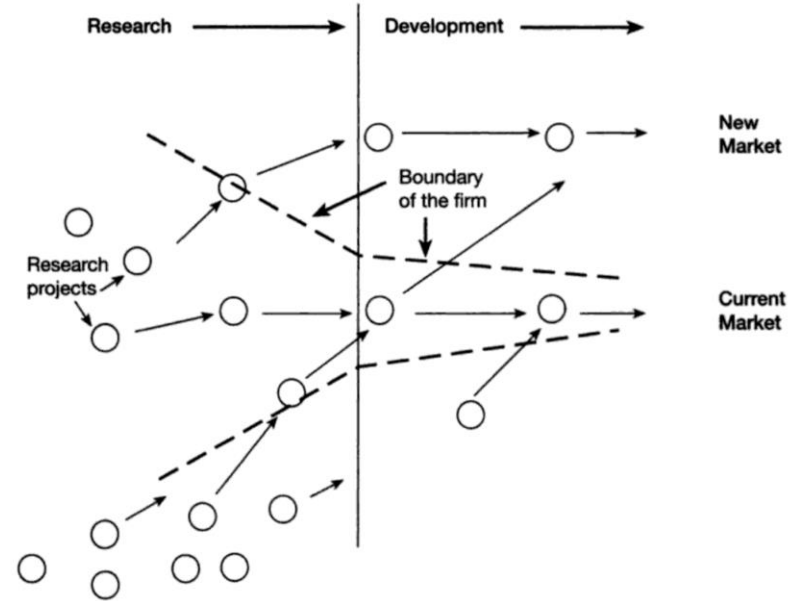


Anderson, C. (2004) *The Long Tail*, Wired

### The Closed Paradigm for Managing Industrial R&D



### The Open Innovation Paradigm for Managing Industrial R&D



Chesbrough, H. (2003) *Open Innovation*, Harvard Business School Press





