

INNOVATION STRATEGIES

Come facilitare processi di innovazione in organizzazioni, community e aziende

ENRICO BASSI

Ricercatore, Designer e Consulente per
l'innovazione



IL TUO DOCENTE

- Ricercatore nell'ambito della sostenibilità
- Consulente aziendale sull'innovazione
- Docente di fabbricazione digitale
- Coordinatore del primo Fab Lab italiano (Fab Lab Italia), di Fab Lab Torino e Fab Lab OpenDot

COS'È L'INNOVAZIONE

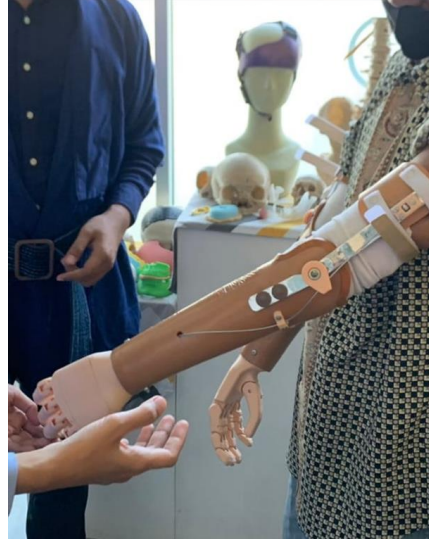
COS'È L'INNOVAZIONE

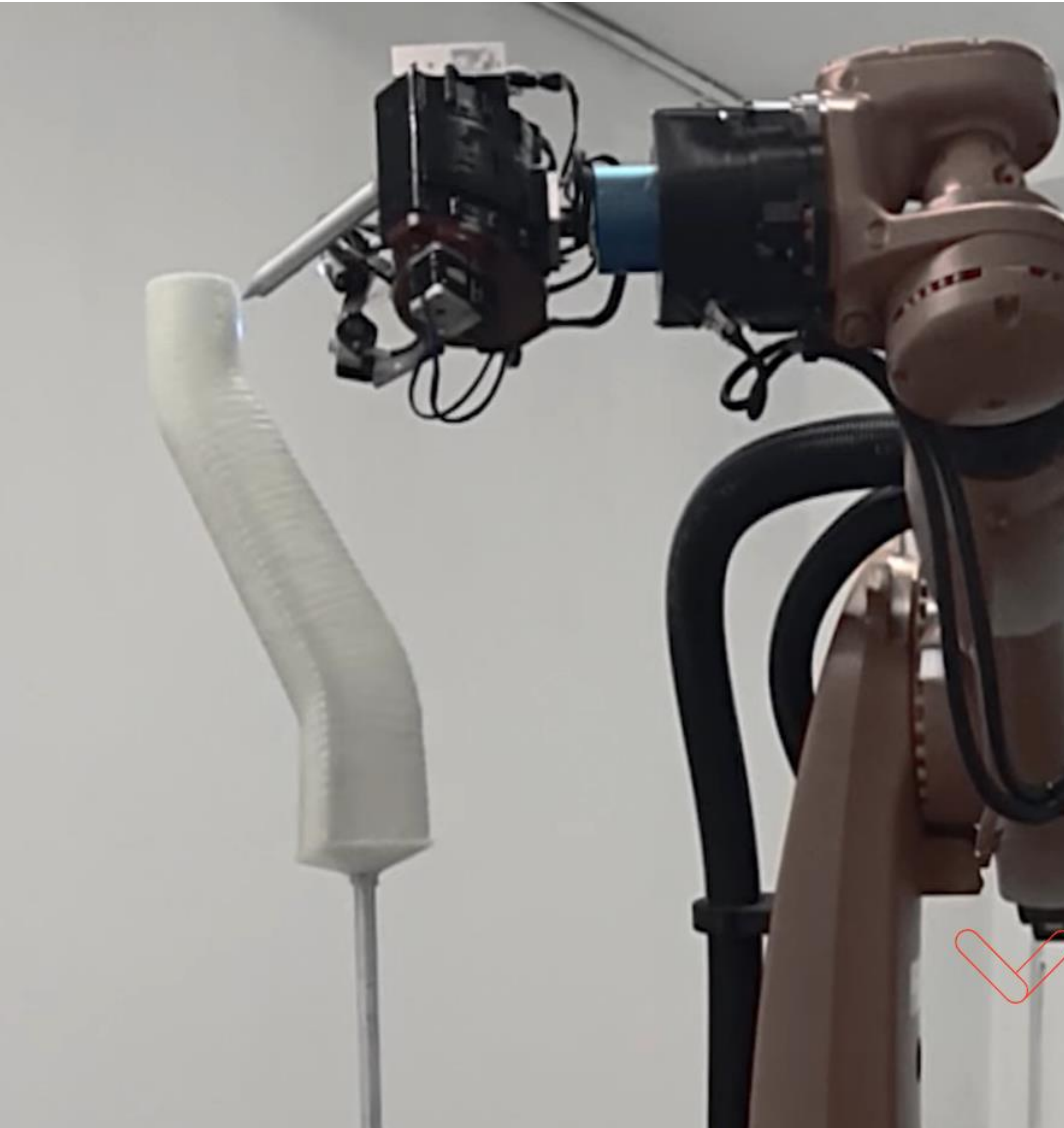


COS'È L'INNOVAZIONE

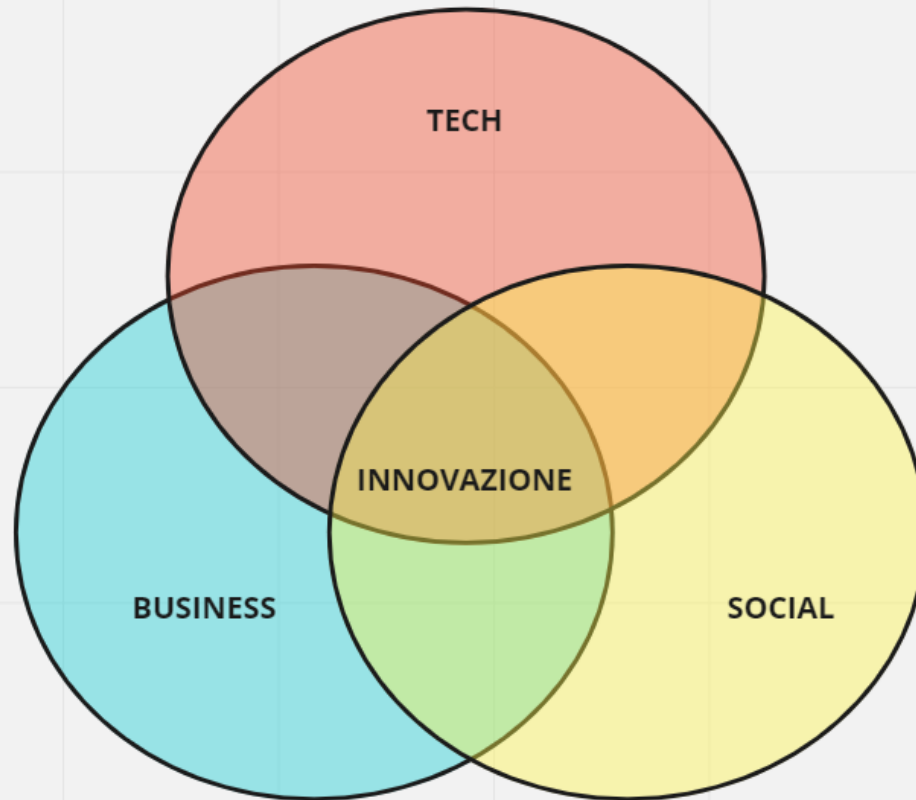
“L’innovazione è l’introduzione di un prodotto, servizio, processo o metodo nuovo o significativamente migliorato che crea valore.”







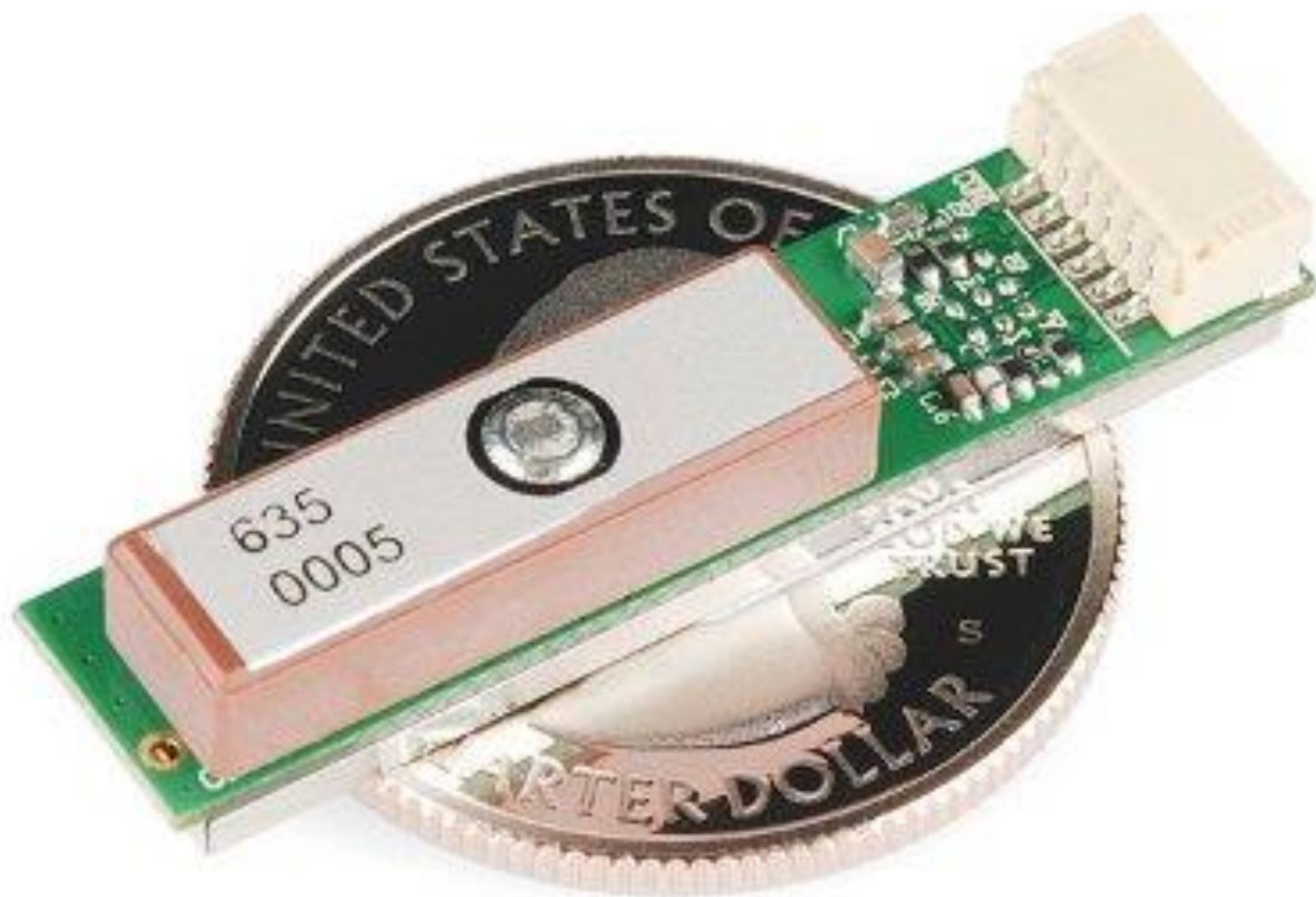
LE COMPONENTI DELL'INNOVAZIONE



INNOVAZIONE TECNOLOGICA \ SCIENTIFICA



INNOVAZIONE TECNOLOGICA \ SCIENTIFICA



L'INNOVAZIONE SOCIALE



Roma, 2018

L'INNOVAZIONE SOCIALE



L'INNOVAZIONE SOCIALE

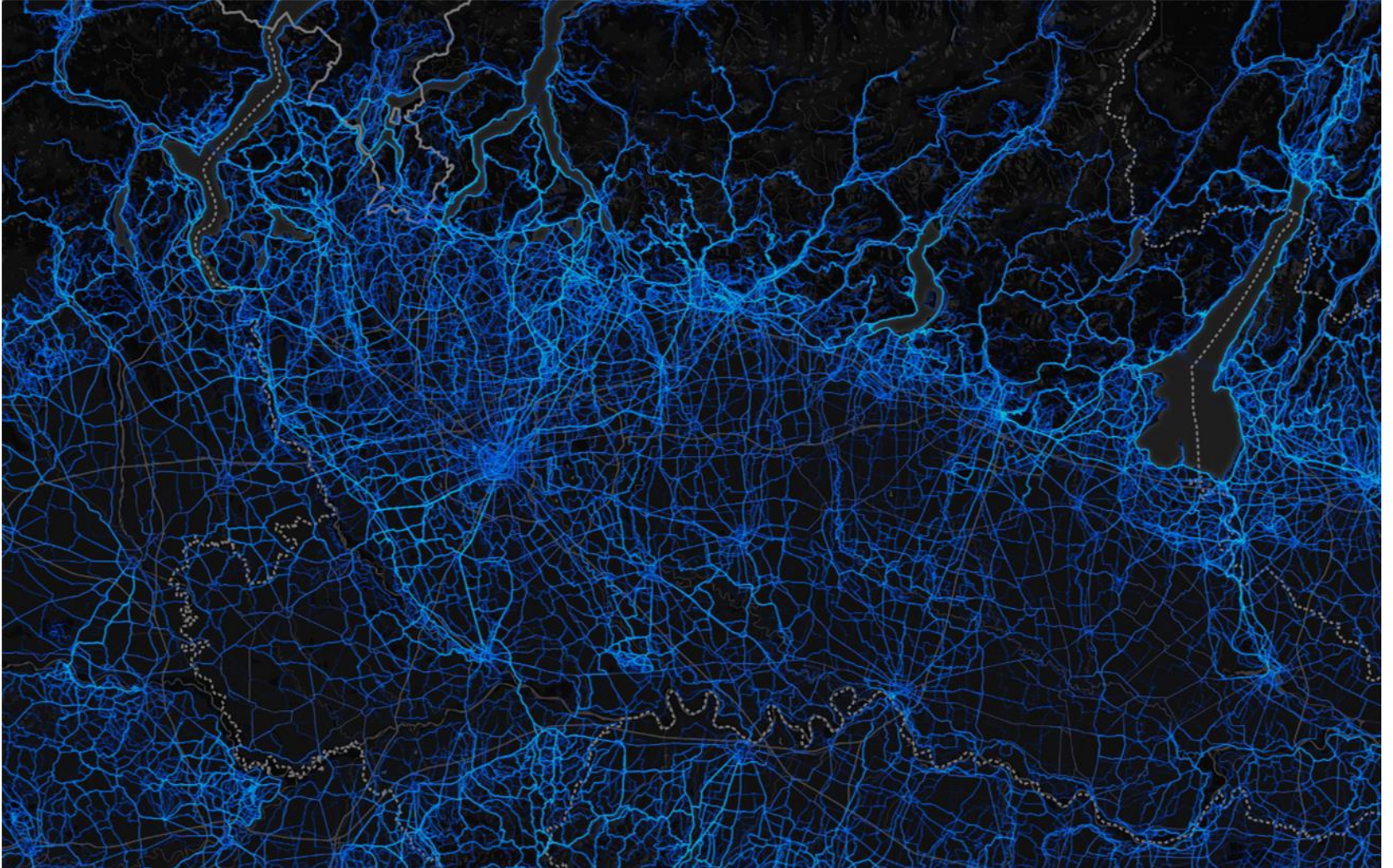


<http://senseable.mit.edu/trashtrack/>

INNOVAZIONE DI BUSINESS (PRODOTTO)



INNOVAZIONE DI BUSINESS (SERVIZIO)



**QUANTO GUARDARE
LONTANO**

IT'S NOT WHAT YOU DO
IT IS HOW YOU DO IT

84%

of global executives say
innovation is extremely
important

94%

of them are dissatisfied
with their innovation
performance

[Source McKinsey]

IL DILEMMA DELL'INNOVATORE

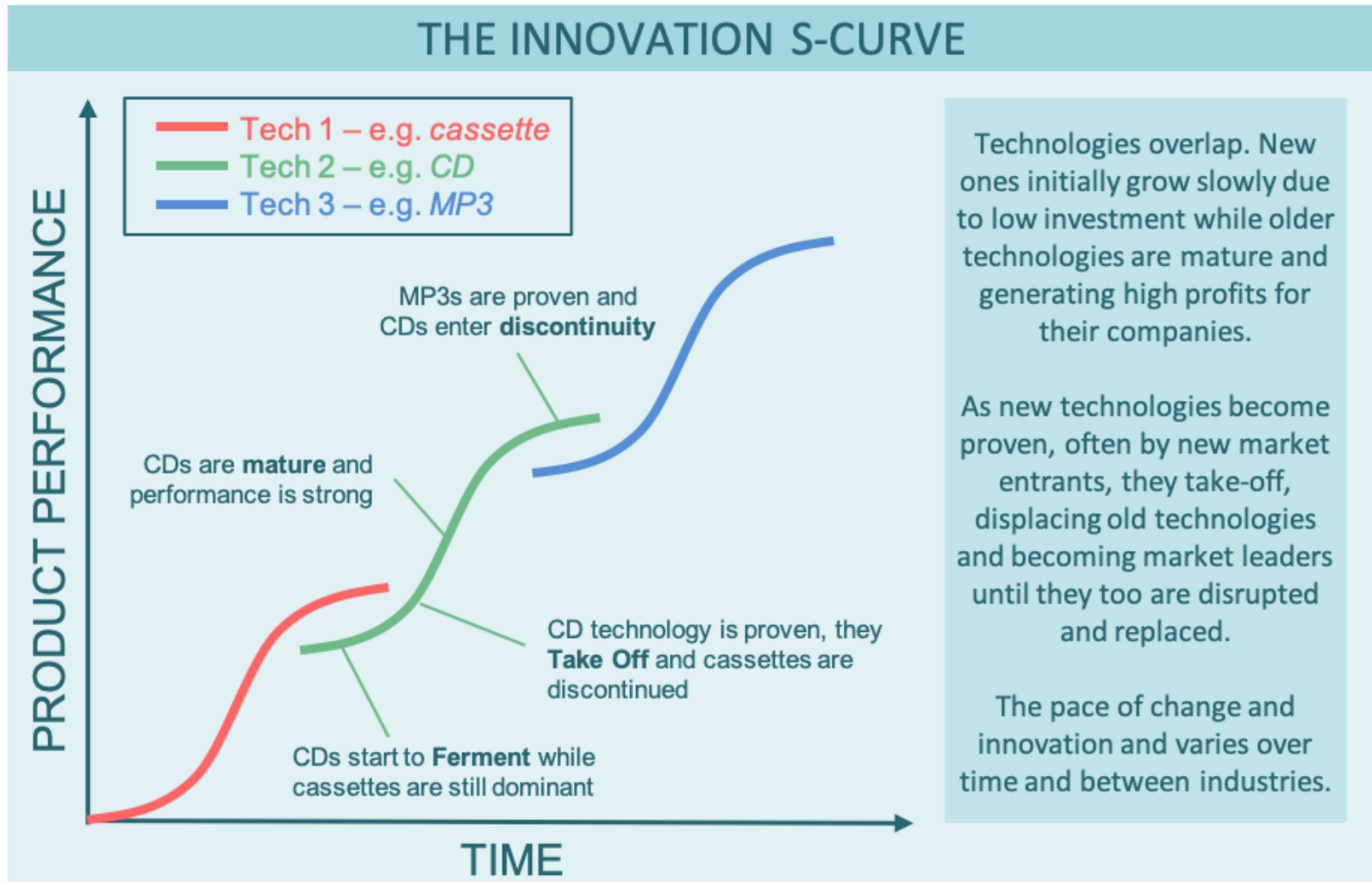
“... un prodotto veramente innovativo dovrebbe essere “disruptive”, ovvero capace di creare un nuovo mercato e rete di valore, eventualmente spiazzando aziende, prodotti e alleanze leader preesistenti. Un esempio classico di prodotto innovativo è l’iPhone di Apple, che ha ridefinito il concetto di telefono cellulare introducendo l’interfaccia touch e l’ecosistema delle app...”

Clayton Christensen



<https://www.economyup.it/innovazione/innovazione-di-prodotto-cose-come-funziona-i-casi-di-successo>

IL DILEMMA DELL'INNOVATORE

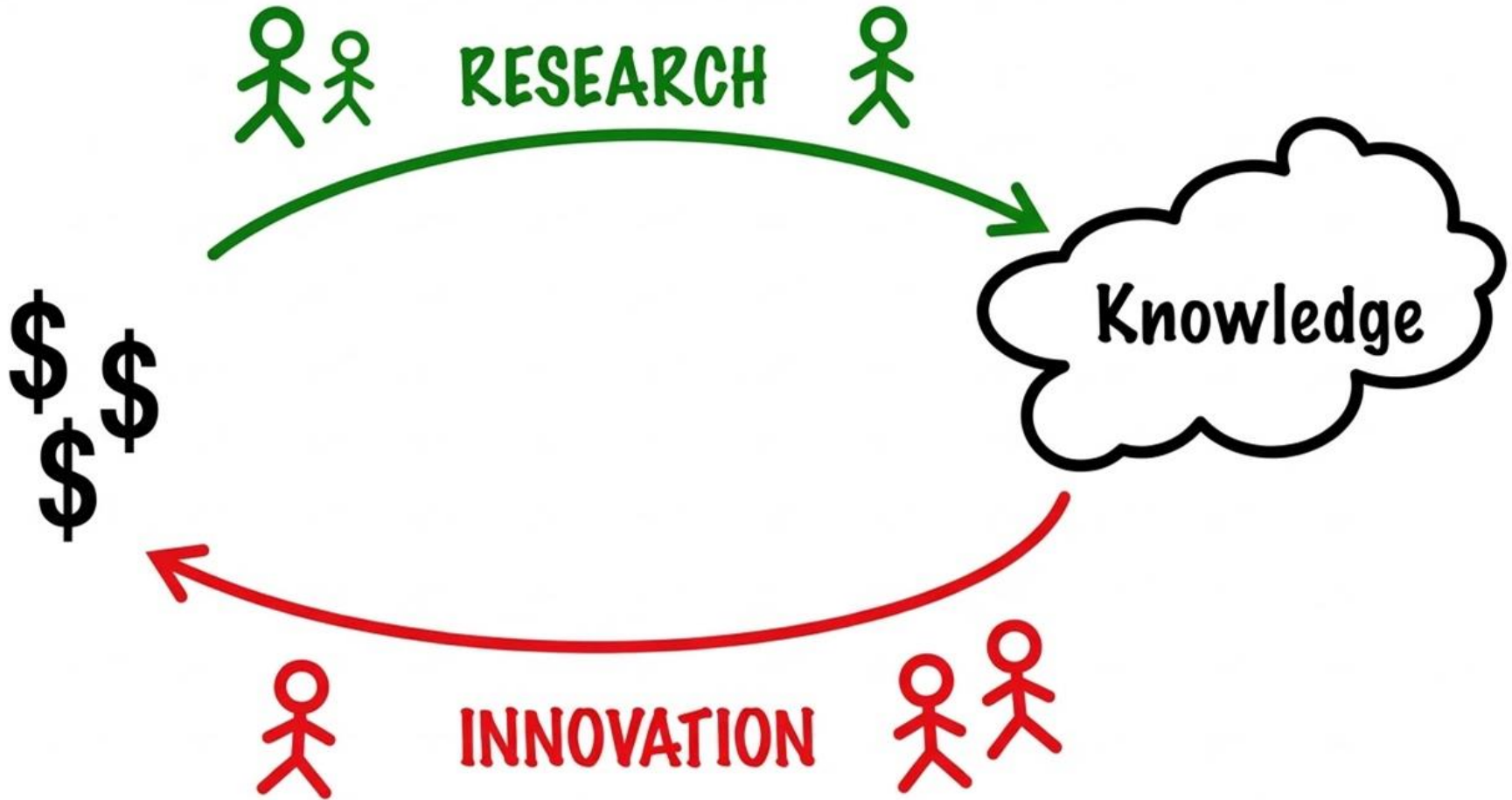


LE COMPONENTI DELL'INNOVAZIONE

- (RICERCA)
- CREATIVITA'
- CONTAMINAZIONE
- PROTOTIPAZIONE
- FORMAZIONE

RICERCA

NON PROPRIO INNOVAZIONE...

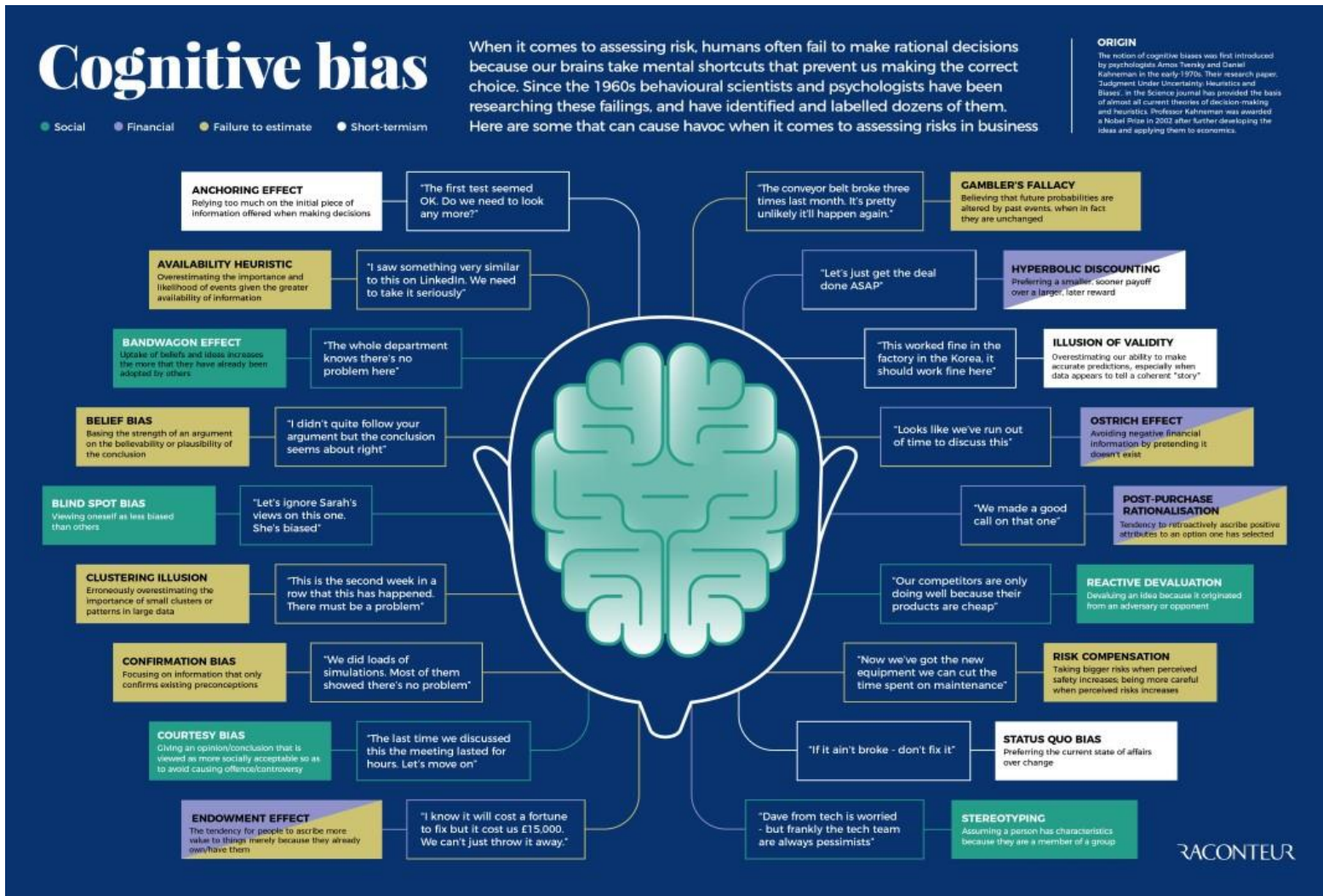


CREATIVITA'

PERCHÉ SERVONO TECNICHE CREATIVE

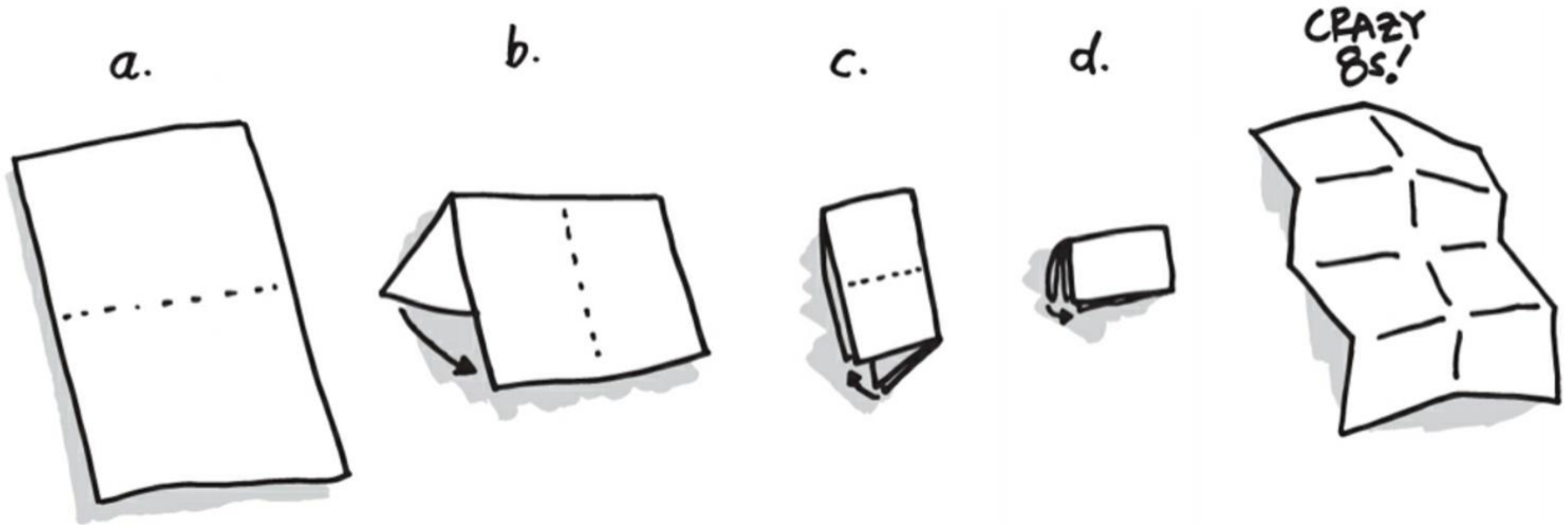


PERCHÉ SERVONO TECNICHE CREATIVE



<https://www.linkedin.com/pulse/heuristics-cognitive-biases-authority-leah-cordy/>

CRAZY EIGHT

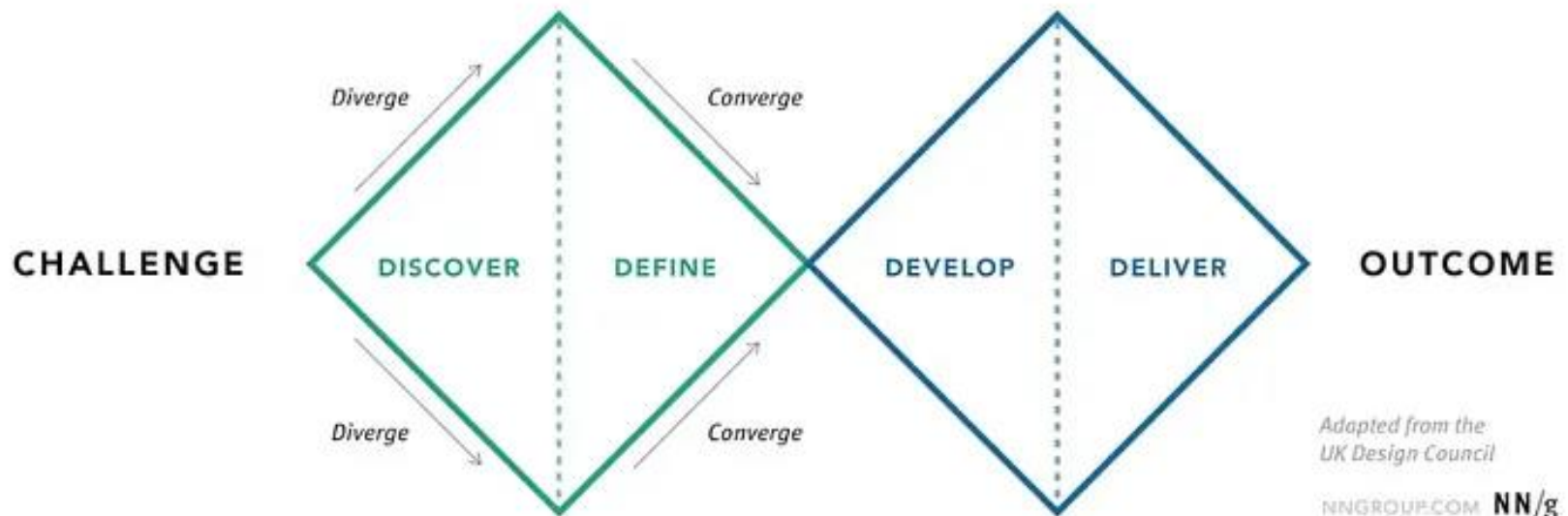


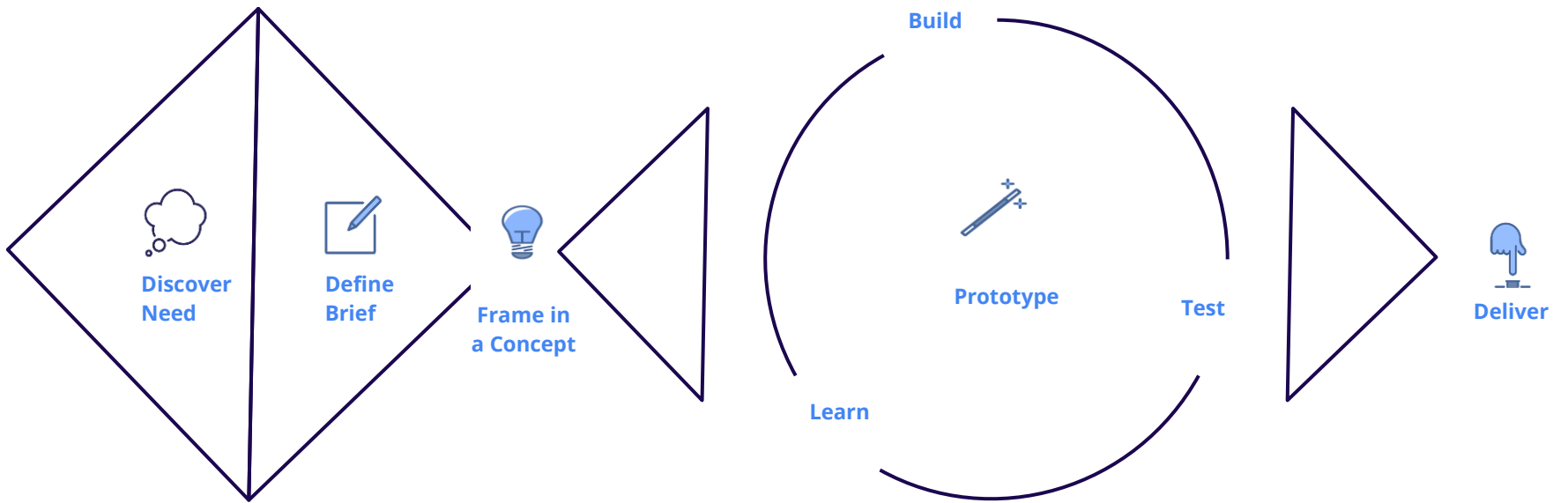
MAGIC CIRCLE



DOUBLE DIAMOND

The Double Diamond Model





CO-PROGETTAZIONE



CO-PROGETTAZIONE (NEED FINDING) —

PROBLEM:
define what
you want to
tackle

NEED:
what do you
need to live
better?

CONTAMINAZIONE

ISPIRAZIONE DA ALTRI SETTORI

GOSH doctors visited and observed the pit crew handoff in Italy. While visiting the Formula One pit crew the GOSH doctors became interested in the way they addressed possible failure. The crew sat around a big table analyzing and reanalyzing, asking, “What could go wrong?” and “What are we going to do if it does go wrong?” and “How important is it if it goes wrong?”



ISPIRAZIONE DALLA NATURA


“...James Dyson was frustrated to discover that the non-reusable bag frequently clogged with dust and dirt. Keen to understand if the same technology he had installed in the Ballbarrow factory could be applied to vacuum cleaners, James constructed a rudimentary cyclone made from cardboard and strapped it to his upright vacuum cleaner in place of the bag. It proved a seminal moment and four years and 5,127 prototypes later, the first cyclonic vacuum cleaner was ready for production...”



<https://www.dyson.com/james-dyson>







ASK NATURE

asknature 

Stanford  Technical University of Denmark 



SECTOR:
Safety

INNOVATION: ACADEMIA  INNOVATION: INDUSTRY 

Coordinated Robot Swarm Inspired by Snails
The Chinese University of Hong Kong

Bioluminescent-Powered Light Sticks Inspired by Anglerfish
Lux Bio

SECTOR:
Transportation

INNOVATION  INNOVATION: INDUSTRY 

asknature 

INNOVATION: ACADEMIA



Computational Design Process Inspired by Evolution
Technical University of Denmark










2017 

FUNCTIONS PERFORMED 

Break Down 1	+
Get, Store, or Distribute Resources 1	+
Make 1	+
Modify 7	+
Move or Stay Put 6	+
Process Information 6	+
Protect From Physical Harm 11	+
Sectors	
<input type="radio"/> Aerospace 11	
<input type="radio"/> Architecture 11	
<input type="radio"/> Automation 2	
<input type="radio"/> BlueTech 1	
<input type="radio"/> Chemistry and Materials 8	
<input type="radio"/> Climate Tech 1	
<input type="radio"/> Communication 3	
<input type="radio"/> Consumer Products 3	
<input type="radio"/> Conversation and Remediation 1	
<input type="radio"/> Cosmetics 2	
<input type="radio"/> Electronics 18	
<input type="radio"/> Filtration 12	

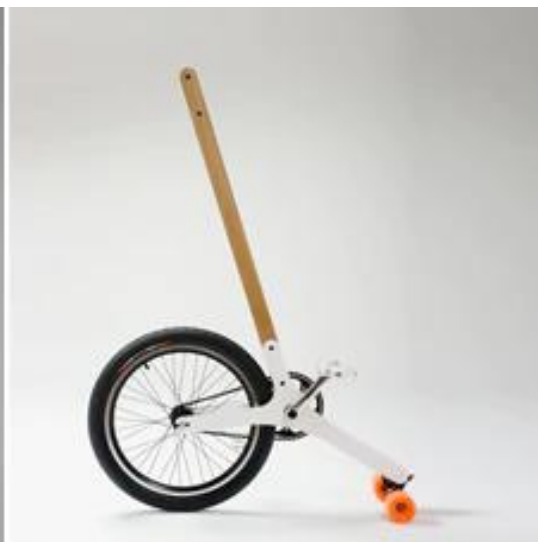
Innovations

AskNature's innovation database makes it easy to explore hundreds of products and design solutions inspired by nature's genius and the workings of living organisms.

 <p>INNOVATION : ACADEMIA</p> <p>Coordinated Robot Swarm Inspired by Snails The Chinese University of Hong Kong</p>	 <p>INNOVATION : INDUSTRY</p> <p>Bioluminescent-Powered Light Sticks Inspired by Anglerfish Lux Bio</p>	 <p>INNOVATION : INDUSTRY</p> <p>High-Powered Cleaners Inspired by Enzymes Sudoc</p>
 <p>INNOVATION : INDUSTRY</p> <p>Sunblock Inspired by Compounds in Our Eyes Sóliome</p>	 <p>INNOVATION : INDUSTRY</p> <p>Mechanical Sniffer Inspired by Canines National Institute of Standards and Technology</p>	 <p>INNOVATION : ACADEMIA</p> <p>Speedy Soft Robot Inspired by Cheetahs North Carolina State University</p>
 <p>INNOVATION : ACADEMIA</p> <p>Non-Invasive Oceanic Crust Imaging Inspired by Fin Whales</p>	 <p>INNOVATION : ACADEMIA</p> <p>Precise Hydrogen Sensor Inspired by Butterflies</p>	 <p>INNOVATION : ACADEMIA</p> <p>Safer Aerial Robot Inspired by Pufferfish University of Colorado Boulder</p>

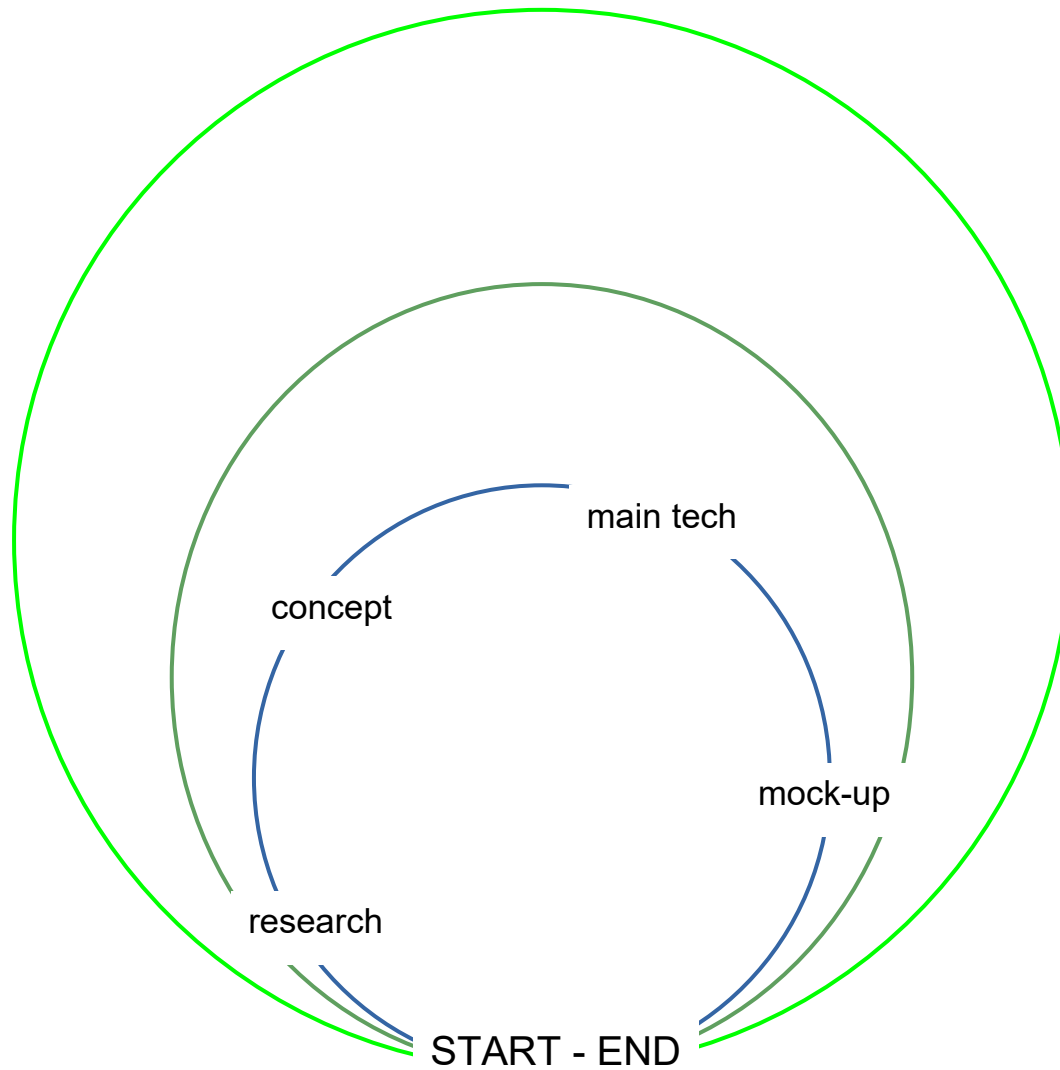
COME PROTOTIPARE PROGETTI INNOVATIVI

COME GESTIRE LA COMPLESSITA'

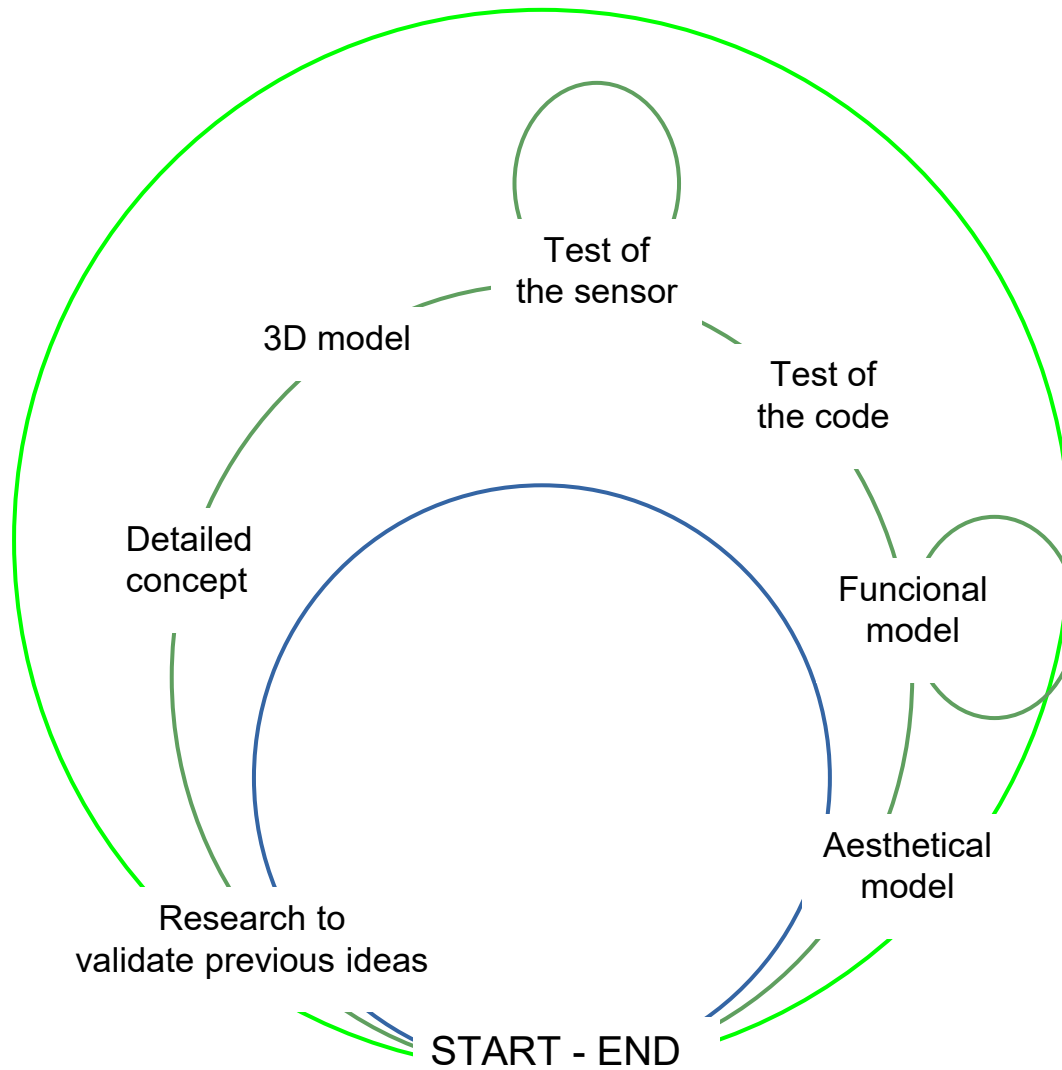


<https://halfbikes.com/>

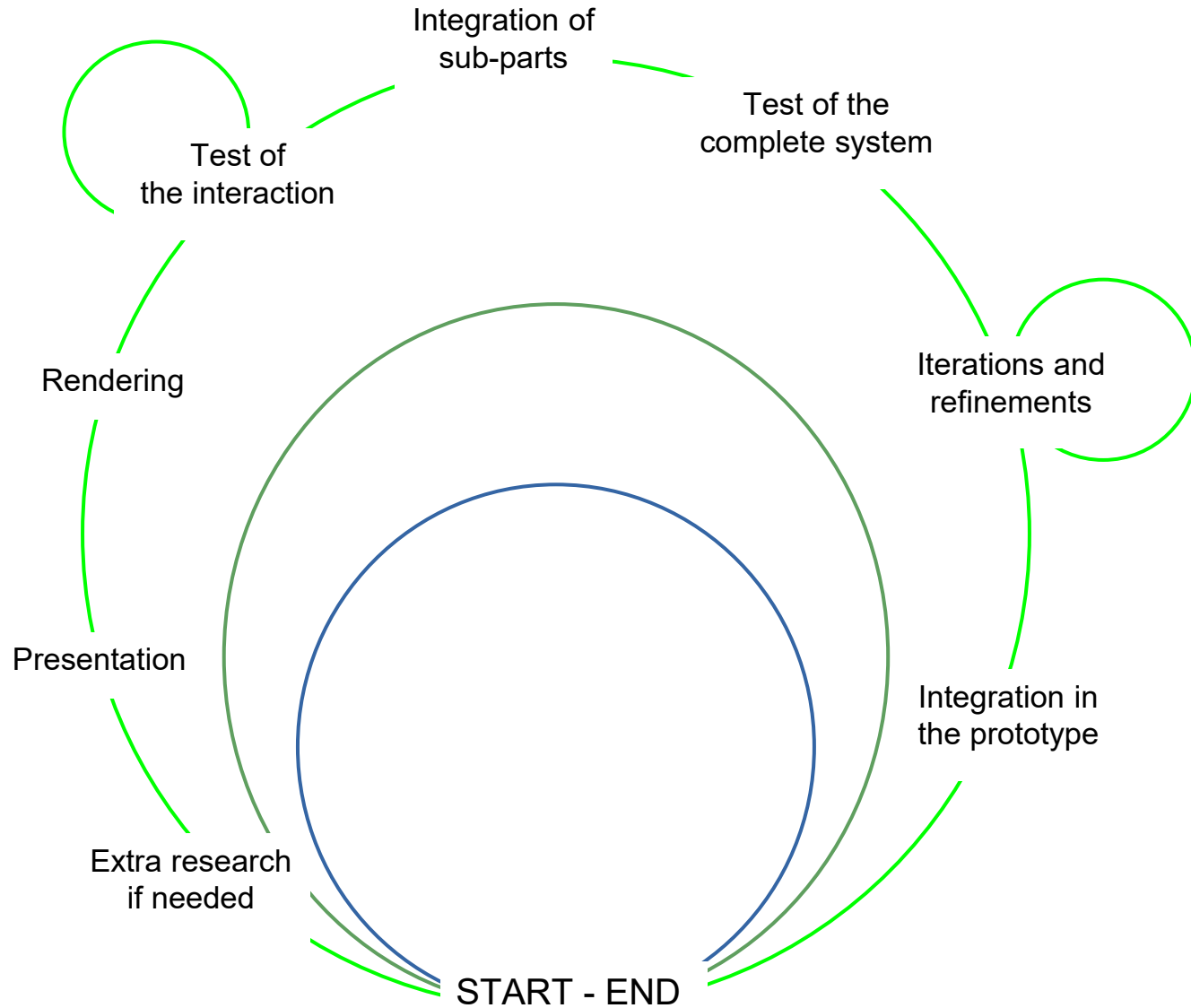
SPIRAL DEVELOPMENT



SPIRAL DEVELOPMENT



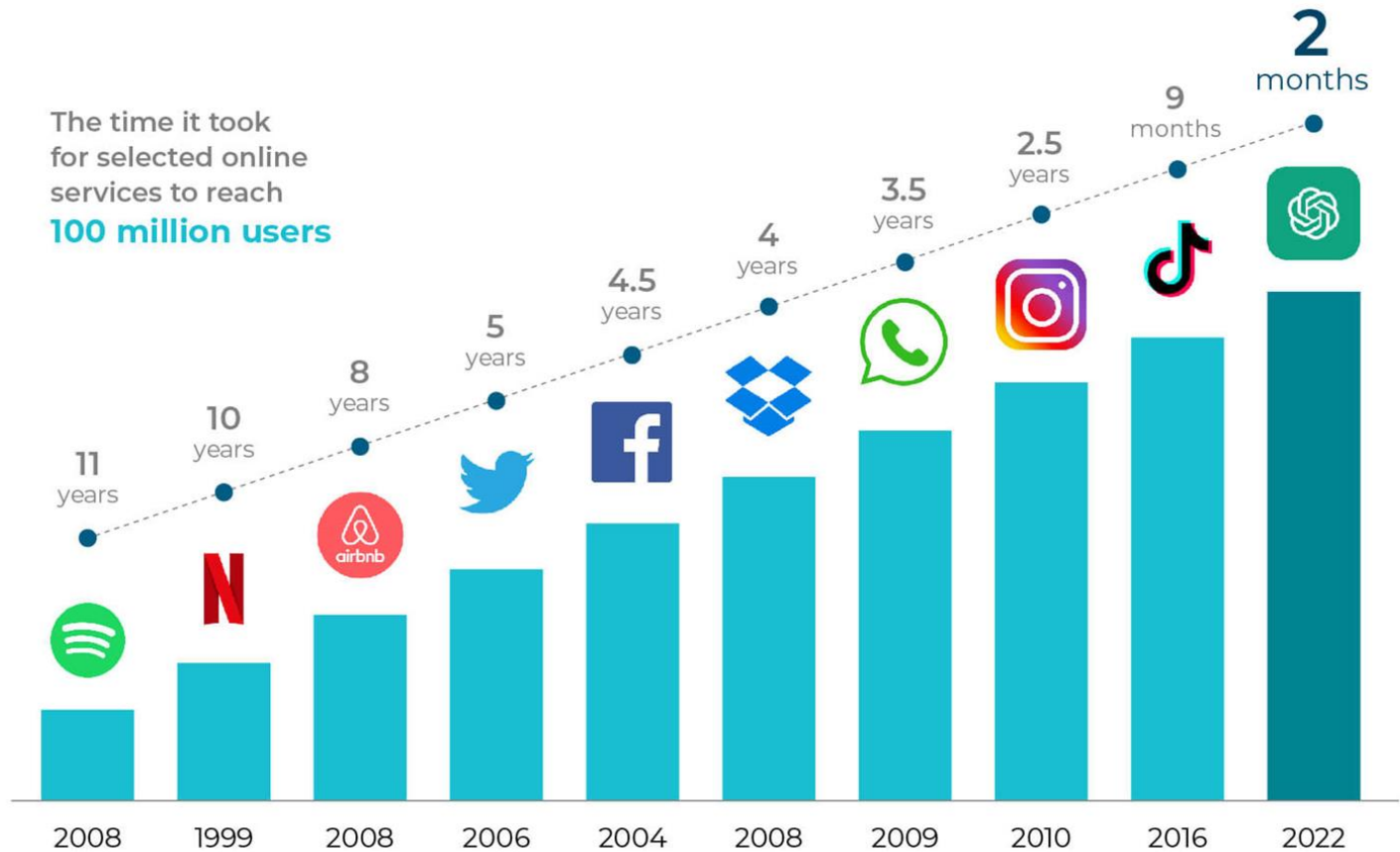
SPIRAL DEVELOPMENT



FORMAZIONE

Chat-GPT sprints to 100 million users

The time it took for selected online services to reach **100 million users**



*Give a Man a Fish, and You
Feed Him for a Day.*

*Teach a Man To Fish, and
You Feed Him for a Lifetime*



Office.

COME COMUNICARE L'INNOVAZIONE

LA STRUTTURA BASE



LA STRUTTURA BASE

The Golden Circle

WHAT

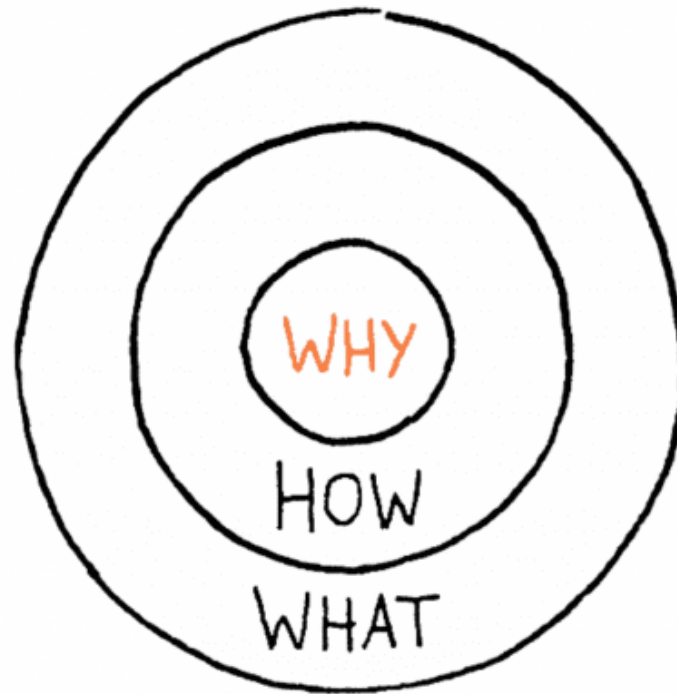
Every organization on the planet knows WHAT they do. These are products they sell or the services

HOW

Some organizations know HOW they do it. These are the things that make them special or set them apart from their competition.

WHY

Very few organizations know WHY they do what they do. WHY is not about making money. That's a result. WHY is a purpose, cause or belief. It's the very reason your organization exists.



**+ WHAT IF
(how might we...?)**

BEYOND THE BAG CHALLENGE

How might we transport goods from retailer to destination in a way that is compatible with diverse retail systems, delivers ease and convenience for customers, and reduces environmental impact?

**COME FAVORIRE
L'INNOVAZIONE**

—

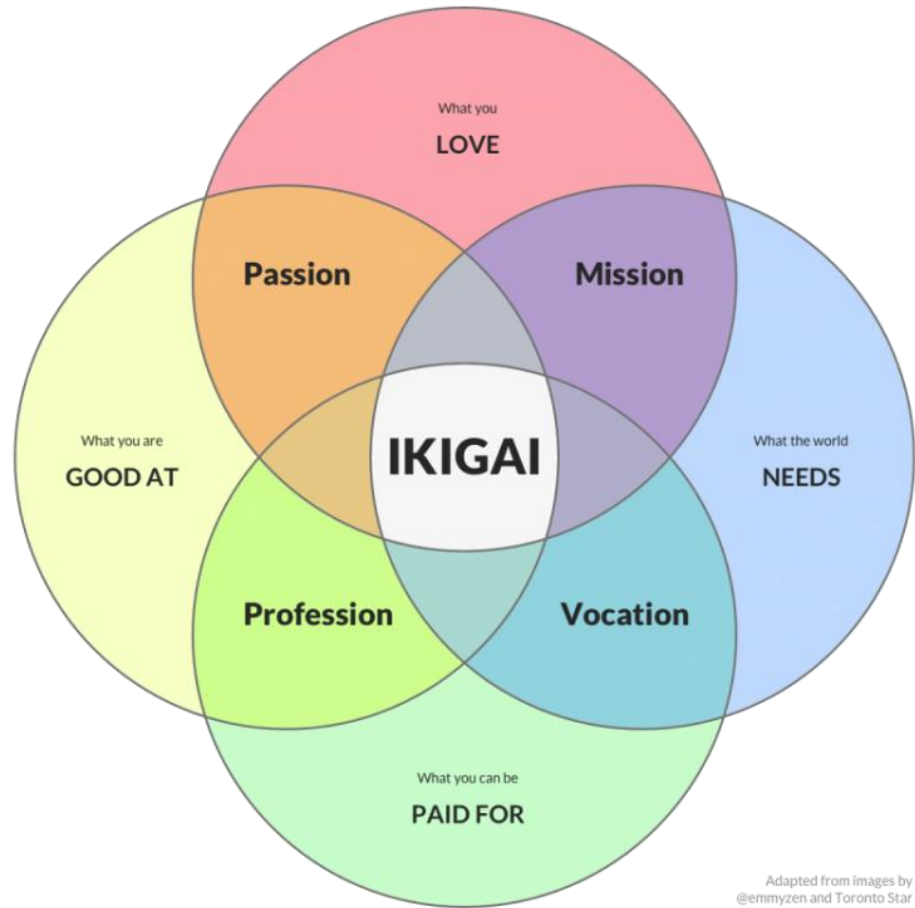
- 1. PERSONAL MEANINGFULNESS**

- 2. DIVERSE TEAM**

- 3. SAFE SPACE**

- 4. SUPPORTIVE LEADERS**

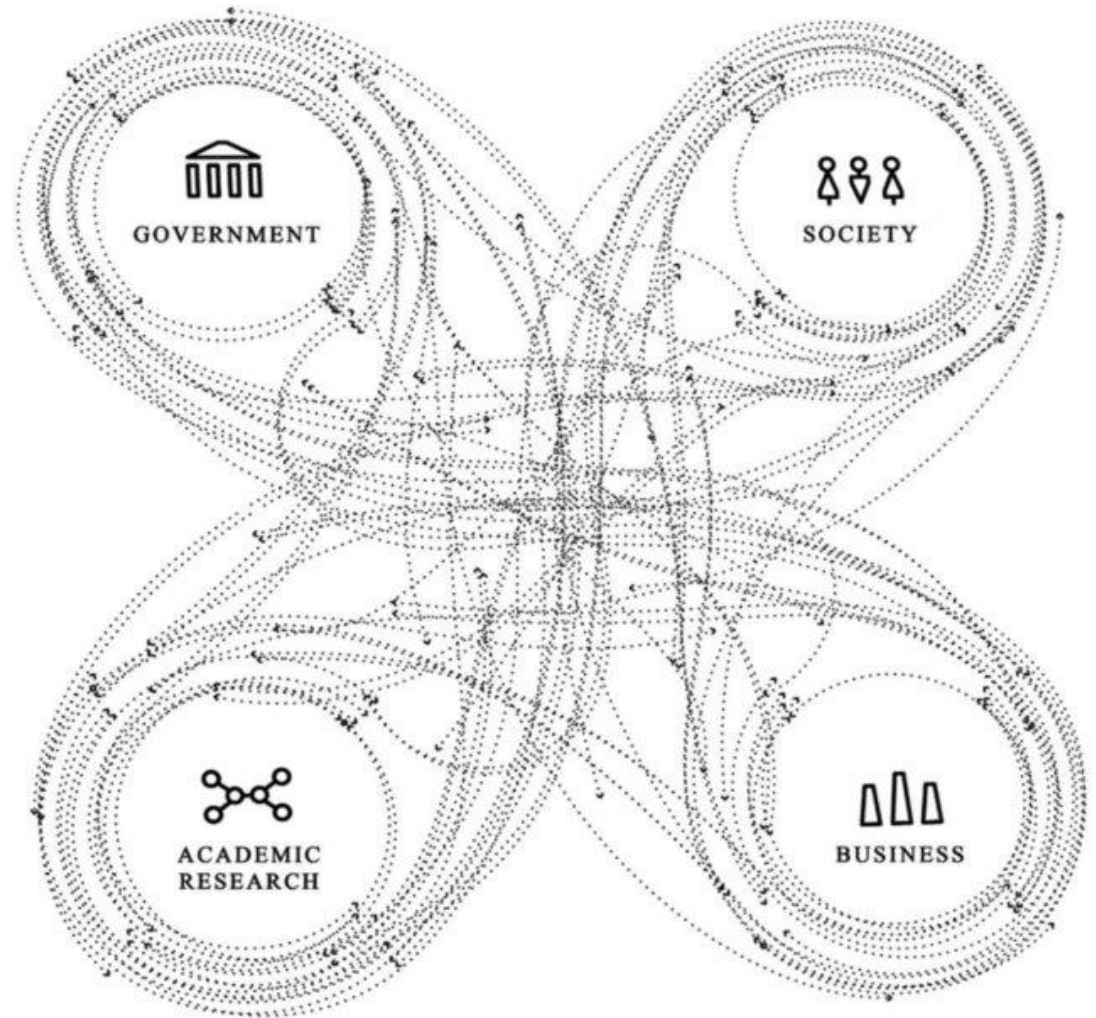
1. PERSONAL MEANINGFULNESS



- . impactful
- . useful
- . properly evaluated

2. DIVERSE TEAM

- . helps divergent thinking
- . complementary skills
- . facilitation skills



3. SAFE SPACE

- . no judgement
- . compromise creativity
- . oppose to “take risks and responsibility”

the fearless organization

Creating **Psychological Safety** in the
Workplace for Learning,
Innovation, and Growth

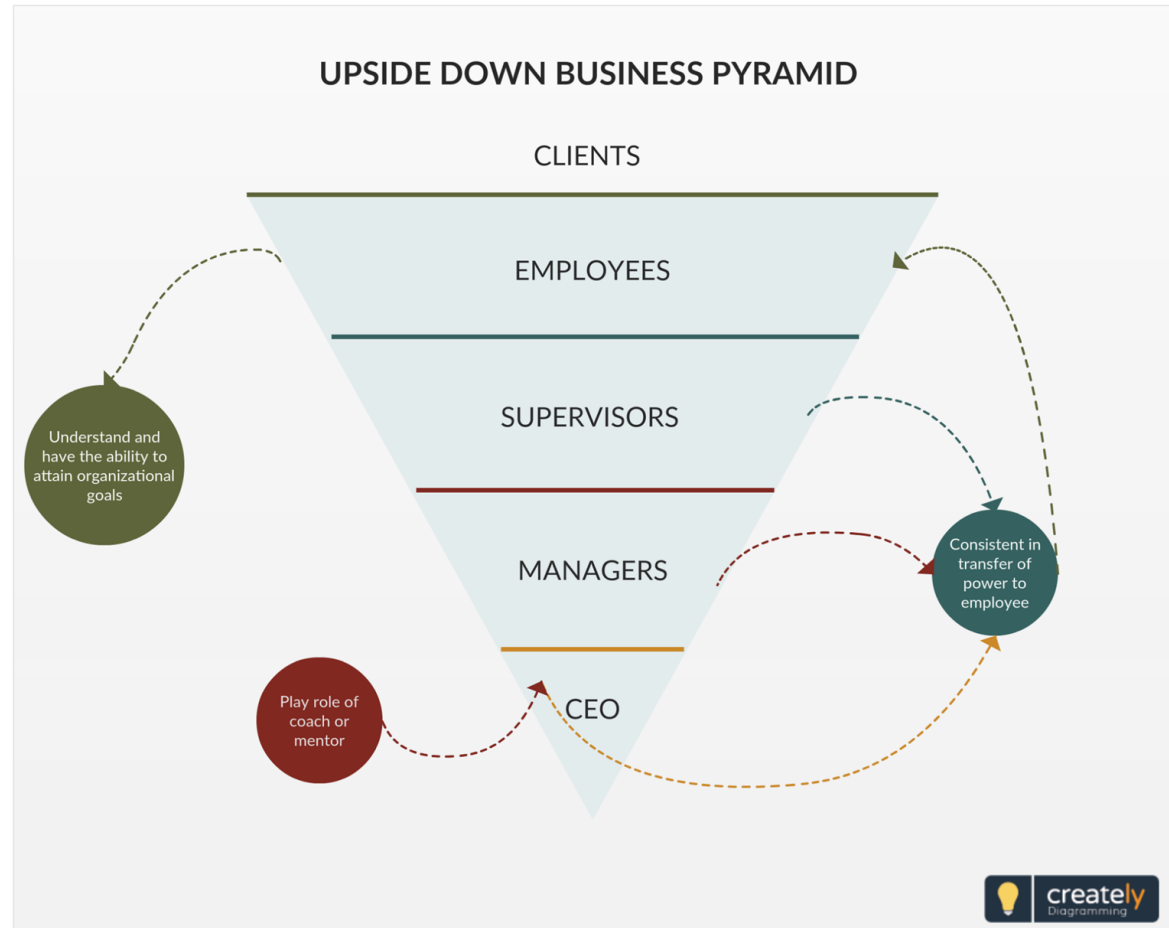
Amy C. Edmondson

HARVARD BUSINESS SCHOOL

WILEY

4. SUPPORTIVE LEADERS

- . mentor and coach
- . listen and guide
- . enable and support processes



CELEBRARE IL FALLIMENTO



https://youtu.be/2t13Rq4oc7A?si=3TIDs_Ldk9vnkvng&t=822

CELEBRARE IL FALLIMENTO

WIRED

SECURITY

POLITICS

THE BIG STORY

BUSINESS

SCIENCE

CULTURE

REVIEWS

ASTRO TELLER

THE BIG STORY FEB 16, 2016 12:00 AM

The Secret to Moonshots? Killing Our Projects

At X, I see up close every day how messy innovation is



<https://www.wired.com/2016/02/the-secret-to-moonshots-killing-our-projects/>

—

INNOVATION IS DONE BY PEOPLE

(WITH THE RIGHT MINDSET,
USING TECHNOLOGIES)

RICAPITOLANDO...

- L'innovazione crea valore introducendo qualcosa di nuovo o migliorato.
- Esistono innovazioni di prodotto, processo, modello di business e paradigma.
- Innovare richiede equilibrio tra tecnologia, business e impatto sociale.
- L'innovazione nasce spesso da bisogni reali e contesti locali.
- Ricerca e osservazione sono la base per individuare le opportunità.
- La creatività va coltivata con tecniche che superano bias e abitudini.
- Il processo innovativo alterna fasi divergenti e convergenti (Double Diamond).
- Il prototipo permette di testare, apprendere e ridurre la complessità.
- La contaminazione da altri settori apre soluzioni inaspettate.
- L'ispirazione dalla natura e dall'ingegneria accelera nuove idee.
- La co-progettazione coinvolge utenti e comunità per definire i need reali.
- La sostenibilità è una direzione obbligata per l'innovazione del futuro.
- Le aziende innovano meglio quando creano team diversi e spazi sicuri.
- Celebrare il fallimento aiuta a imparare più velocemente.
- Il ruolo dei leader è abilitare, supportare e rendere possibili i processi.

GRAZIE!

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<https://www.linkedin.com/in/enricobassi/>