

S3: Future Trends in Artificial Intelligence & Data

A few observations, a few suggestions from...
Canada's academic research infrastructure agency

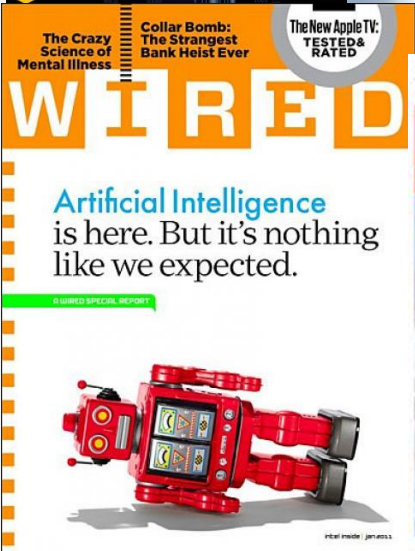
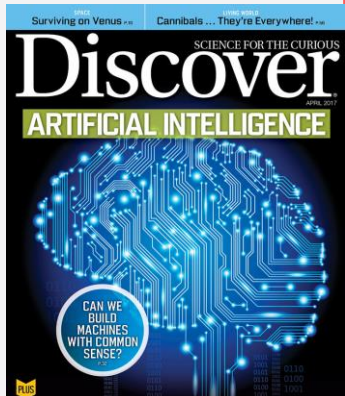


**Global
Forum**
Shaping the future 2017

DIGITALIZATION:
INTELLIGENT PATHWAYS
October 2nd, Winnipeg (Canada)

⋮ **Research builds communities**
⋮ **La recherche au service des collectivités**

...25+ years in the making



INNOVATION.CA

A.I. the promise & the perils

WHERE:

...data, computing, science... and science fiction collide

...an “end in itself” confused with “a means to an end”

...it's the university's- no, government's- no, industry's responsibility

...research strategy is confused with industrial strategy

...an ecosystem approach begs for competitive collaboration

Building an A.I. ecosystem

The CFI focuses on 1st and 2nd of the 4 infrastructure pillars that create “density”

- **Physical infrastructure** : equipment, facilities and space
- **Human infrastructure** : the people and services (talent and expertise) that makes optimal use of #1
- **“Action” infrastructure**: the sum of policies, systems, strategies and incentives in place to optimize #1 & #2
- **“Intangible” infrastructure**: the culture, attitude, values that develop from the cohesion of #1, 2 and 3.

From CFI's vantage point:

Since 1998:

>210 projects, \$80M dollars (40/60 leverage) = \$200M total

Advanced research computing infrastructure: >\$300M = \$750M

>\$200M in O&M support for advanced research computing

A.I. applications across the disciplines:

Aerospace, agriculture, biomedical engineering, space exploration, industrial production, hydrology, manufacturing, social processes, culture and arts, software, telecommunications, transportation, earth exploration, oceanography, energy distribution, civil infrastructure, historical text analysis...