




La ricerca al servizio delle imprese

Nicola Gatti

A photograph showing three men in suits seated in a room. On the left, Shinzo Abe is gesturing with his hands while speaking. In the center, Ben Affleck sits with a serious expression, holding a folder and a pen. On the right, Barack Obama is listening attentively with his hands clasped. The room features a large wooden desk with a brass paper tray and a lamp in the background.

*It's hard to think of a single
chnology that will shape our world
ore in the next 50 years than
tificial Intelligence” Barack Obama*



*“Artificial Intelligence will be either
the best or worst thing for humanity”*

Stephen Hawking



“Artificial Intelligence will make our lives more productive and creative” **Bill Gates**



Mark Zuckerberg



Elon Musk



Sundar Pichai



Satya Nadella



Available at
amazon





AI & Deep Learning At Amazon

Guy Ernest
Principal Business Development Manager
gernest@amazon.com

The CLOUD above clouds
Microsoft Azure
Korea Live

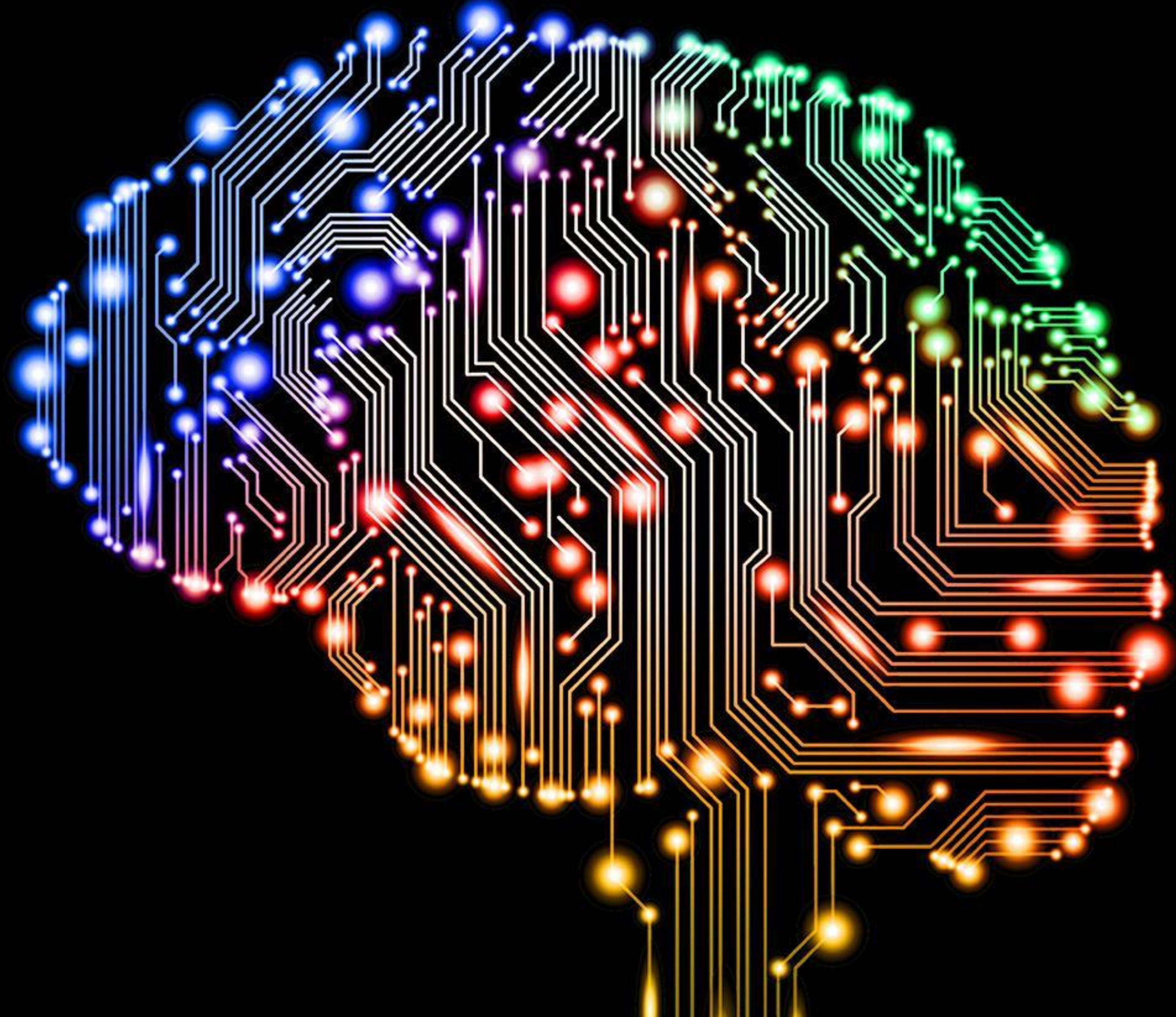
A Dive into Microsoft
Strategy on Machine
Learning, Chat Bot, and
Artificial Intelligence

SeokJin Han
Microsoft



facebook

What is Artificial Intelligence?





*Are there imaginable digital computers
which would do well in the imitation
game?" Alan Turing*

The beginning (1955)



Challenge: Turing's imitation game

Winters and springs

1° winter: 1960 (minor)

2° winter: 1970-1980

3° winter: 1990-2000



Strong vs. Weak AI

General AI

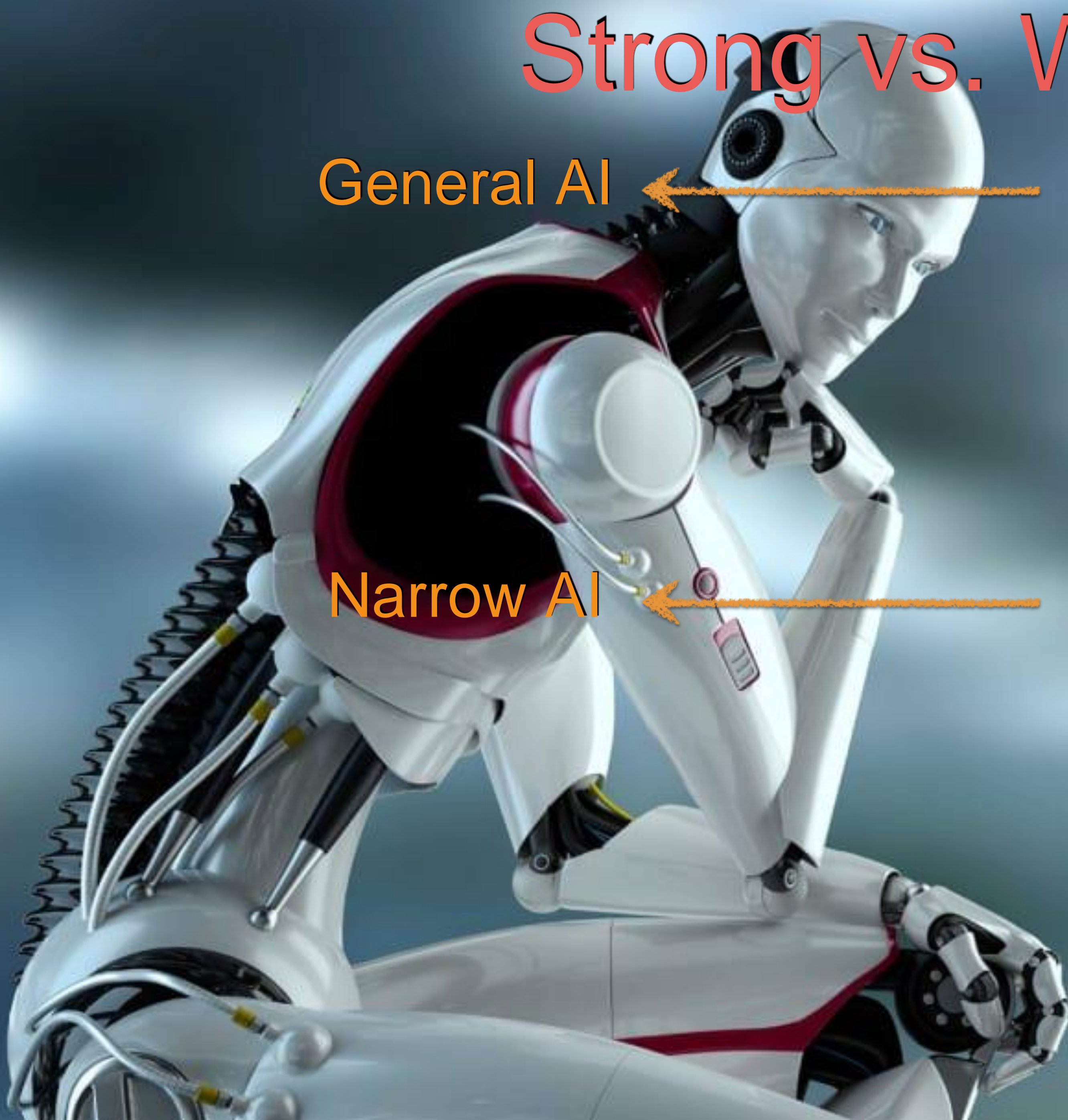


Strong: it is an artificial intelligence construct that has mental capabilities and functions that mimic the human brain

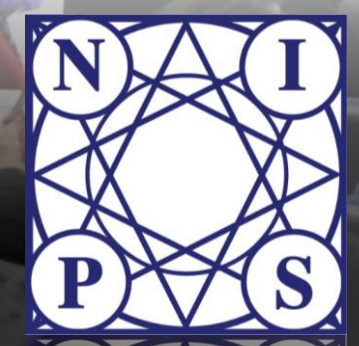
Narrow AI



Weak: is an approach with the consideration that AI is only a simulation of human cognitive function and that computers are not actually conscious in any sense of the word



Challenge: super rationality



Every year

- more than 4000 papers
- more than 10000 attendees

Today (2019)

Optimal

- Tic-Tac-Toe
- Connect Four (1998)
- Checkers (2007)
- Rubik's Cube (2010)
- Heads-up limit hold'em poker (2015)

Super-human

- Chess (1997)
- Shogi (2014)
- Go (2016)
- Backgammon (2002)
- Reversi (1980)
- Arimaa (2015)
- Scrabble (1995)
- Heads-up nolimit hold'em poker (2017)
- Jeopardy (2011)

High-human

- Bridge: world class (2006)
- Texas hold'em no limit poker (2017)
- Crosswords (2012)

Sub-human

- Optical character recognition for printed text
- Object recognition
- Safely driving a car
- Visual question answering
- Stable bipedal locomotion
- Speech recognition
- Translation
- Word-sense disambiguation

Par-human

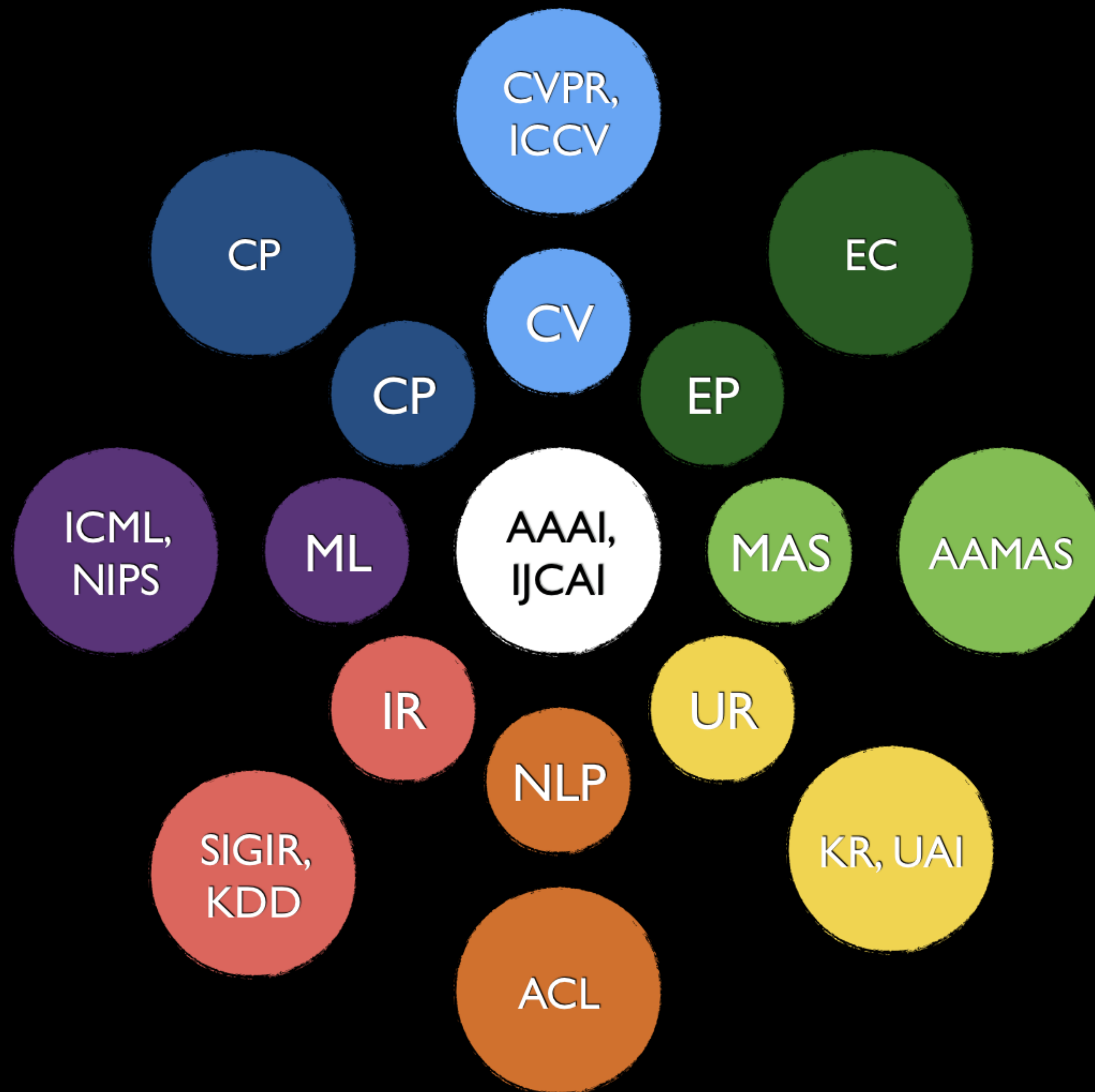
- Optical character recognition for special characters
- Classification of images

What is Artificial Intelligence?

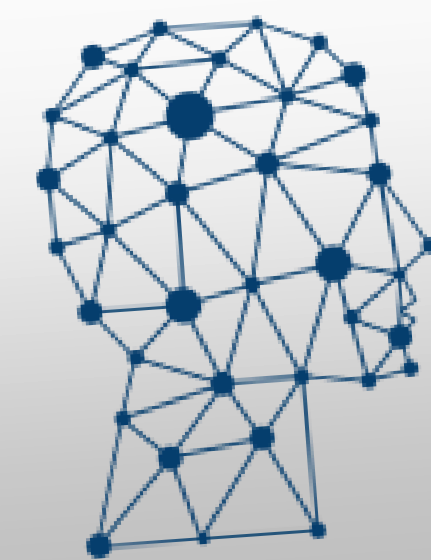
A research field that studies how
machines can make optimal decisions
autonomously

What does Artificial Intelligence
produce?
Algorithms capable of making optimal
decisions





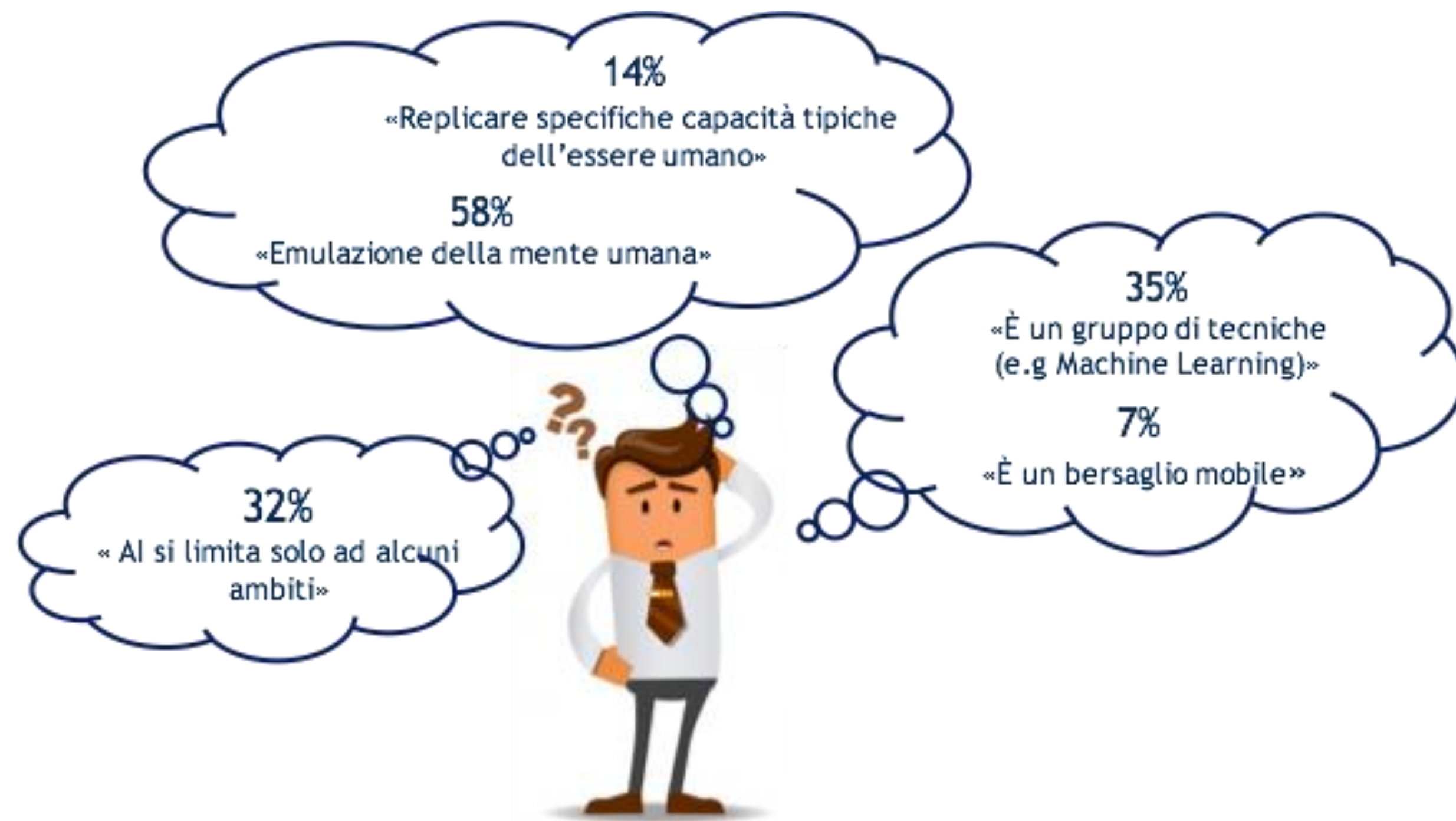
OSSERVATORI.NET
digital innovation



Artificial
Intelligence
and
Intelligent
Systems

ini National Lab

From the Observatory AI (1)



What is AI?



Which AI topics are of interest?

From the Observatory AI (2)



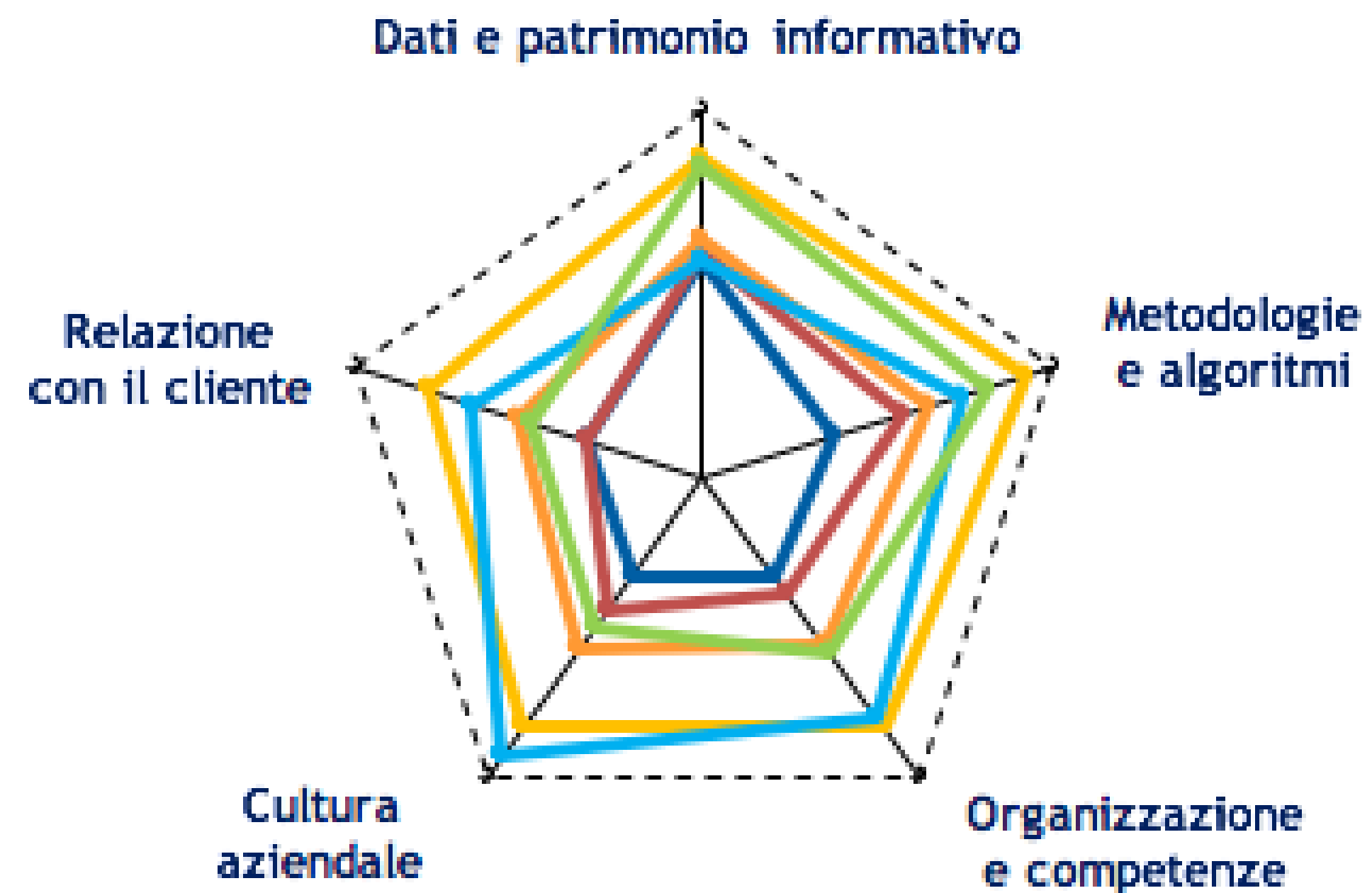
Le aziende italiane **non sono ancora mature**



Prevale un approccio empirico: il **percorso inizia dai dati e prosegue con l'approfondimento di metodologie e algoritmi**



Campione: 151 Aziende italiane medio-grandi



CINI AI&IS Lab

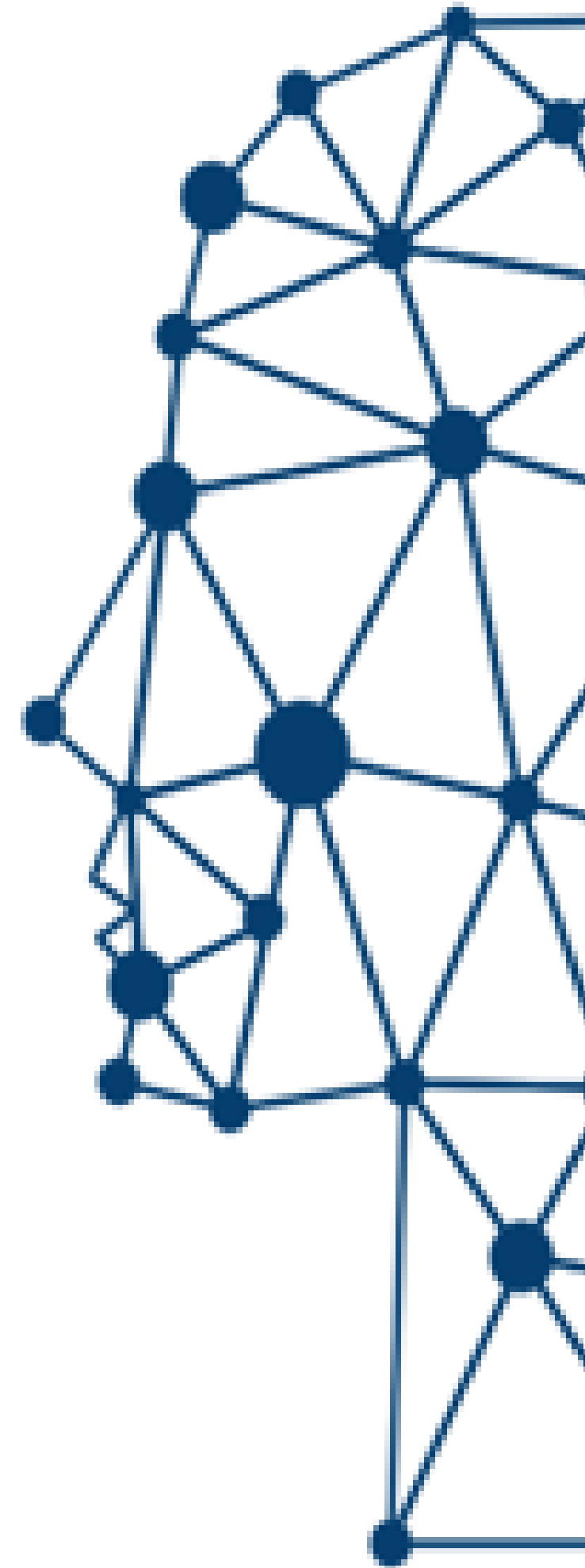
2017: AGID: Task Force su IA

2018: AGID : Libro Bianco IA a servizio del Cittadino

2018: Dichiarazione "Ai for Europe " EU

2018 (4 Giugno): nasce il **National Lab CINI di Artificial Intelligence and Intelligent Systems**

con il supporto della Presidenza del Consiglio dei Ministri
(Dipartimento di Informazione e Sicurezza)



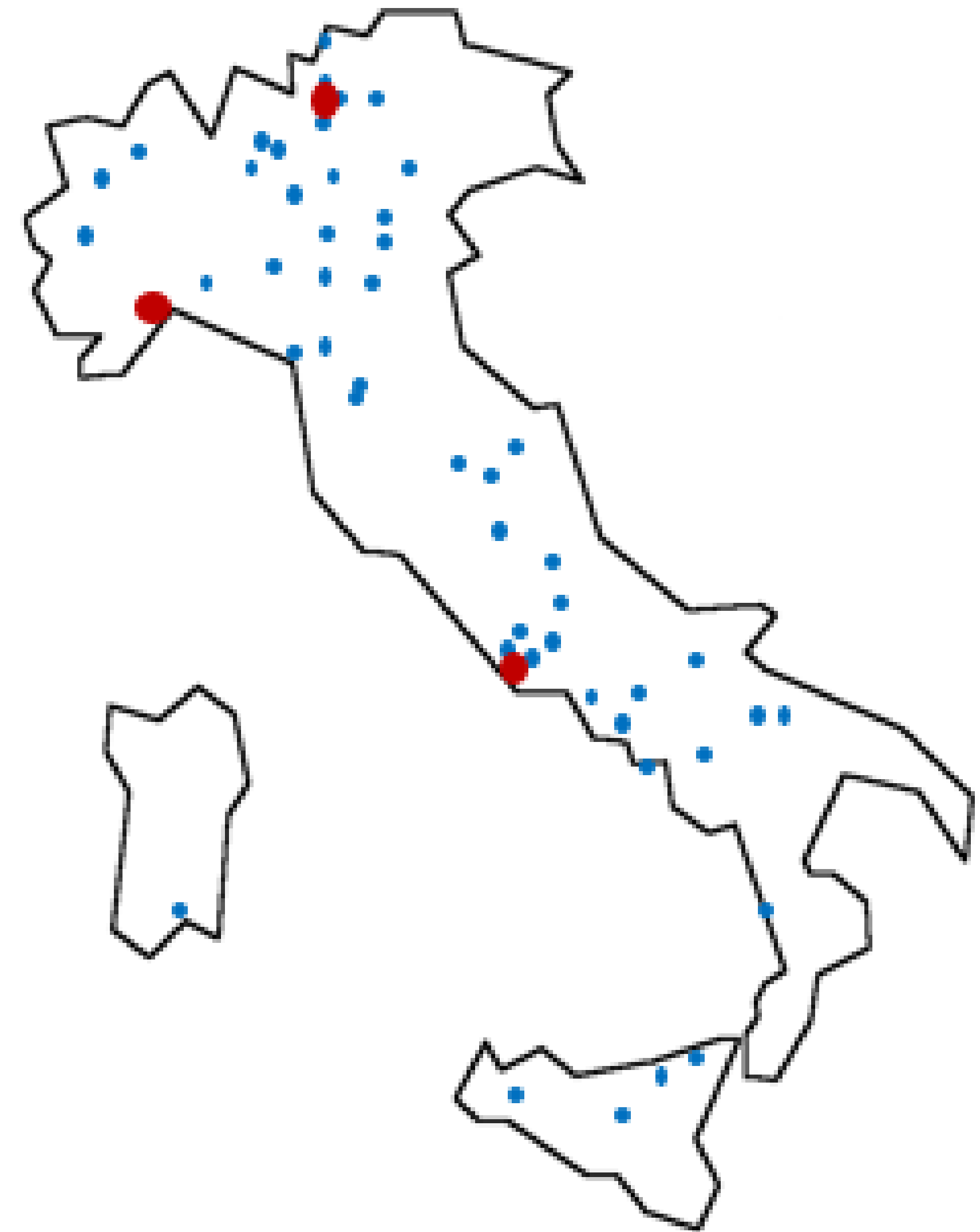
CINI AI&IS Lab

53 Nodi su tutto il territorio Nazionale

- 49 nodi in 46 Università
- 4 nodi in 3 Centri (CNR, IIT, FBK,)

905 membri (università e centri ricerca)

Italia	Nodi	Membri
Nord	19	349
Centro	11	112
Sud	19	237
Centri Ricerca Nazionali	4	207



CINI AI&IS Lab

Attività Nazionali:

- Supporto alle Istituzioni (Presidenza Consiglio dei Ministri, MISE, MIUR, ...)
- Attività di diffusione scientifica
- Attività di interazione con industria (Digital Week, Kilometro Rosso, Osservatorio AI, ...)

Attività Internazionali:

- ITALIA-UK (London, Roma, Milano) con Alan Turing Institute
- ITALIA- ISRAEL (Tel Aviv mar- nov 2019)
- ITALIA_CANADA (Montreal nov 2019)

Reti Europee:

- LAB CINI AIIS- CLAIRE (Roma)
- LAB CINI AIIS – ELLIS (Monaco, Madrid, Montreal)

Progetti:

- Rete Ferroviaria Italiana
 - Lab Congiunto Italy-ISRAEL for Cultural Heritage
- in fieri:
- Associazione Notarile Italiana
 - Presidenza Consiglio dei Ministri
 - Progettazione Europea –ECSEL