

L'industrie du code

Sociologie de la Silicon Valley

Olivier Alexandre (CNRS/Centre Internet & Sociétés)

- Parcours

- Silicon Valley

- ?



Enquête (2008-2012)

- > 200 entretiens
- Archives
- Compilation et analyse de données
- Observations (tournages, montages, projection-presse, festival de Cannes, salles, soirées, etc.)

- Théories?

Le cinéma français: une exception

Allemagne/Italie/Russie/US

Industries culturelles (Jeux vidéo, littérature, télévision)

Auteur (consécration/précarisation)

Olivier Alexandre

La règle de l'exception

Écologie du cinéma français



CINEMA

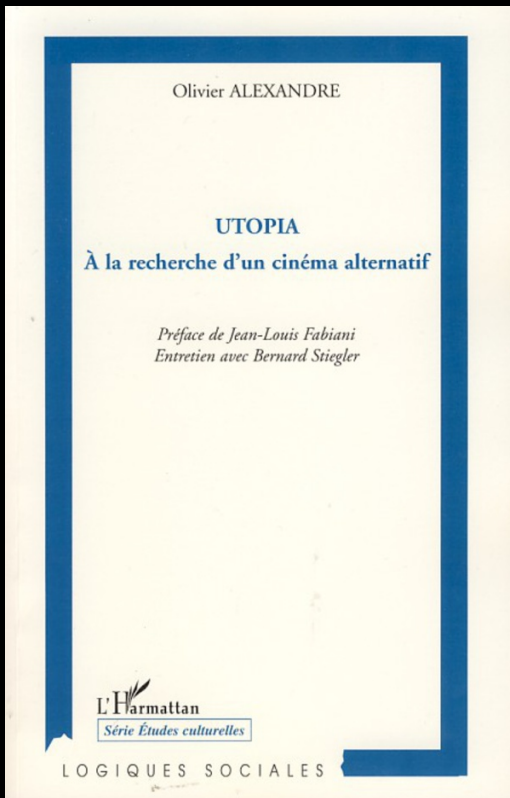
Cas de figure

éditions
EHESS

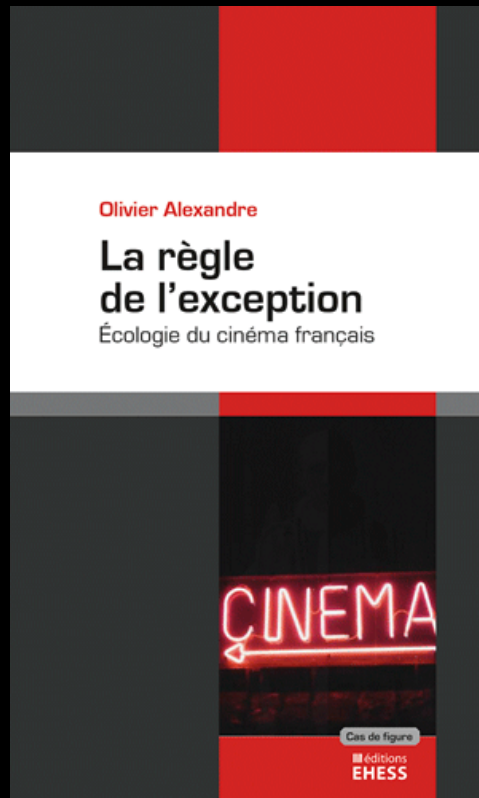








2007



2015



2017



2018



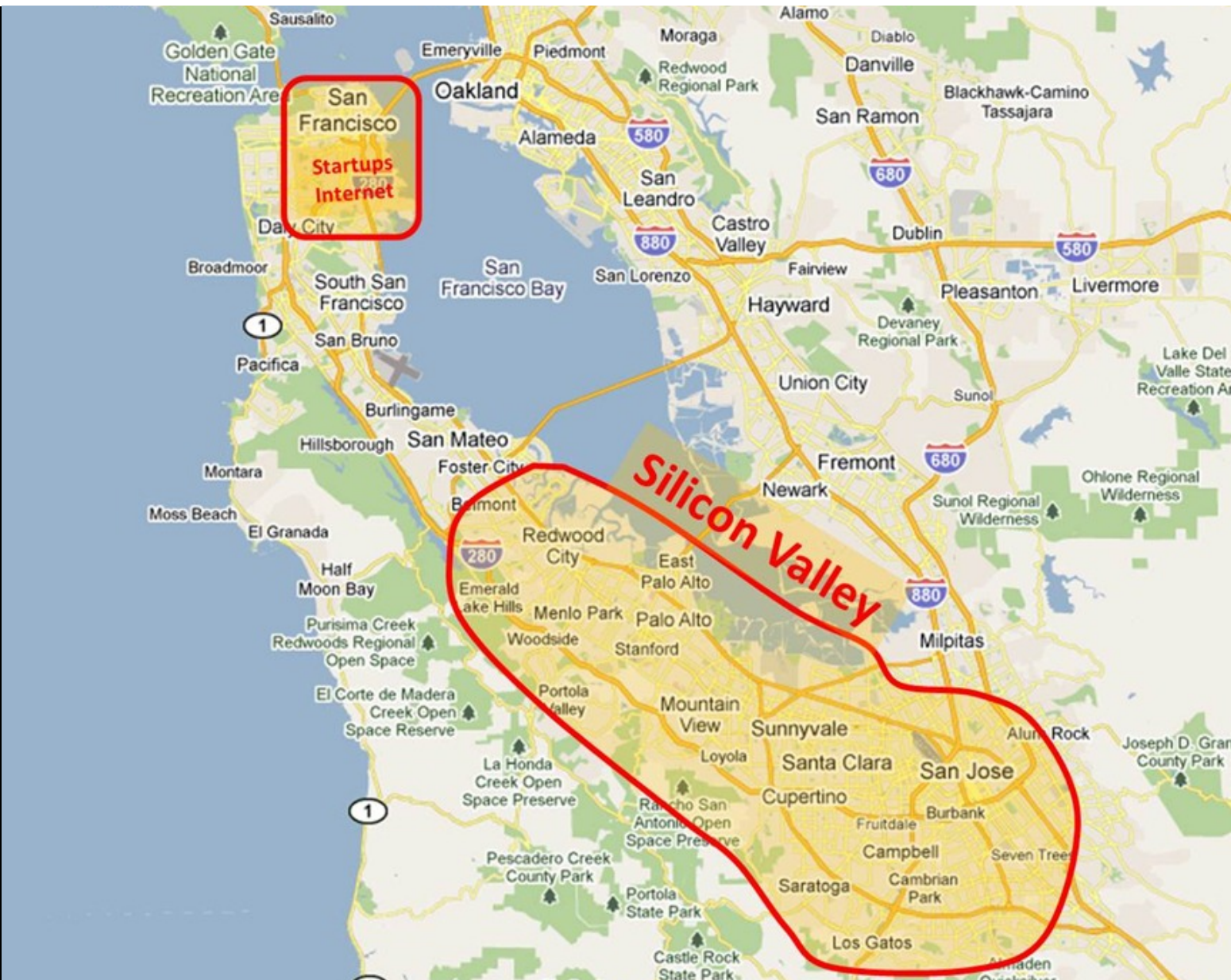
Apple tv+



amazon







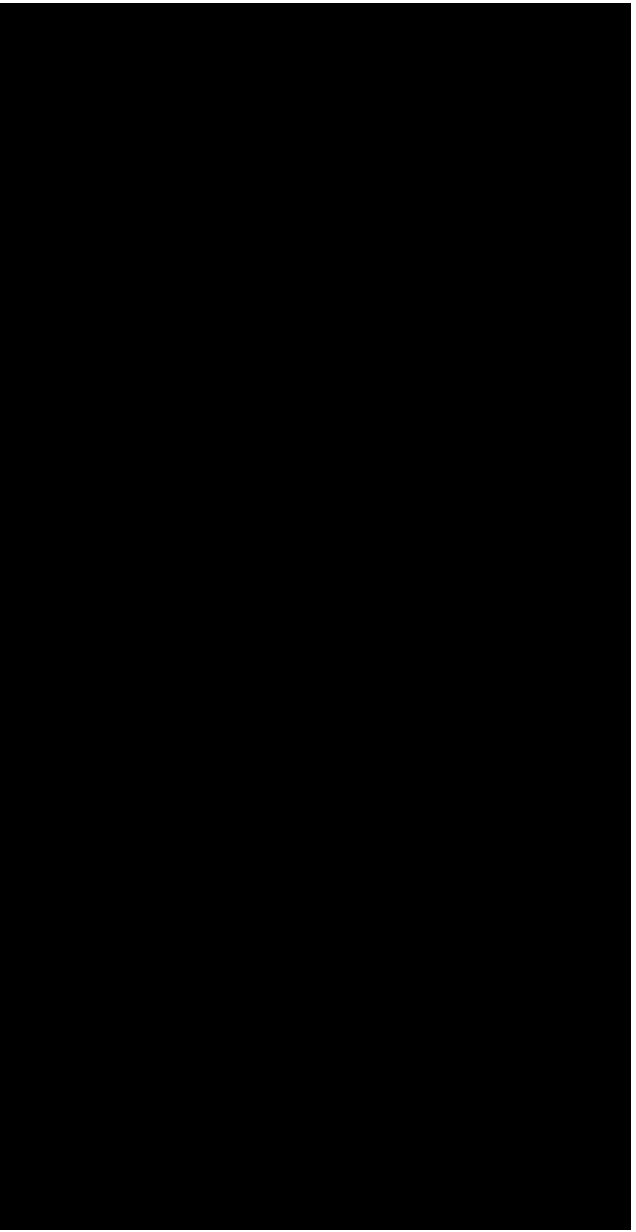
San Francisco
Startups
Internet

Silicon Valley

Olivier Alexandre

Jan 19, 2016 · 6:41 PM
Realtime attendee













Enquête (2015-2020)

Indepth interviews (146): entrepreneurs, techies (*dev, designers, data analysts*), investors, lawyers, journalists, academics, civil servants

Tech events (TechCrunch, Dreamforce, SemiconWest, Girls in Tech, Crunchies Tech awards), Meetups, Workshops, Pitch contests, Hackatons

Observations (bootstrap, running startups, unicorns, GAFAM)

Data (Crunchbase), press, LinkedIn profiles, trials and hearings

Stanford (talks and archives in Law, Business, Computer Science)

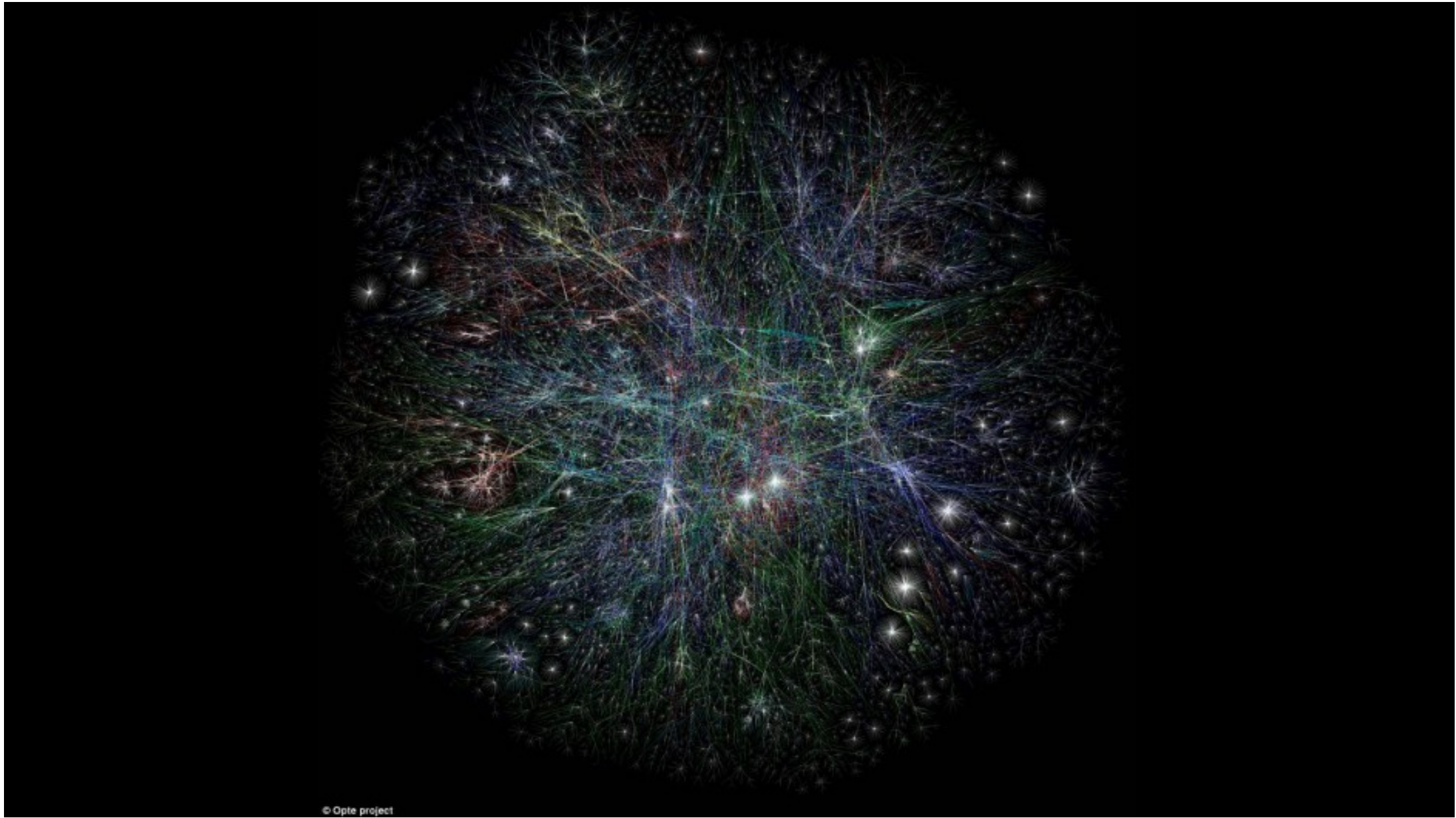
Capital humain - Silicon Valley paradoxes

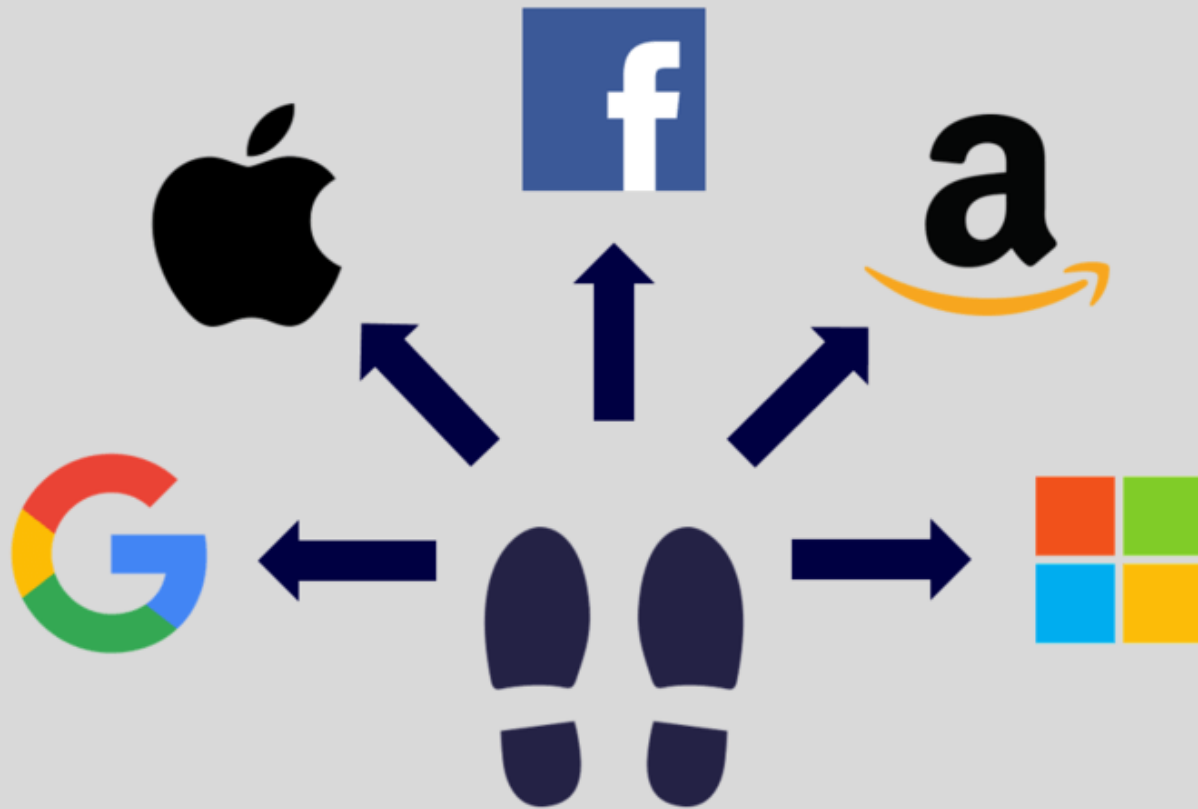
- Loi de Moore (loi de puissance)
- Loi de Metcalfe (effet réseau)

- Destruction d'emplois
- Besoin d'employés

- Innovation ouverte (open source, free software, wiki, copyleft)
- Capitalisme de monopoles intellectuelles (brevets, procès, copyright etc.)

- Transhumanisme
- Renaissance





Industrie du code

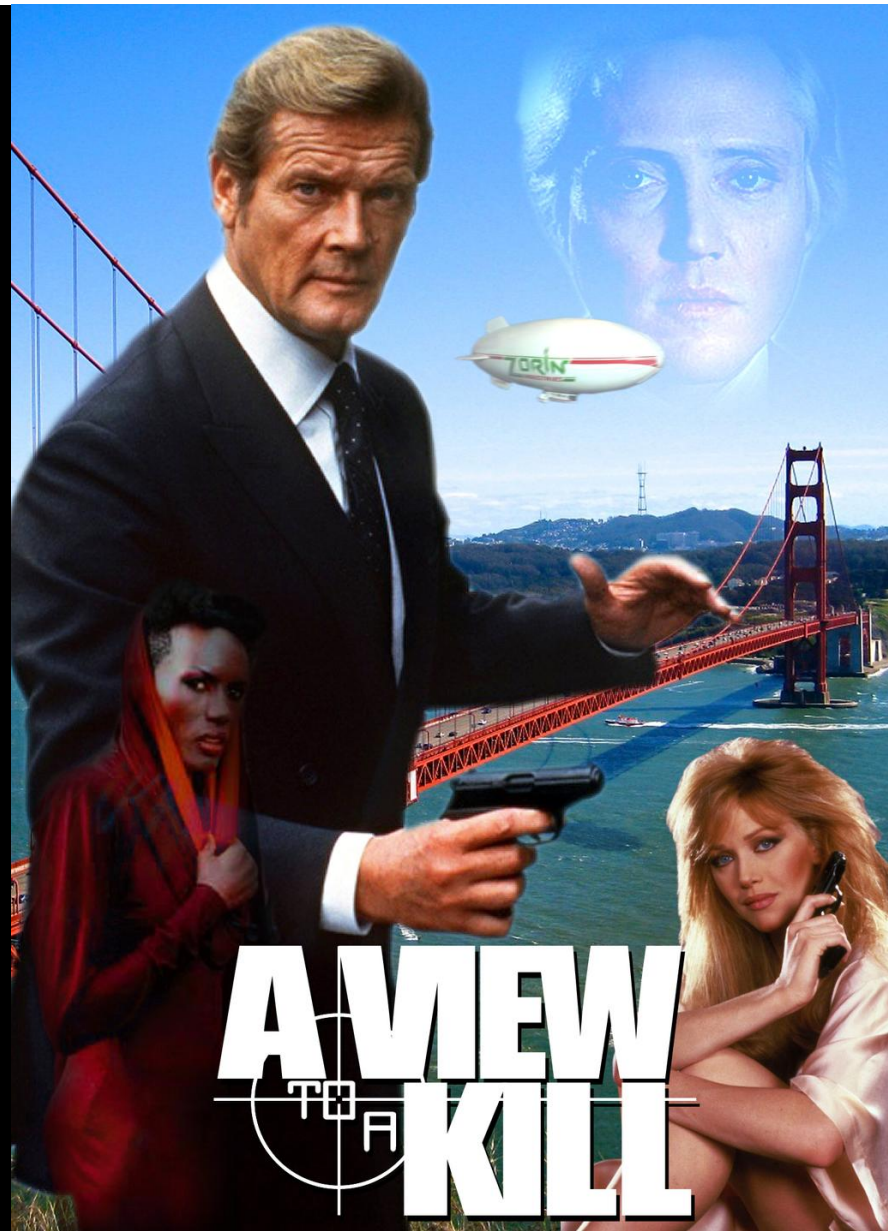
- Industrie
- Activité
- Organisation

|

Industrie du code

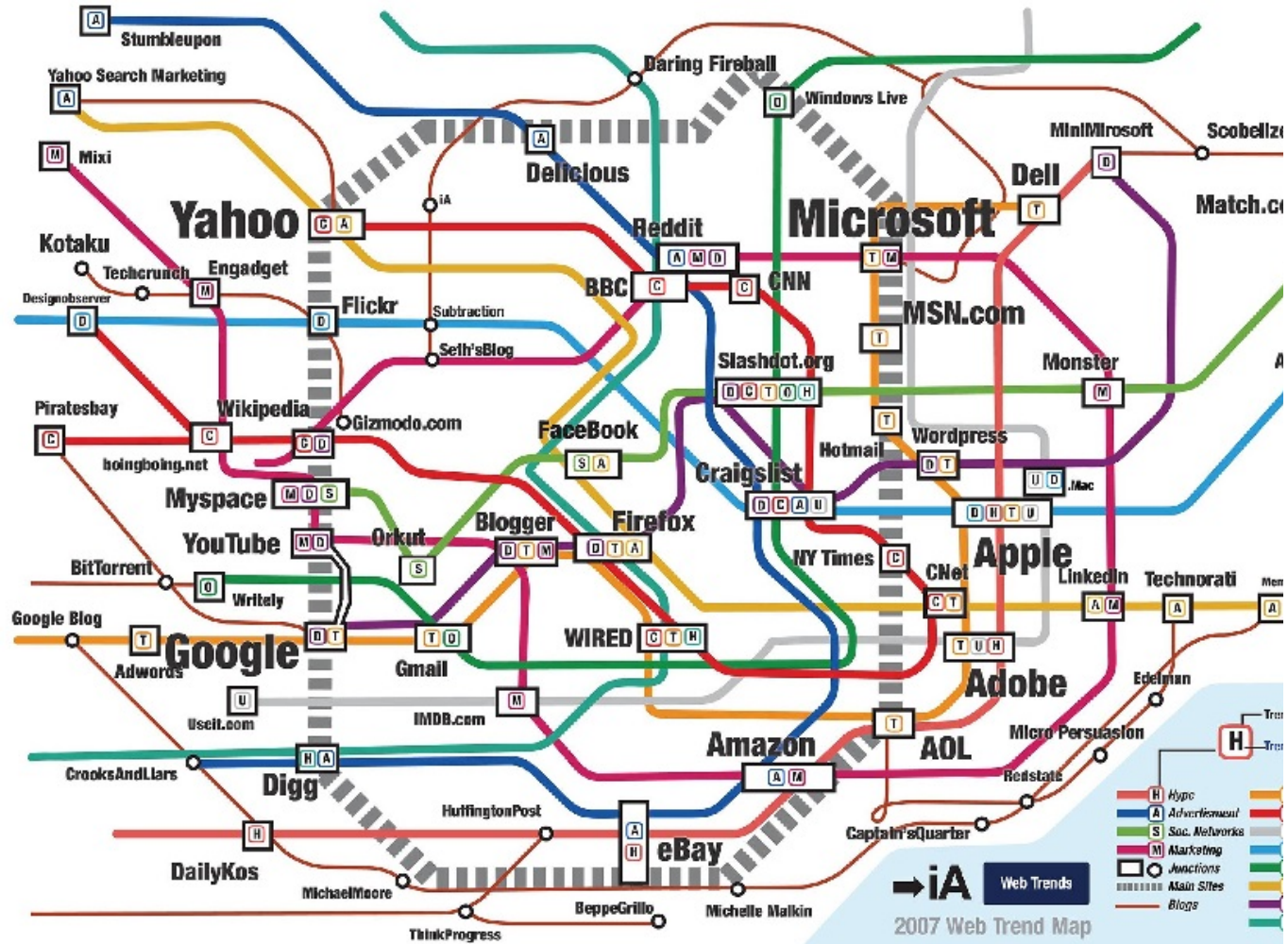
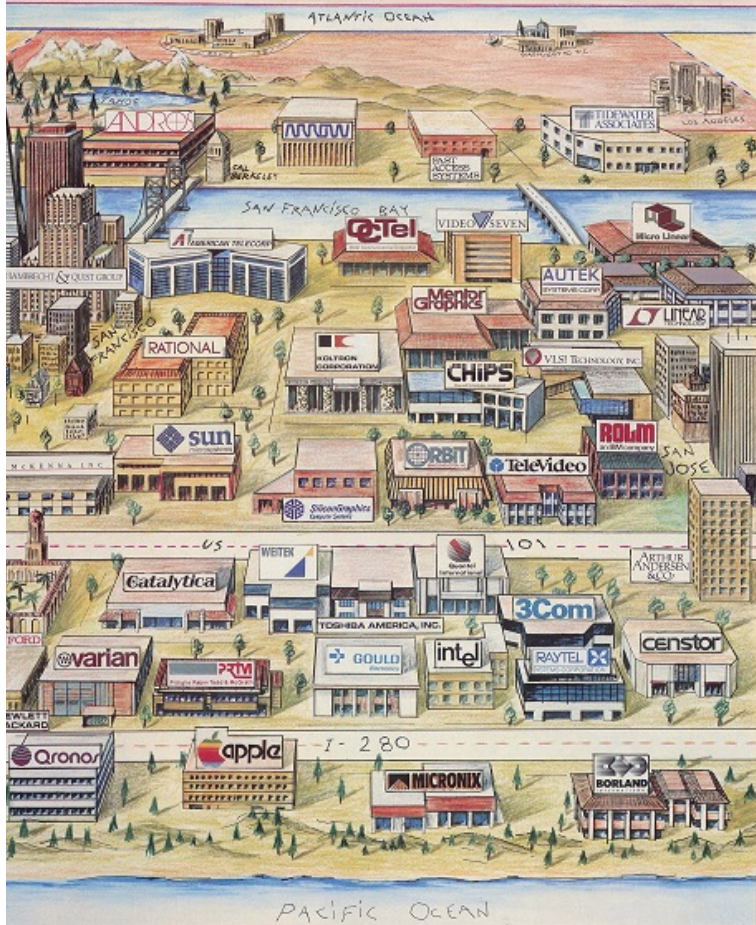


Stanislaus Valley
From the Hamilton Ranch



**A VIEW
TO A
KILL**

SILICON VALLEY



A4 and A3 versions under <http://www.informationarchitects.jp/web>





Data is the new oil.

We see in data the same transformative, wealth-creating power that 19th-century visionaries once sensed in the crude black ooze trapped underground.

If "crude" data can be extracted, refined, and piped to where it can impact decisions in real time, its value will soar. And if data can be properly shared across an entire ecosystem and made accessible in the places where analytics are most useful, then it will become a true game changer, altering the way we live, work, learn, and play.



Source: Cisco IBSG, 2012.

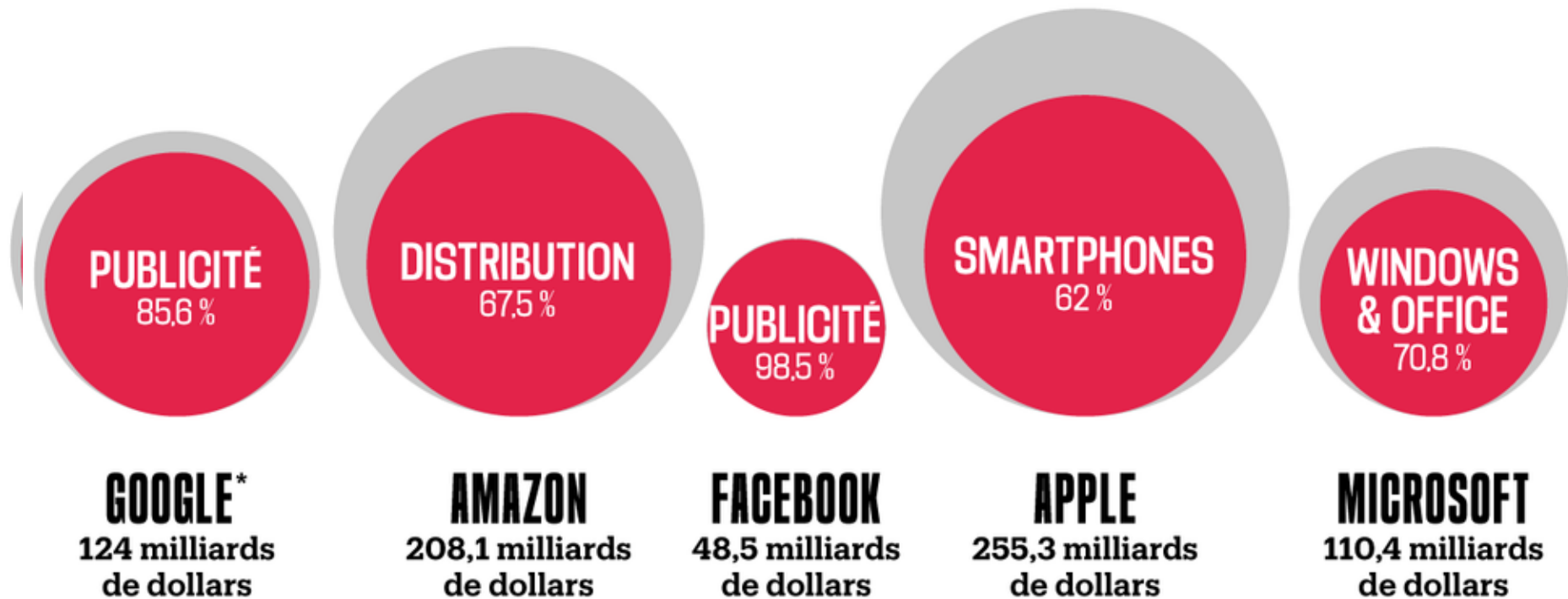
#DataInMotion

Dématérialisation

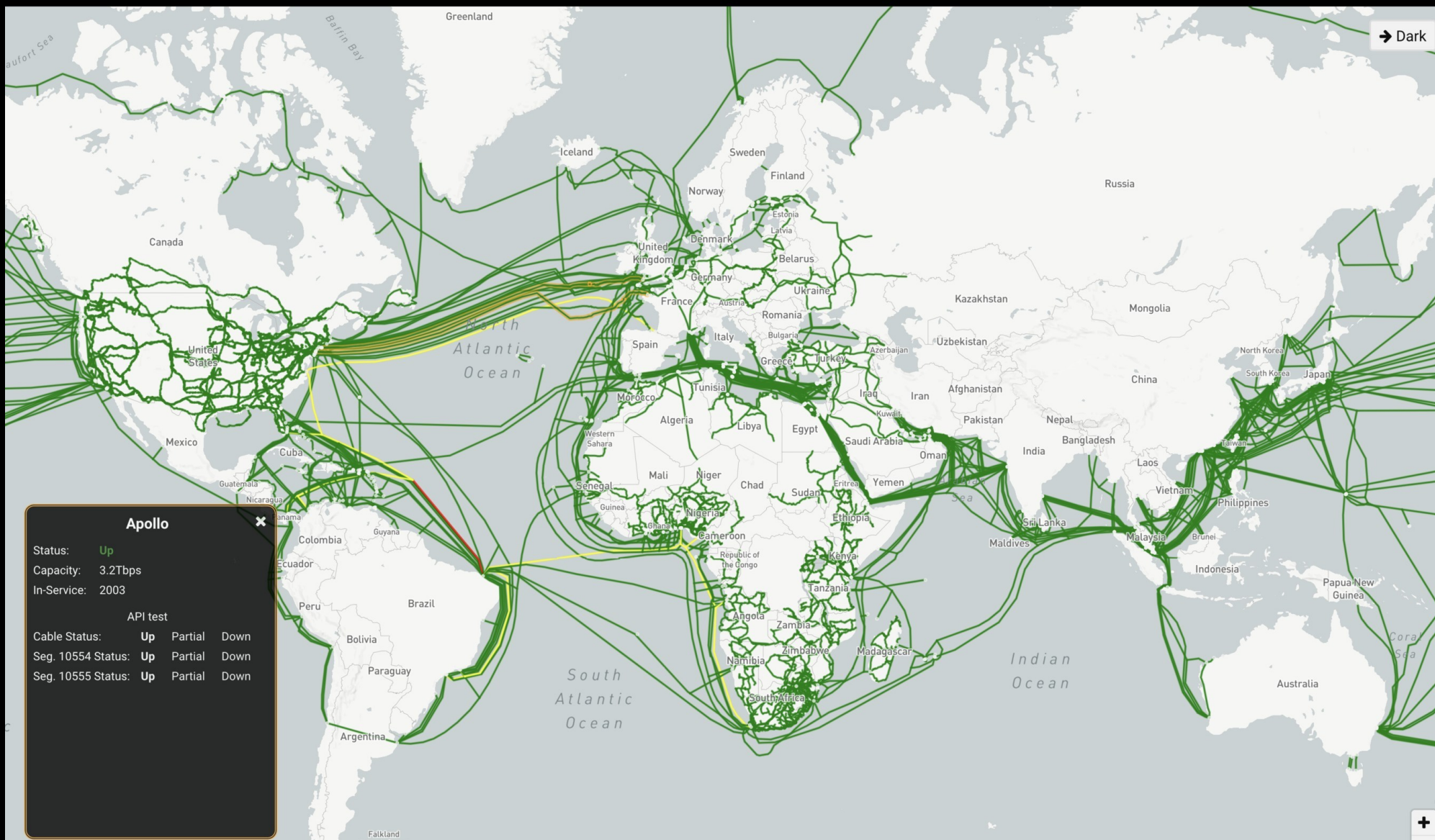
- Display
- Storage
- Security
- Connection
- Open Graph
- Open source
- Documentation
- Market place

Les sources de revenus des GAFA(M)

Part du secteur d'activité principal dans le chiffre d'affaires annuel (au 30 juin 2018)



Source : sociétés (*Alphabet)



SILICON VALLEY TECHNOLOGY TRENDS

Electronic Tools

Semiconductor

Enterprise

Telecom

Consumer

Smart Enterprise



AMPEX



Litton

intel.

AMD

FAIRCHILD
SEMICONDUCTOR



Adobe

ORACLE



SAP

cisco



Aol.

frontier

Google

facebook

amazon.com

GROUPON

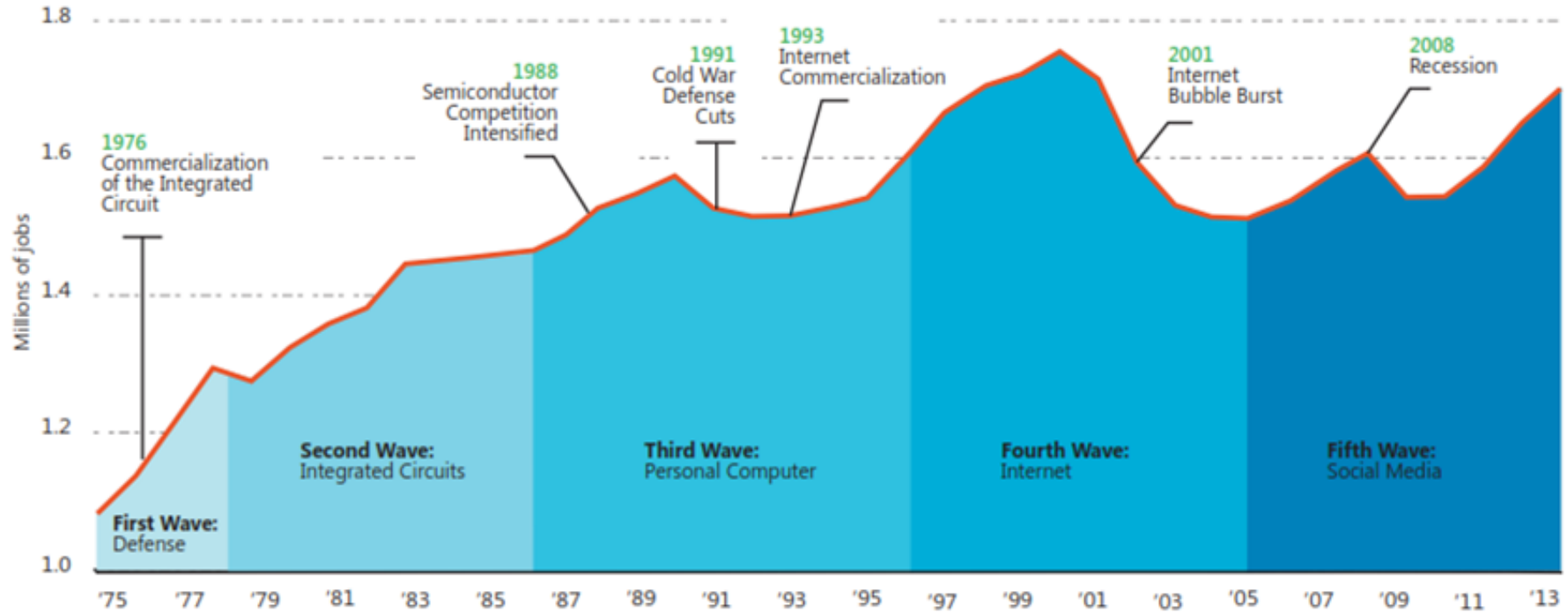
Palantir



Delphi

relateiq

Evolution of Silicon Valley



Key Companies/Organizations

<p>1950s-1978</p> <p>Stanford Research Institute, NASA Ames, Lockheed Missile & Space Division, FMC/United Defense, Stanford Industrial Park: including Varian Associates, Hewlett Packard and others</p>	<p>1979-1986</p> <p>Shockley Semiconductor, Fairchild Semiconductor, Intel, AMD, National Semiconductor; over the period, more than 50 firms were working to develop or produce semiconductors in Silicon Valley</p>	<p>1987-1996</p> <p>Xerox PARC, SRI, Homebrew Computer Club, Apple, with at least fifteen more computer companies active in the region</p>	<p>1997-2005</p> <p>Netscape, (Mosaic Communications), Cisco, Google, SRI were key innovators; hundreds of companies active in the region</p>	<p>2006-2013</p> <p>LinkedIn and Facebook scaled their businesses in Silicon Valley; joined now by hundreds of social media companies</p>
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Data Source: Employment Development Department, Labor Market Information Division
 Analysis: Collaborative Economics

« Ecosystem » - Microcosme/macrocosme

- Corporate (IPO, Public)
- Startup: bootstrap/scaling, lean/fast, cockroach/unicorn > -5, 20, 50-500, +3000
- Entrepreneurs: collaborative circles (CEO, CTO, COO), vrai/faux, innovateurs/entrepreneurs, first movers/power brokers
- Investisseurs: F&F, *angels* (+25 000 to 100K), Seed firms (100K to 1M), VCs (boutique, capital, corporate), Banque d'affaire (Softbank), *Hedge funds*, actionnaires (*equity*)
- Universités: Stanford, Berkeley, USF, San Jose, Santa Cruz, *Ivy League*, partenariats
- Accélérateurs (YC)/incubateurs/*Seed fund programs* (The Refiners)/Tech Schools (42, Hoberton School), *workshops*
- Grands comptes (NYSE, Nasdaq), monde (Orange, Leroy Merlin, BPI)
- Instances diplomatiques (Romain Serman), réseaux nationaux (TiE), labels (French Tech)
- Médias: Wired, TechCrunch, Business Insider, ReCode
- Events: conférences, meetups, pitch contests, hackatons

Grand tour/bruit, pollution

Why Software Is Eating The World

By **MARC ANDREESSEN**

This week, Hewlett-Packard (where I am on the board) announced that it is exploring jettisoning its struggling PC business in favor of investing more heavily in software, where it sees better potential for growth. Meanwhile, Google plans to buy up the cellphone handset maker Motorola Mobility. Both moves surprised the tech world. But both moves are also in line with a trend I've observed, one that makes me optimistic about the future growth of the American and world economies, despite the recent turmoil in the stock market.



In an interview with WSJ's Kevin Delaney, Groupon and LinkedIn investor Marc Andreessen insists that the recent popularity of tech companies does not constitute a bubble. He also stressed that both Apple and Google are undervalued and that "the market doesn't like tech."

In short, software is eating the world.

More than 10 years after the peak of the 1990s dot-com bubble, a dozen or so new Internet companies like Facebook and Twitter are sparking controversy in Silicon Valley, due to their rapidly growing private market valuations, and even the occasional successful IPO. With scars from the heyday of Webvan and Pets.com still fresh in the investor psyche, people are asking, "Isn't this just a dangerous new bubble?"

II
Esprit

« Les *devs* sont devenus indispensables à l'économie mondiale. Se sont les nouveaux ouvriers spécialisés. Et se sont des animaux bizarres... »

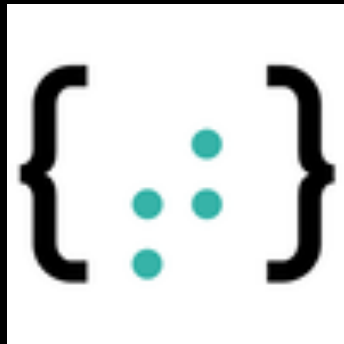
Entretien avec un investisseur institutionnel, SV +9 ans

« Personne ne sait ce que ça veut dire en fait d'être informaticien ici. »

VP Engineering, SV+8 ans



Product school



First step coding



Magnimind



Holberton



Data App Lab



42



The Den



Insight Data Science



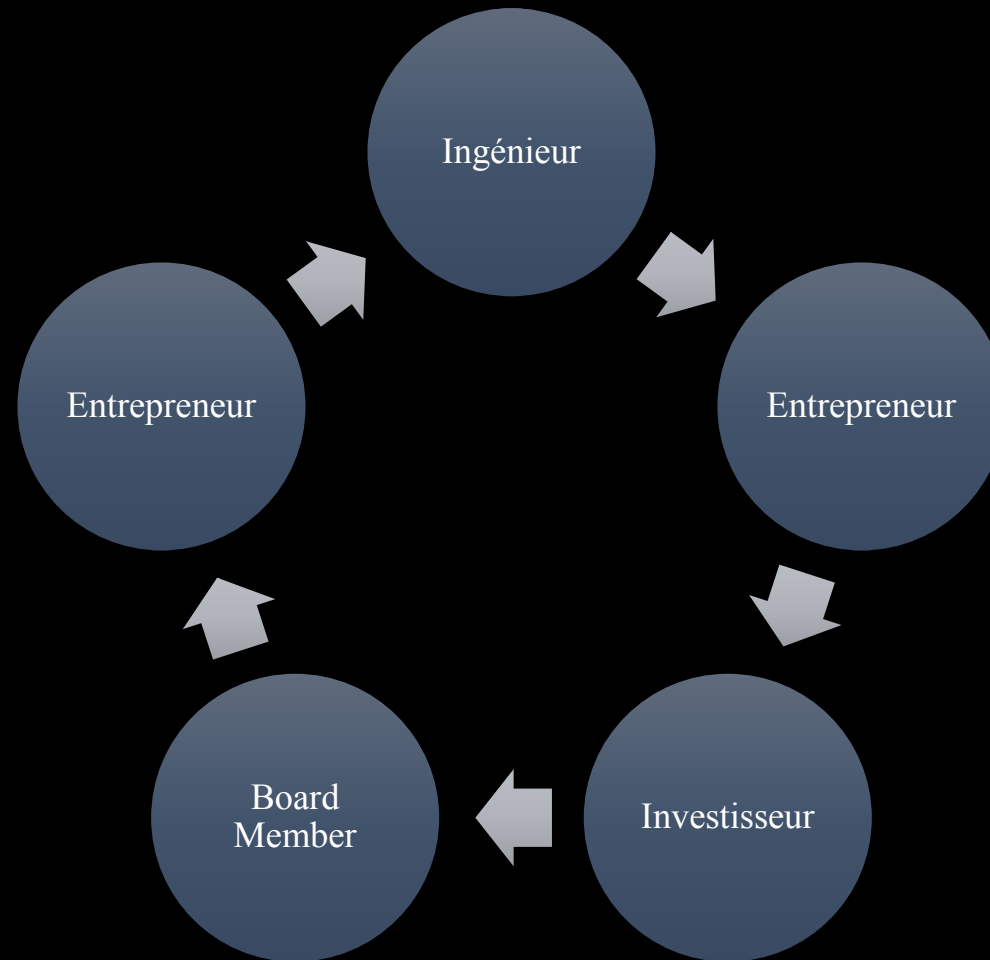
Acclaim Education

Most in-demand tech Jobs in Silicon Valley

Roles with the biggest share of tech jobs

Rank	Job title	Rank	Job title
1	Software test engineer	11	IT security specialist
2	Senior product manager	12	Product owner
3	Quality assurance engineer	13	Senior data analyst
4	Technical program manager	14	Principal product manager
5	Machine learning engineer	15	Technical product manager
6	Cloud engineer	16	Senior design engineer
7	Principal software engineer	17	Information technology manager
8	Firmware engineer	18	Senior application engineer
9	Software engineering manager	19	Business intelligence analyst
10	Operations analyst	20	Hadoop developer

Carrière mobile



Stéréotypes



Silicon Valley (HBO, Saison 1)

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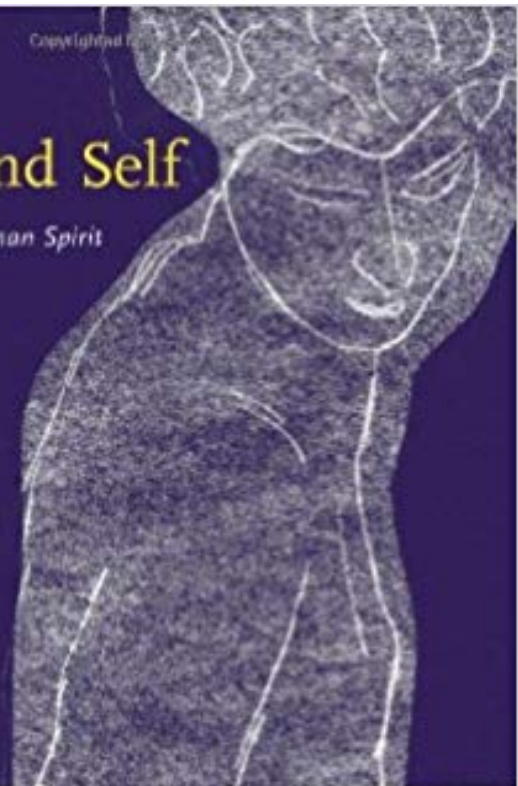
The Second Self

Computers and the Human Spirit

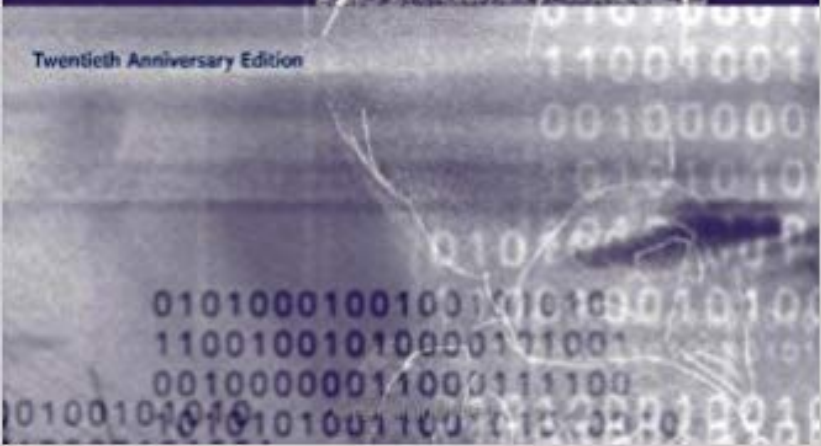
Sherry Turkle

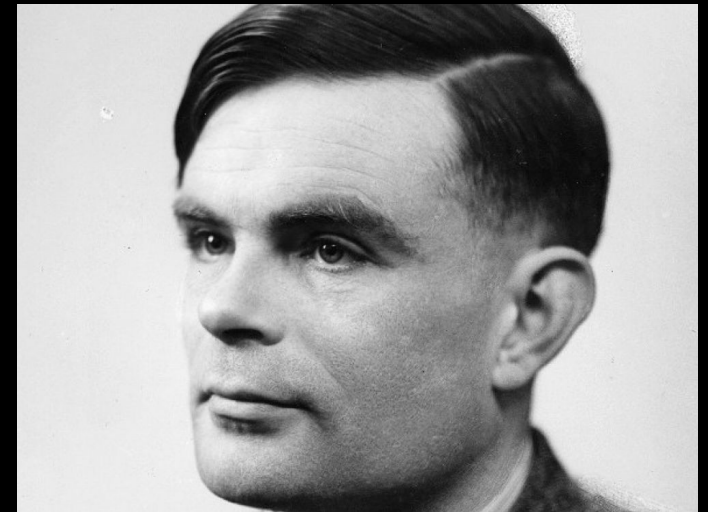
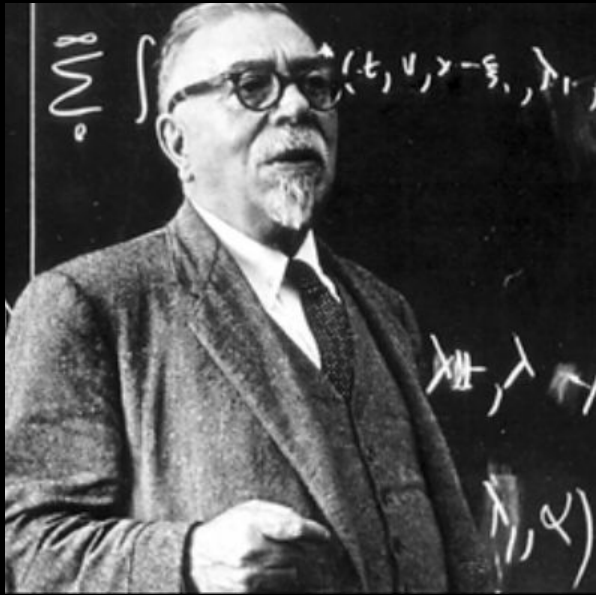
"A brilliant and challenging
discussion presented with
extraordinary clarity."

—Christopher Lasch, *Harvard
New York Times*



Twentieth Anniversary Edition





The ten's digit indicates the area of Computer Science it addresses:

10-19 Hardware Systems

20-29 Artificial Language

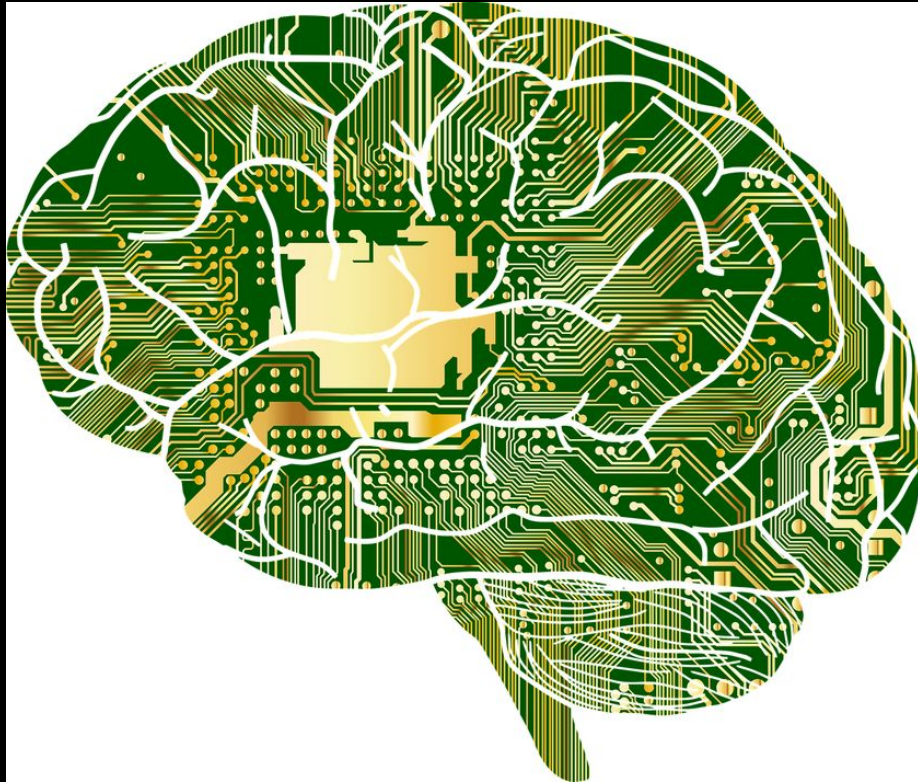
30-39 Numerical Analysis

40-49 Software Systems

50-59 Mathematical Foundations of Computing

60-69 Analysis of Algorithm



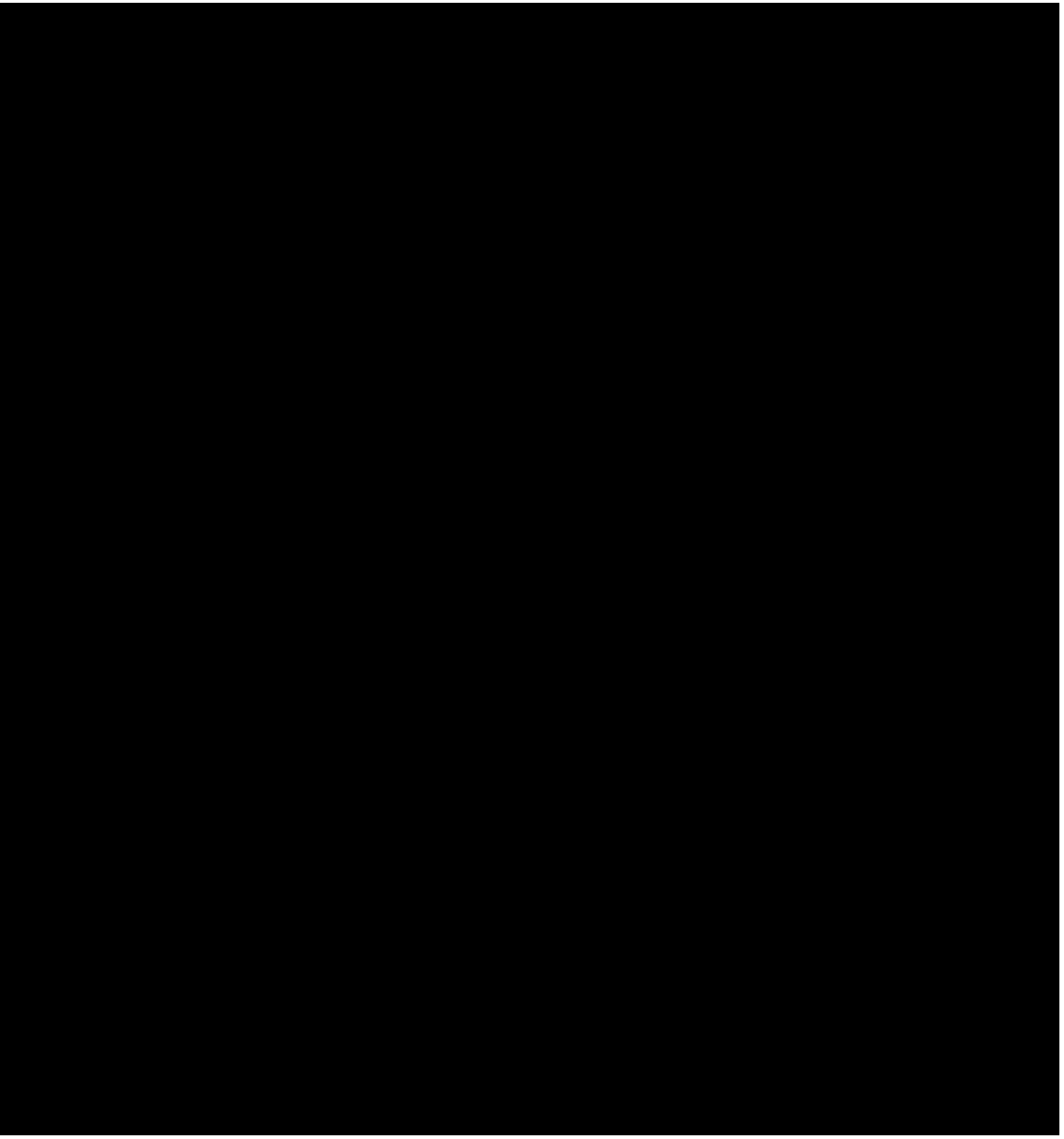


Stanislas Dehaene

Apprendre !

Les talents du cerveau,
le défi des machines







627710450









LE SENS COMMUN

pierre bourdieu
et jean-claude passeron

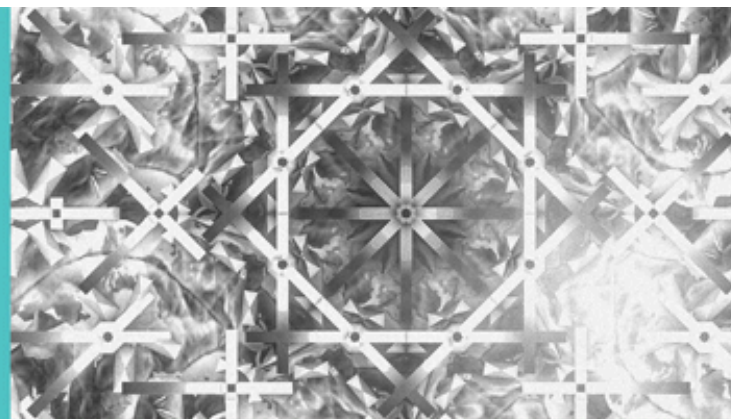
les héritiers

les étudiants et la culture



LES ÉDITIONS DE MINUIT

Sciences sociales



Nicolas Auray

L'Alerte ou l'Enquête

Une sociologie pragmatique du numérique

Préface d'Emmanuel Kessous

Postface de Sylvaine Bulle



MINES
ParisTech
Presses des Mines

Compétences

- **Intrapersonnelles** : admettre être critiqué, accepter de se corriger, prendre sur soi, art de pondérer la parole dans une communauté d'échange, non recours à l'accusation personnelle, à la violence, à l'insulte; savoir marquer un désaccord avec un supérieur
- **Interpersonnelles** : ouverture à l'altérité, recherche de l'hétérogénéité des rencontres, varier son univers relationnel; être capable de trouver des ressources dans autrui; construire des ponts; ne pas interioriser l'entre soi
- **Herméneutiques** : capacité à s'insérer dans un jeu de langage; à déchiffrer correctement les sources documentaires; à analyser les jeux de pouvoir et les intentions cachées
- **Topologiques** : nées avec Internet, savoir explorer et adopter un raisonnement logique. « Promenade » et « géométrie euclidienne ». Tension entre ces deux lignes. Talent en informatique: les dialectiser.

« Le changement est inévitable. Et de tout.. Par exemple si tu utilises un *process* de vérification, par le biais d'un humain en lui disant: *tous les bugs vont passer par toi et tu vas t'occuper du retriage*. Dans cinq ans, tu auras une IA pour faire ça. C'est inévitable. Avant on avait besoin d'une armée de gars pour cliquer et tester des sites webs. Et puis on a tout automatisé. Et le type qui faisait ça on lui a dit, arrête et va apprendre à coder pour faire autre chose. C'est l'évolution des métiers liés à la technologies, et tu ne peux rien y faire. Tu peux y résister.. mais il faut penser ce changement; ce changement technique et ce changement culturel. »

Product Manager, +6 ans dans la Silicon Valley

II Organisation



\$18.95

The Visible
Hand The
Managerial
Revolution
in American
Business

Alfred D.
Chandler, Jr.

The
Pulitzer Prize
and
The Bancroft
Prize

Valeur(s)/management inversé

Mission

Gain d'apprentissage

Energie

Salaire

Bonus

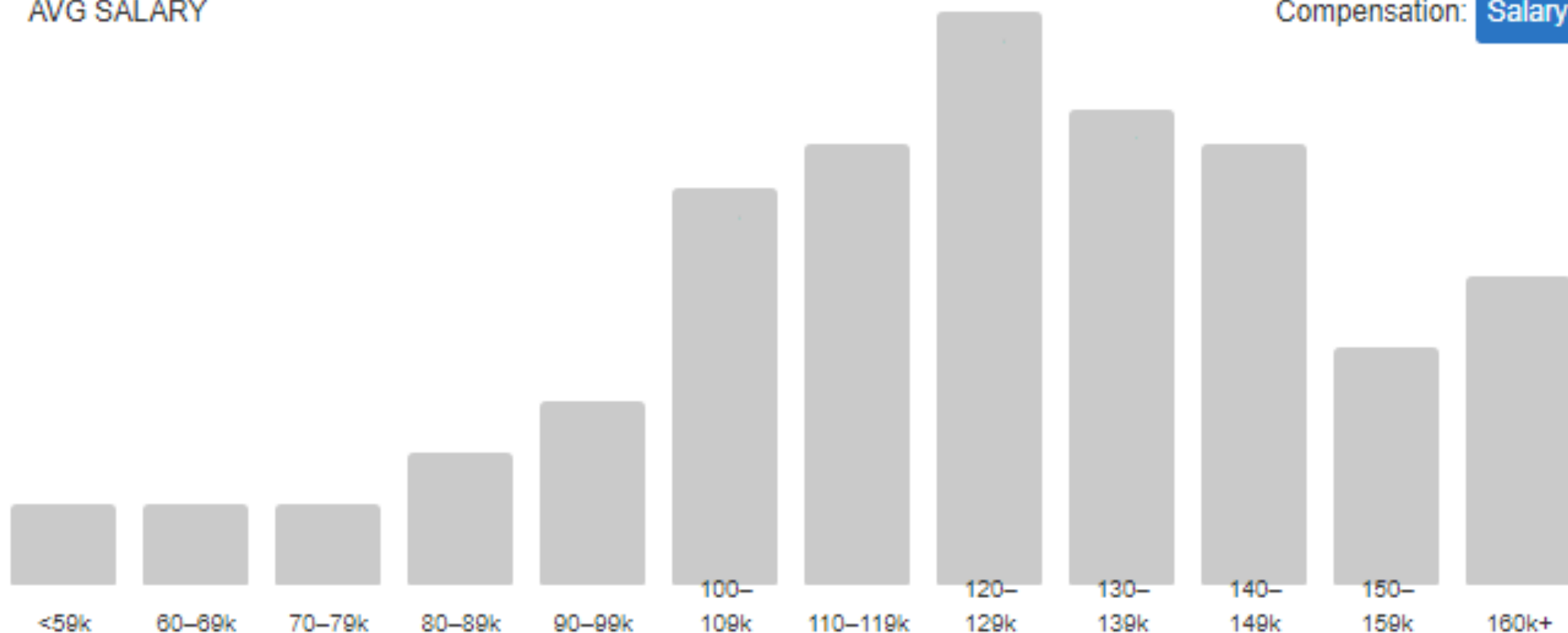
Perks

Options

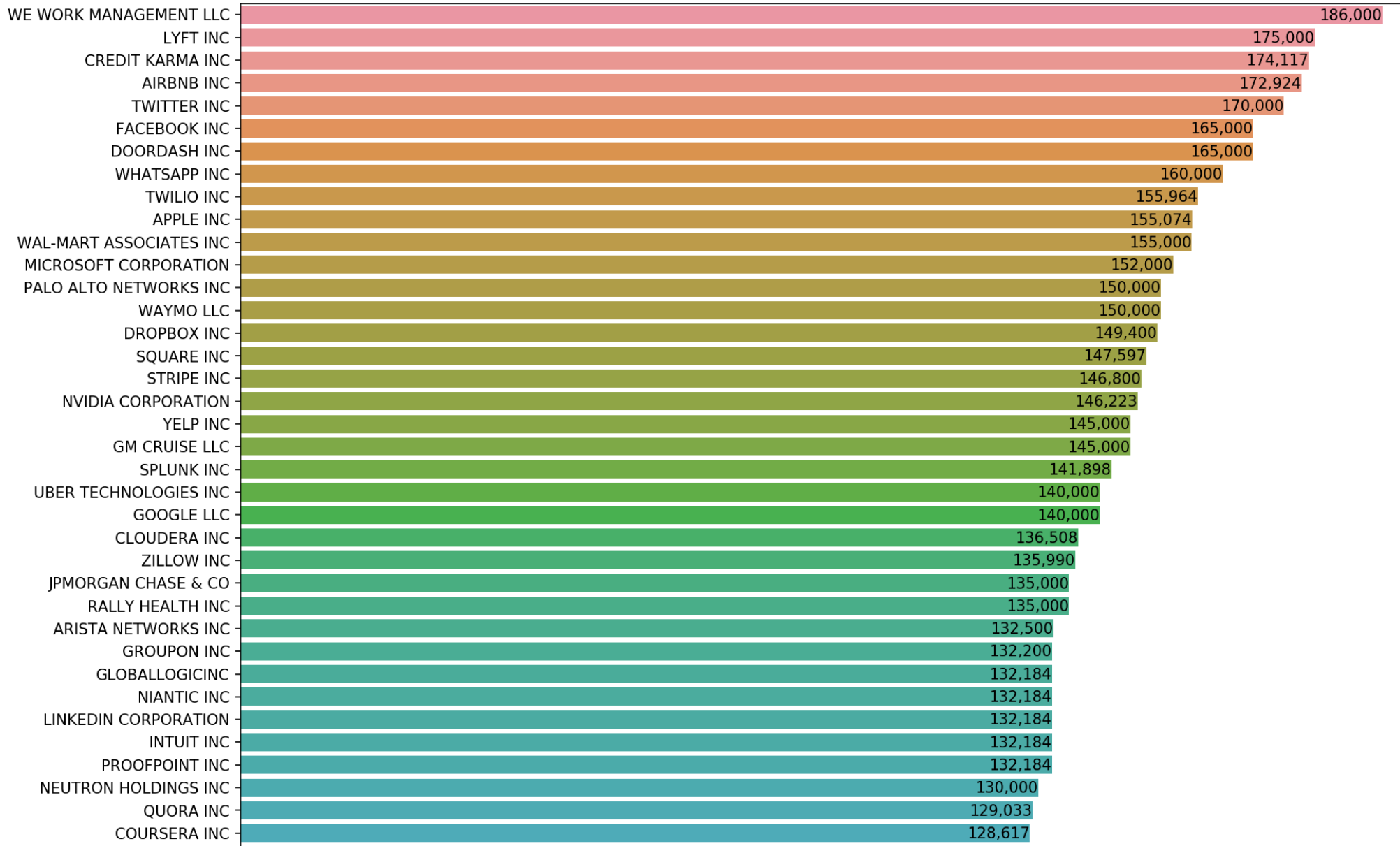
Silicon Valley Python Developer Salary

\$125,000
AVG SALARY

Compensation: **Salary**



Company





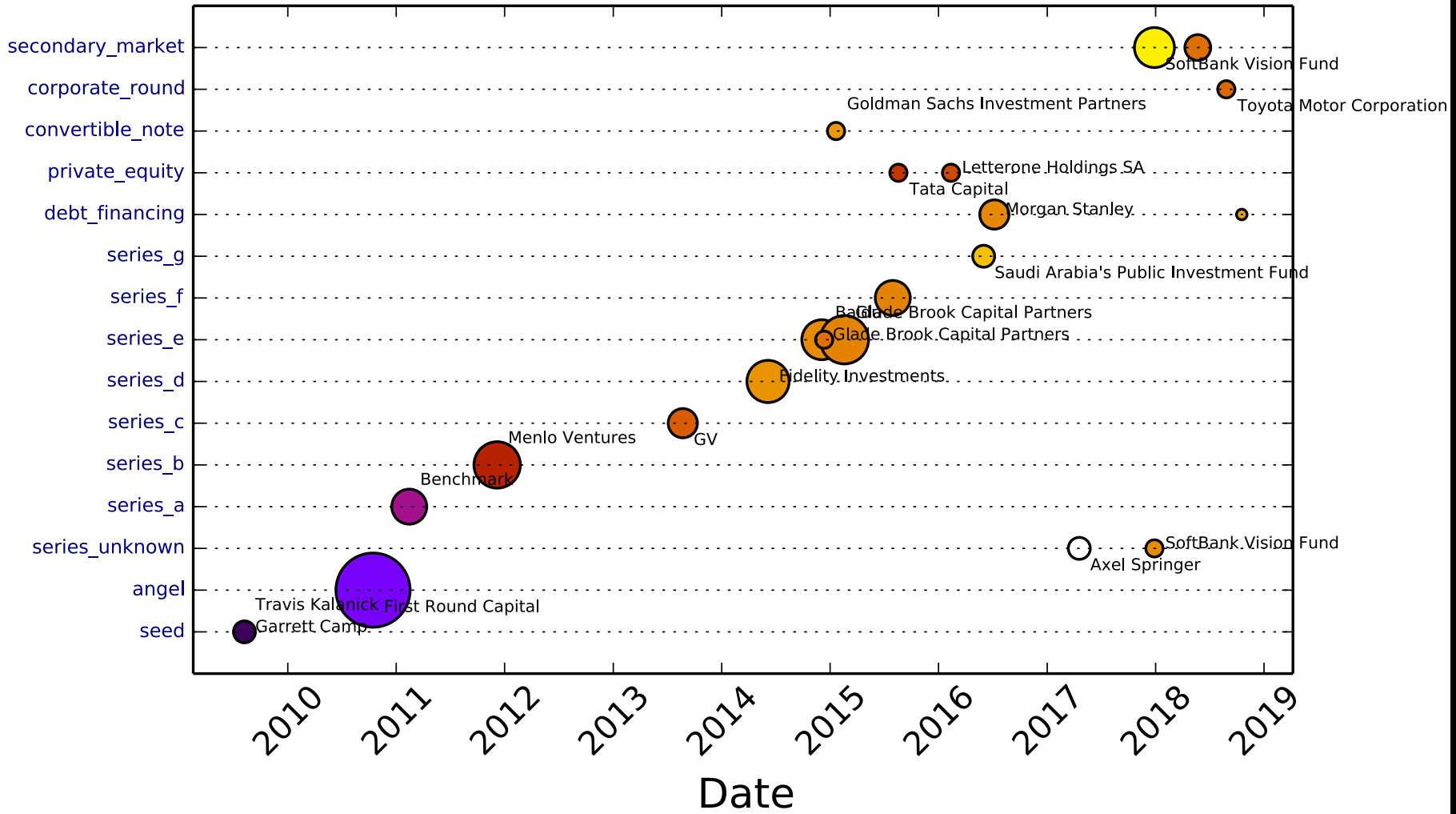


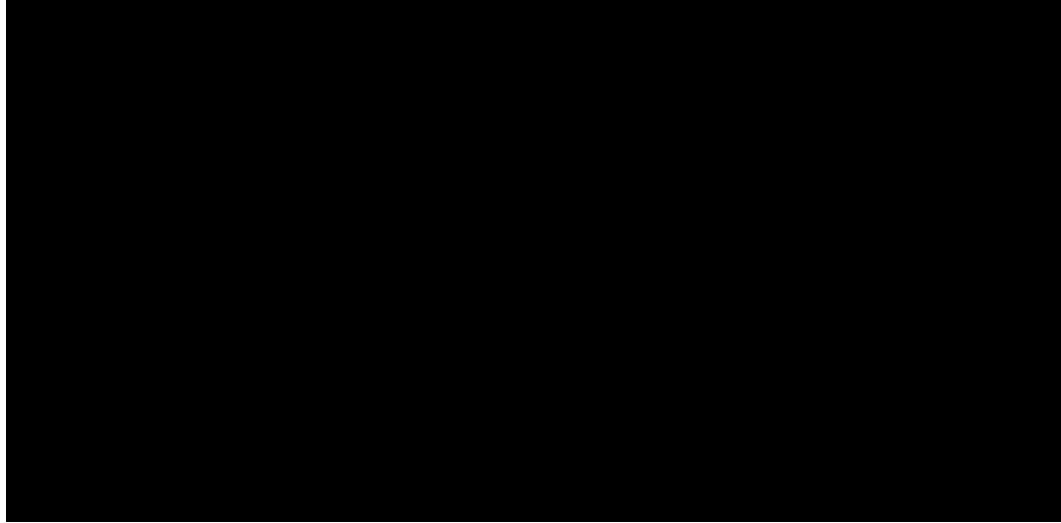
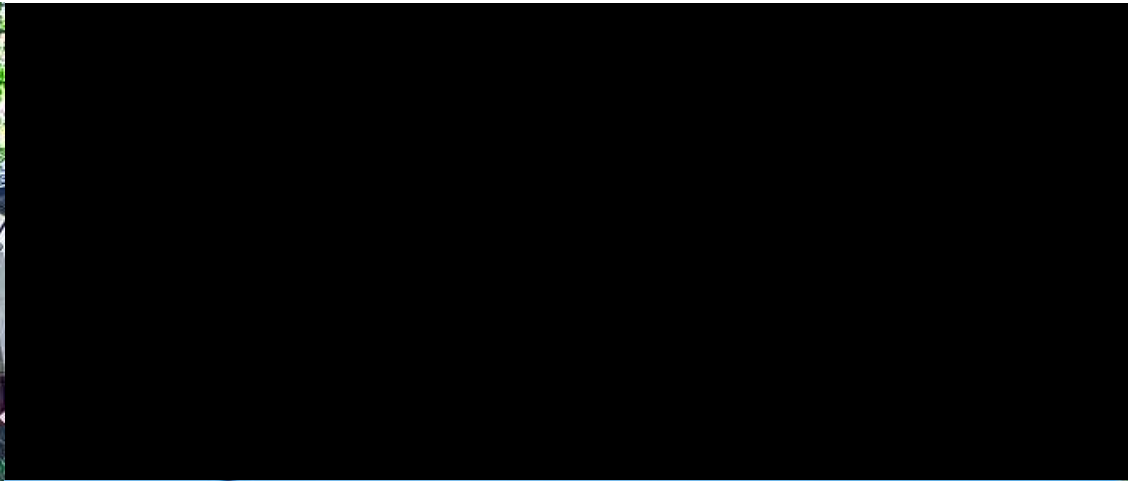
100 k \$

10 G \$

Uber

Category of fund raising





Mission

- *Organize the world's information and make it universally accessible and useful*
- *Give people the power to share and make the world more open and connected*
- *Belong anywhere*
- *We ignite opportunity by setting the world in motion*
- *Bring the best user experience to its customers through its innovative hardware, software, and services*
- *Delight our customers, employees, and shareholders by relentlessly delivering the platform and technology advancements that become essential to the way we work and live*

Mission

Mission
Objectifs
Stratégies

Mission

Mission
Objectifs
Stratégies

Mission
Story
Valeurs



BE
WORTHY
of
TRUST



WE not I



SWEAT
the
DETAILS

Isomorphisme

« au final, le produit c'est le reflet de l'équipe qui le construit »

Encapsulation