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Emergent public goods and public private partnerships 2.0

Port Macquarie

5th Feb 2014

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AARES National Conference
Global, Local, Private, Public: Re-thinking the Categories, Bridging the Gaps

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Lateral Economics

Outline

Caveats

Your theme

Emergent public goods

The ecology of public and private goods

Digital Public Private Partnerships

- The current state of the art
- Some new ideas

Government as impressario

Some thoughts on ag economics applications

LateralEconomics

Public goods

Public goods . . . present serious problems in human organisation.

Vincent and Elenor Ostrom - 1977

	Excludable	Non-Excludable
Rivalrous	Private Good	Common Pool Good
Non-Rivalrous	Toll or Club Good	Public Good

LateralEconomics

Web 2.0 platforms are public goods:

- Google (1998)
- Wikipedia (2001)
- Blogs (early 2000s)
- Facebook (2004)
- Twitter (2006)

LateralEconomics

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As a #MWF2012 public service I'd like to announce that the place called Beer Deluxe makes a fine $12 soup.
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Lateral Economics

Jefferson's enlightenment dream

He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation.

Thomas Jefferson to Isaac McPherson, August, 1813

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Web 2.0 platforms are public goods:

- Google (1998)
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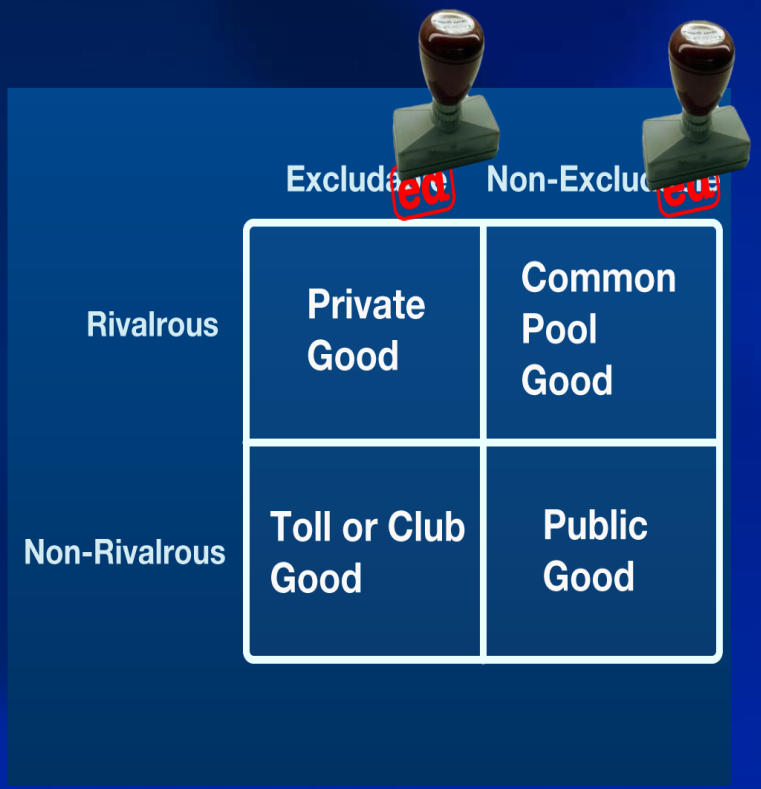
- Blogs (early 2000s)
- Facebook (2004)
- Twitter (2006)



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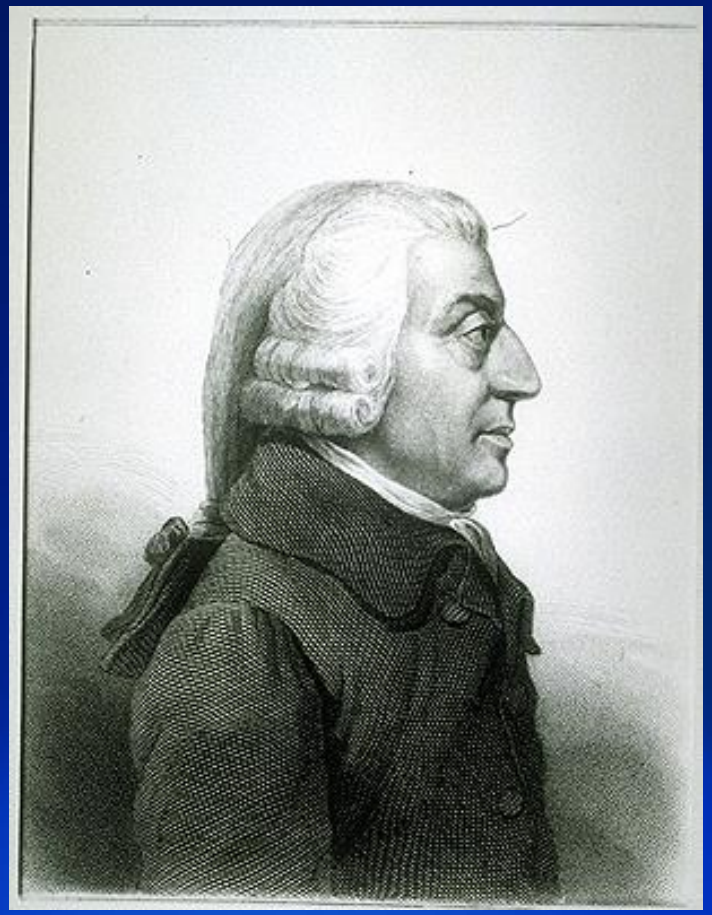
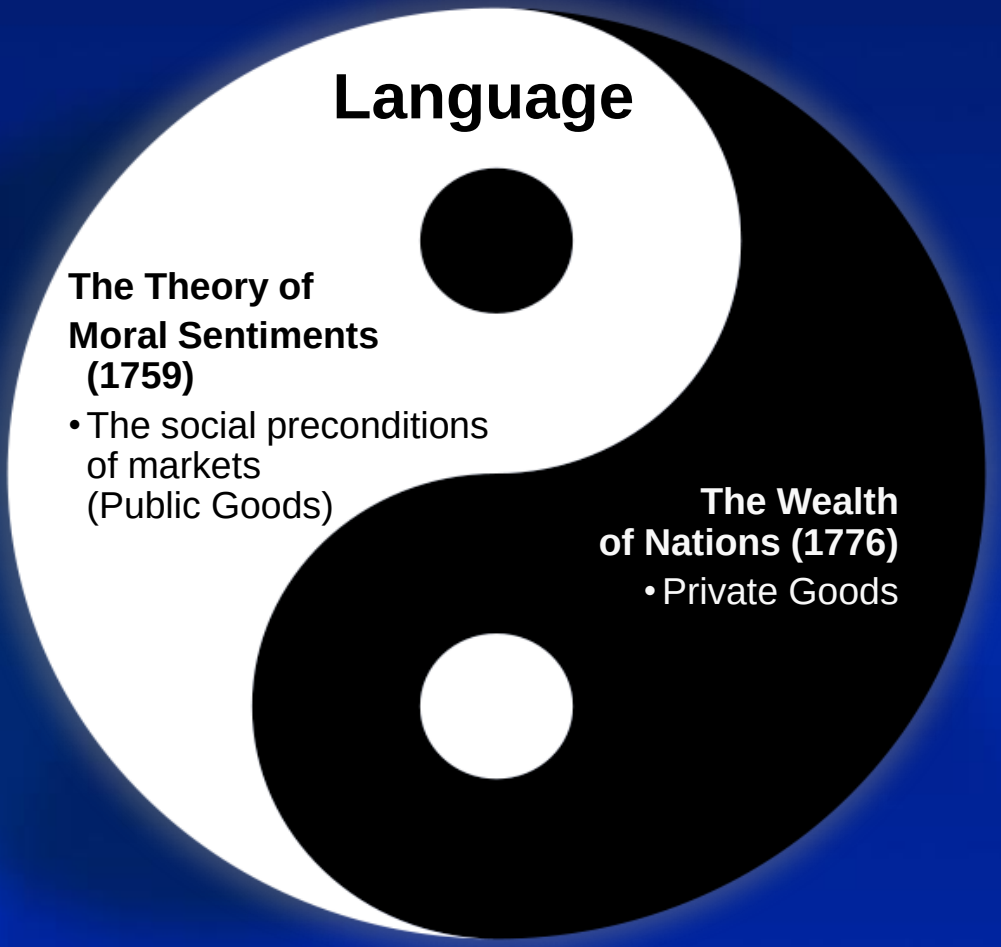
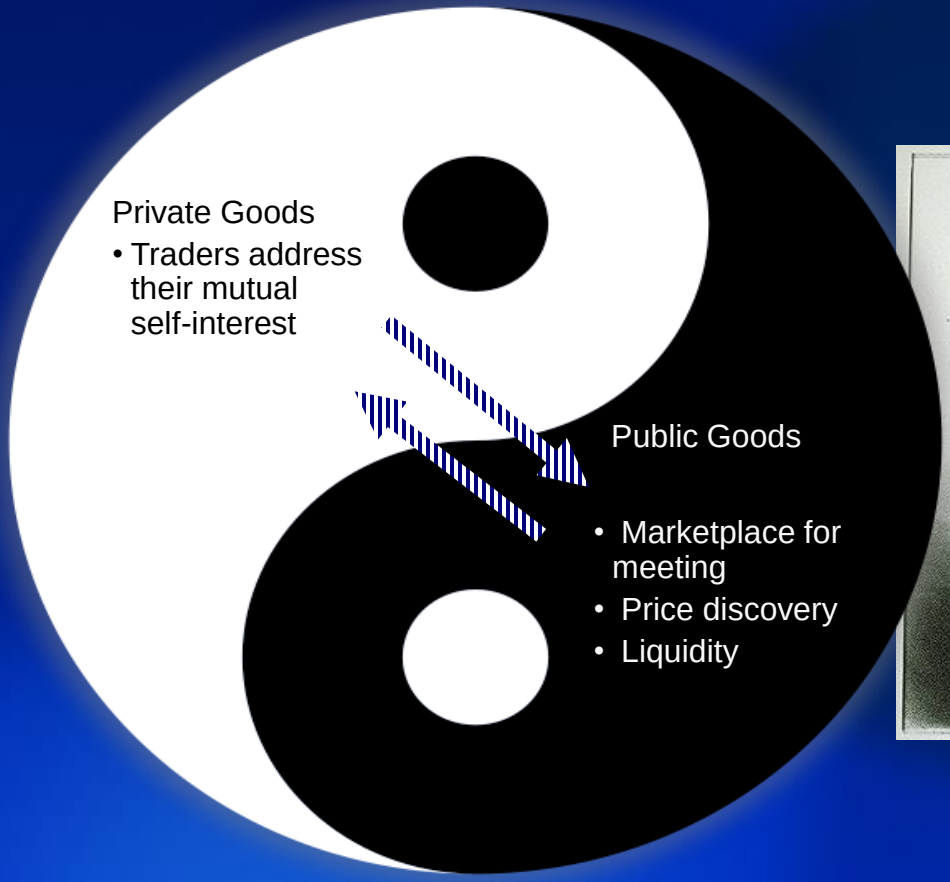


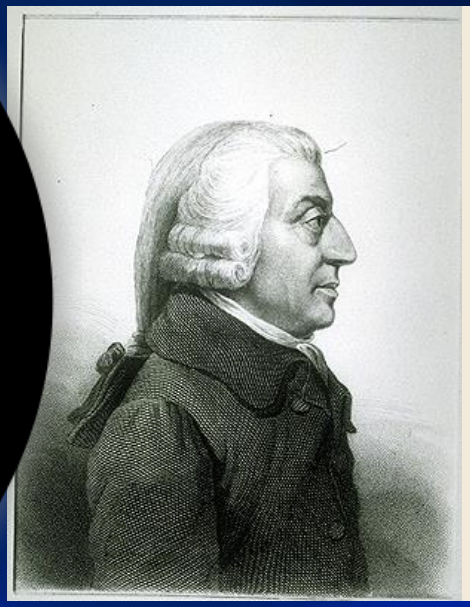
Adam Smith

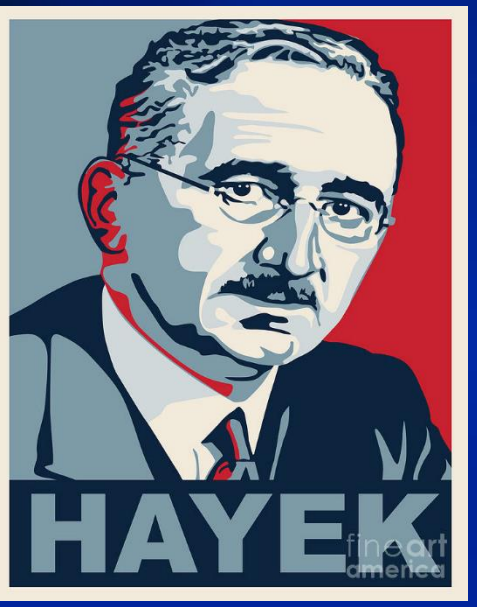


LateralEconomics

The ecology of private and public goods: Markets







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The ecology of public and private goods

[The public good of] Justice . . . is the main pillar that upholds the whole edifice. If it is removed, the great, the immense fabric of human society . . . must in a moment crumble into atoms.

Adam Smith

Lateral Economics

The ecology of public and private goods

Private goods

We look after ourselves

Public goods

- What won't look after itself
- Health
- Nurturing
- Education
- Alleviating
  - Suffering
  - Poverty
- Art
- Religion

We will ever strive for the ideals and sacred things of the city, both alone and with many; we will unceasingly seek to quicken the sense of public duty; we will revere and obey the city's laws; we will transmit this city not only not less, but greater, better and more beautiful than it was transmitted to us.

The fractal ecology of public and private goods

Private goods

Individuals

Firms

Teams

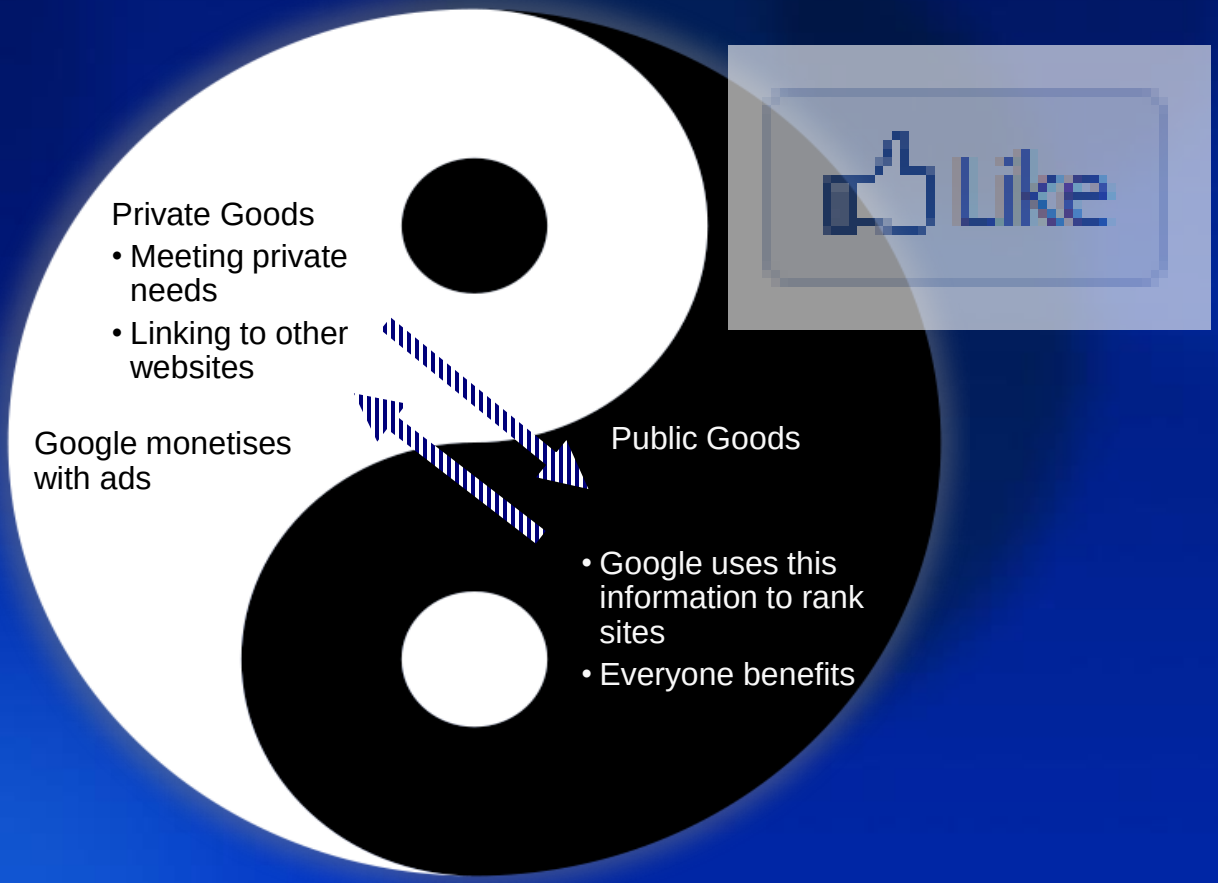
Competition and self-interest

Public goods

- Governments
- Families
- Civic association
- Philanthropy
- Within ‘teams’

Cooperation and group-interest

Private and public goods on a platform



LateralEconomics

The economics of abundance: a new birth of freedom

Public goods as an opportunity

He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.

Thomas Jefferson

Public goods as a problem

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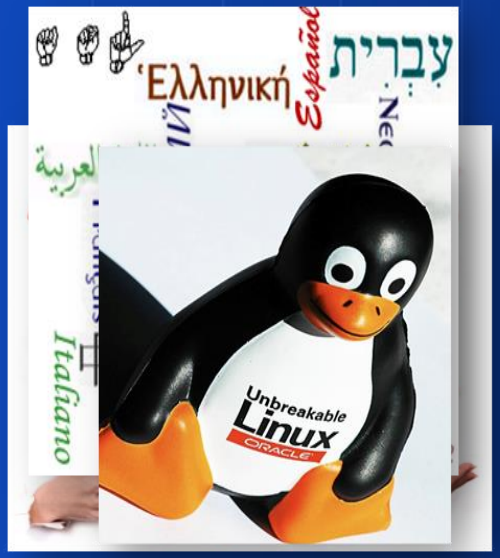
Vincent and Elenor Ostrom - 1977



Emergent

Distributed on a platform

Coercively, centrally funded

Lateral Economics

Government as impresario

- Public access to state assets: ‘Government as platform’
  - Release of public sector information
  - Intangible state assets as public
- Building platforms for others
- Opening up to global [illegible] not-for-profit endeavour
  - With global [illegible] like Kaggle
  - Volunt[illegible]
- Integrate capabilities into private platforms
- Re-configuring boundaries
- State funding of marginal cost pricing
- Data sharing PPPs

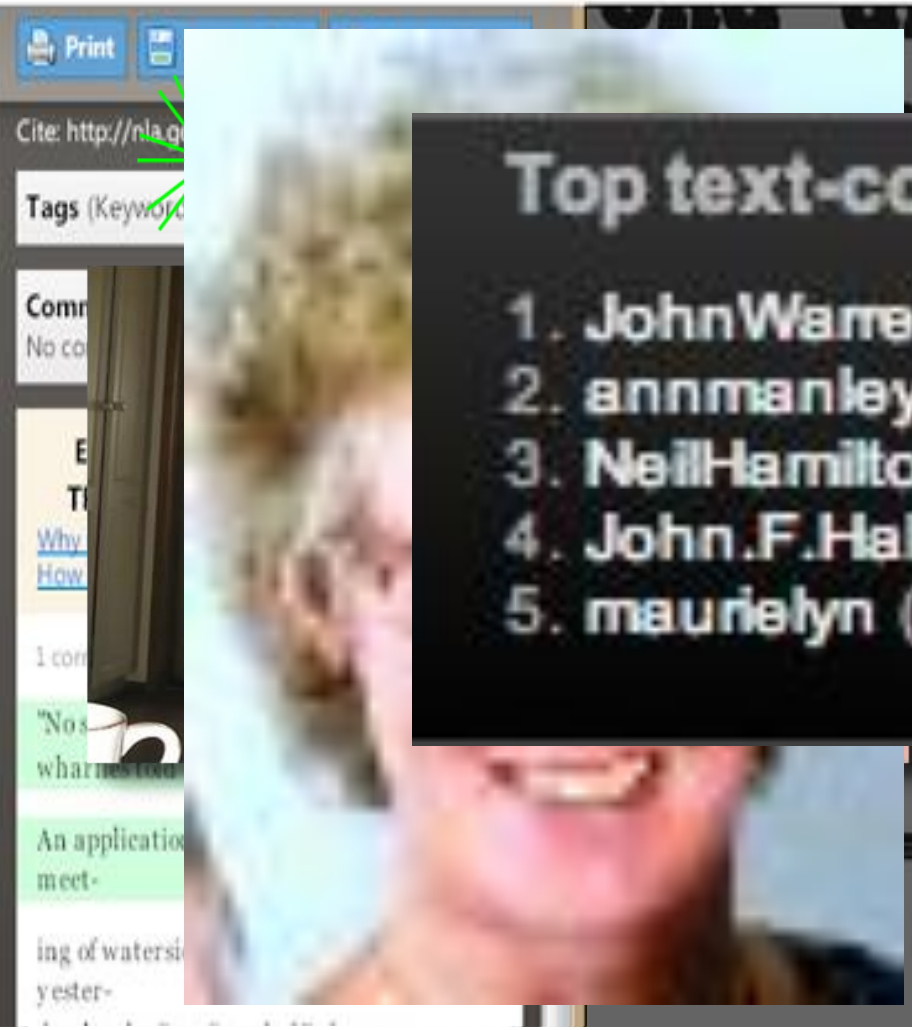
What could be built in this space?

← Emergent Distributed on a platform Coercively, centrally funded →

Lateral Economics

AUSTRALIAN NEWSPAPERS

3. Corrections are saved and instantly shown to other users.



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Public private partnerships

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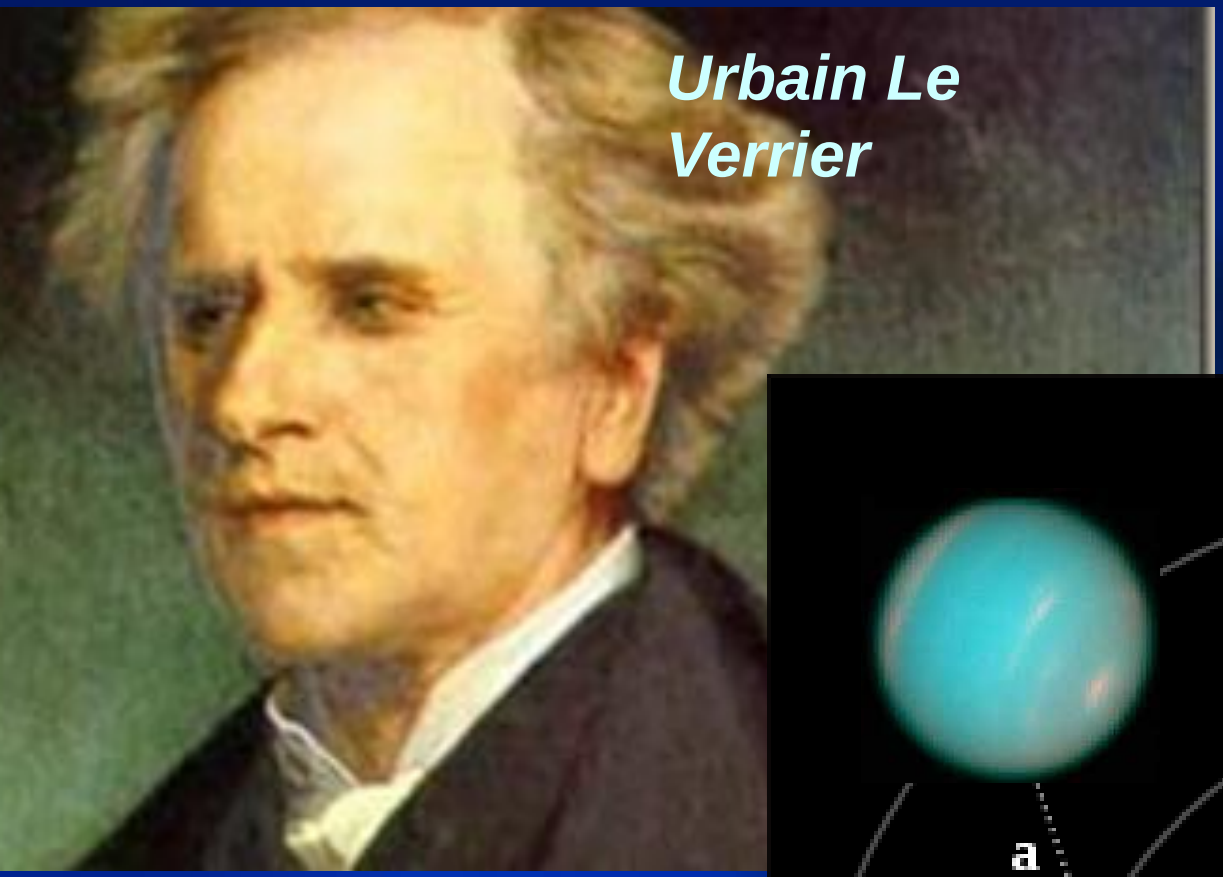

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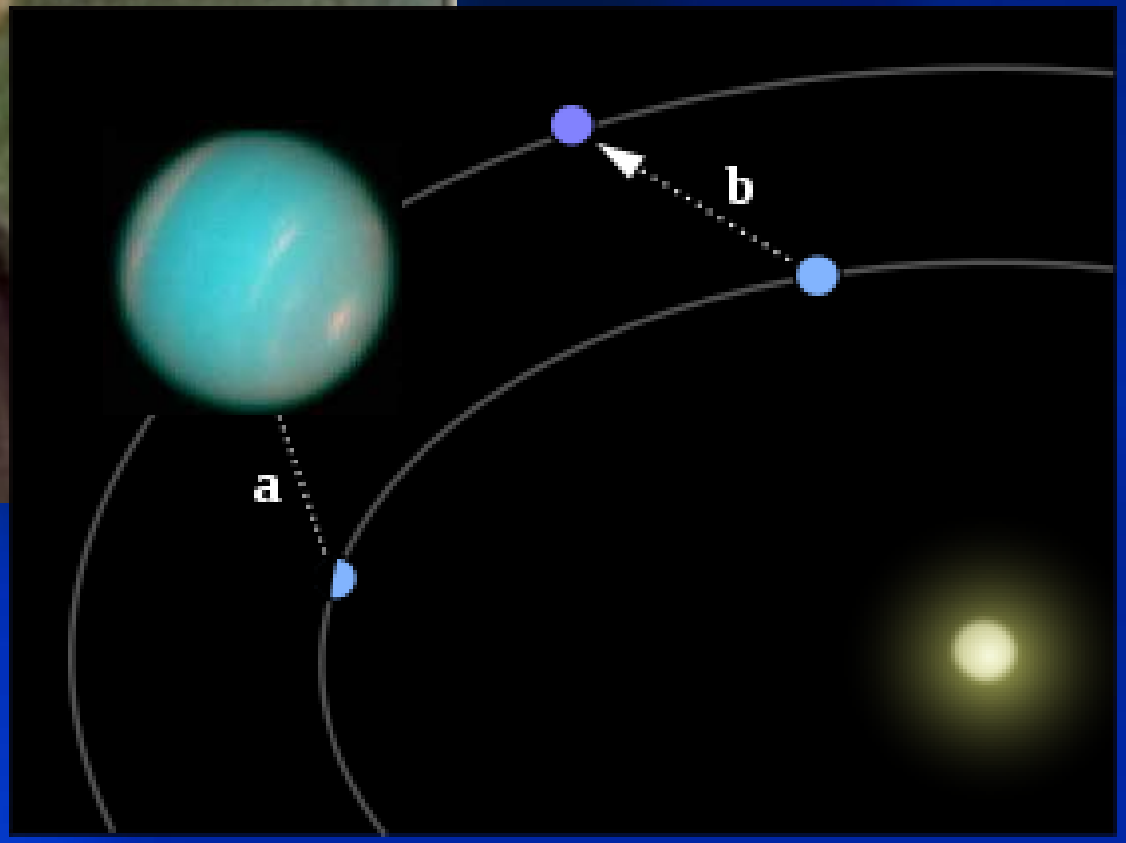

Strata Rx 2012: "Own Your Data", Anne Wojcicki
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reports

NEW Biological Aging

In addition to the changes you can see and feel as you age, there are less obvious ways in which your body ages. For example, the cells in your body need to make copies of themselves to offset injury and general wear and tear. This renewal process, however, is limited by the length of your

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PLoS one

Efficient Replication of over 180 Genetic Associations with Self-Reported Medical Data

Joyce Y. Tung[1]*, Chuong B. Do[1], David A. Hinds[1], Amy K. Kiefer[1], J. Michael Macpherson[1], Arnab B. Chowdry[1], Uta Francke[1,2], Brian T. Naughton[1], Joanna L. Mountain[1], Anne Wojcicki[1], Nicholas Eriksson[1]

1 23andMe, Inc., Mountain View, California, United States of America, 2 Department of Genetics, Stanford University, Stanford, California, United States of America

Abstract

While the cost and speed of generating genomic data have come down dramatically in recent years, the slow pace of collecting medical data for large cohorts continues to hamper genetic research. Here we evaluate a novel online framework for obtaining large amounts of medical information from a recontactable cohort by assessing our ability to replicate genetic associations using these data. Using web-based questionnaires, we gathered self-reported data on 50 medical phenotypes from a generally unselected cohort of over 20,000 genotyped individuals. Of a list of genetic associations curated by NHGRI, we successfully replicated about 75% of the associations that we expected to (based on the number of cases in our cohort and reported odds ratios, and excluding a set of associations with contradictory published evidence). Altogether we replicated over 180 previously reported associations, including many for type 2 diabetes, prostate cancer, cholesterol levels, and multiple sclerosis. We found significant variation across categories of conditions in the percentage of expected associations that we were able to replicate, which may reflect systematic inflation of the effects in some initial reports, or differences across diseases in the likelihood of misdiagnosis or misreport. We also demonstrated that we could improve replication success by taking advantage of our recontactable cohort, offering more in-depth questions to refine self-reported diagnoses. Our data suggest that online collection of self-reported data from a recontactable cohort may be a viable method for both broad and deep phenotyping in large populations.

02:37 / 12:51

BIOMEDICINE NEWS

Why the U.K. Wants a Genomic National Health Service

The U.K. plans to sequence 100,000 National Health Service patients by 2017—in a bold push to be a genomic medicine leader.

By Susan Young on October 25, 2013

By sequencing the genomes of 100,000 patients and integrating the resulting data into medical care, the U.K. could become the first country to introduce genome sequencing into its mainstream health system. The U.K. government hopes that the investment will improve patient outcomes while also building a genomic medicine industry. But the project will test the practical challenges of integrating and safeguarding genomic data within an expansive health service.

Officials breathed life into the ambitious sequencing project in June when they announced the formation of Genomics England, a company set up to execute the £100 million project. The goal is to "transform how the NHS uses genomic medicine," says the company's chief scientist, Mark Caulfield.

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MIT Technology Review SAP

Those changes will take many shapes. First, by providing whole-genome sequencing and analysis for National Health Service patients with rare diseases, Genomics England could help families understand the origin of these conditions and help doctors better treat them. Second, the company will sequence the genomes of cancer patients and their tumors, which could help doctors identify the best drugs to treat the disease. Finally, say leaders of the 100,000 genomes project, the efforts could uncover the basis for bacterial and viral resistance to medicines.

WHY IT MATTERS

DNA sequencing is expected to improve medical care, but researchers and health care providers aren't yet sure how to best use genomic data.

LateralEconomics

PPPs 2.0

Private sector builds service

Public sector contributes its resources

- Networks
- Nudges
- Non-obstruction
- Financial internalisation

Subject to openness and privacy undertakings

Much more for each in partnership than alone

Australia acquires new research assets

Government as impresario

- Each PPP generates
  - Services as public and/or private goods
  - Big data as a public good
  - Industry development

← Emergent Distributed on a platform Coercively, centrally funded →

Lateral Economics

Government as impresario

Public Private Partnerships
- 23andMe

Directory
- HealthKit

Interfaces
- Open Aust
- SeeClickFix
- CareMonkey

Internal Innovation
- OneTouch
- FixMyBudget
- e-taskr

Chaperone
- Murmur

Validation
- Rate my prof
- Rate Govt Services

Seeding altruism
- Code for Australia

Building platforms
- Open Australia
- Sense-t

← Emergent Distributed on a platform Coercively, centrally funded →

Lateral Economics

The art of the PPP

To come up with terms of engagement which

- Play to each sector's strengths
- Including cultural/economic norms/imperatives
- Within the hard-won traditions of modern liberal democratic government
- Data PPPs might reinvigorate the search for socially advantageous PPPs elsewhere
- It's the interface stupid!

Ag

Government as impresario

RDCs

CRCs

Industry Levies

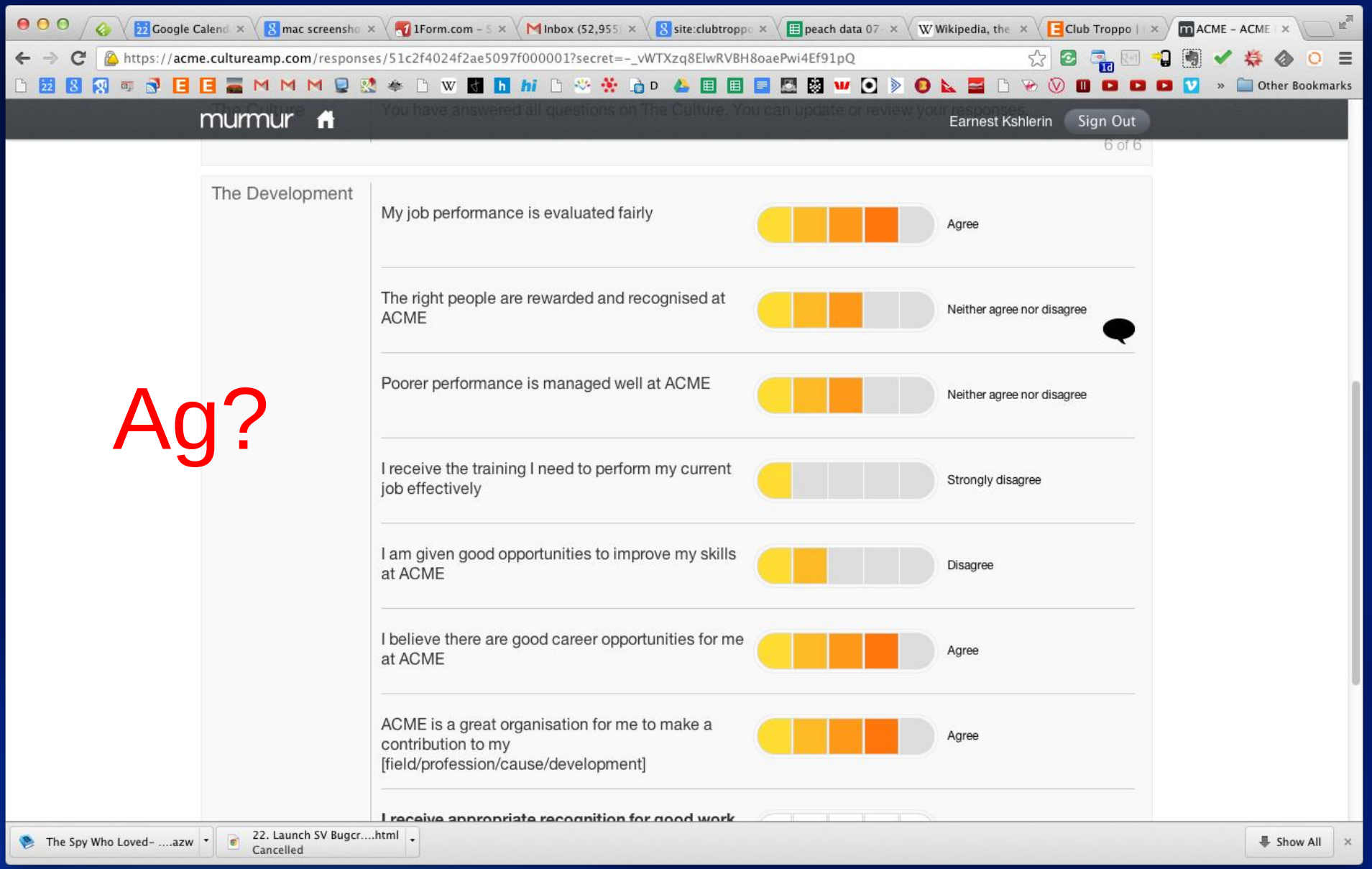
Extension services

State supported co-ops

Action Agendas strategies etc

← Emergent Distributed on a platform Coercively, centrally funded →

Lateral Economics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murmur
Earnest Kshlerin
Sign Out
6 of 6
The Development
My job performance is evaluated fairly
Agree
The right people are rewarded and recognised at ACME
Neither agree nor disagree
Poorer performance is managed well at ACME
Neither agree nor disagree
I receive the training I need to perform my current job effectively
Strongly disagree
I am given good opportunities to improve my skills at ACME
Disagree
I believe there are good career opportunities for me at ACME
Agree
ACME is a great organisation for me to make a contribution to my [field/profession/cause/development]
Agree
Ag?
The Spy Who Loved- ....azw
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www.sense-t.org.au

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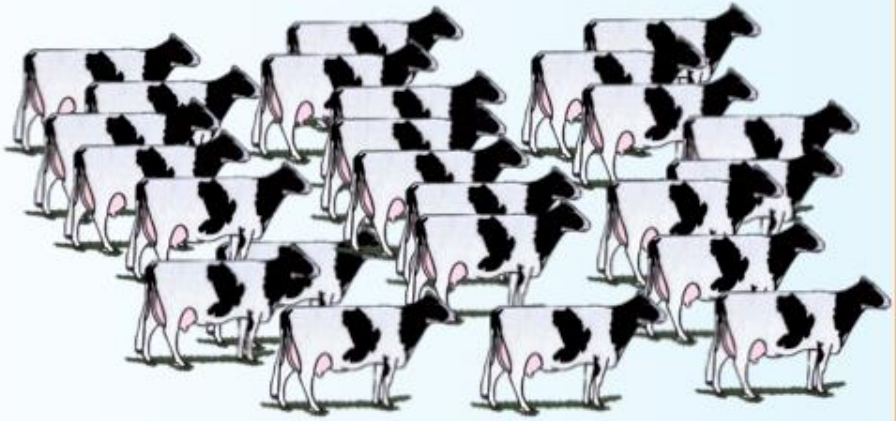
Sense-T is creating the world's first economy-wide intelligent sensor network that integrates different data sources to build a digital view of Tasmania. Sense-T will give business, governments and communities the tools to make

3323 bulls with
Australian daughters

Australian national reference set



9563 cows
deliberately selected

The DNA sample from any bull or cow in this country is now compared against a large reference set

or

Dairy Futures CRC

Australian Dairy Herd Improvement Scheme

The ultimate delivery of DNA technology is such that the catalogue doesn't change – it just improves its accuracy. Very simple implementation!

Genotyping cows is as easy as collecting tail hairs

General shot of cows

Dairy Futures CRC

Genomics is having its greatest impact in industries that already have infrastructure for genetic evaluation and is creating payoffs for public, industry and private investors.

Often no one party could achieve the outcomes.

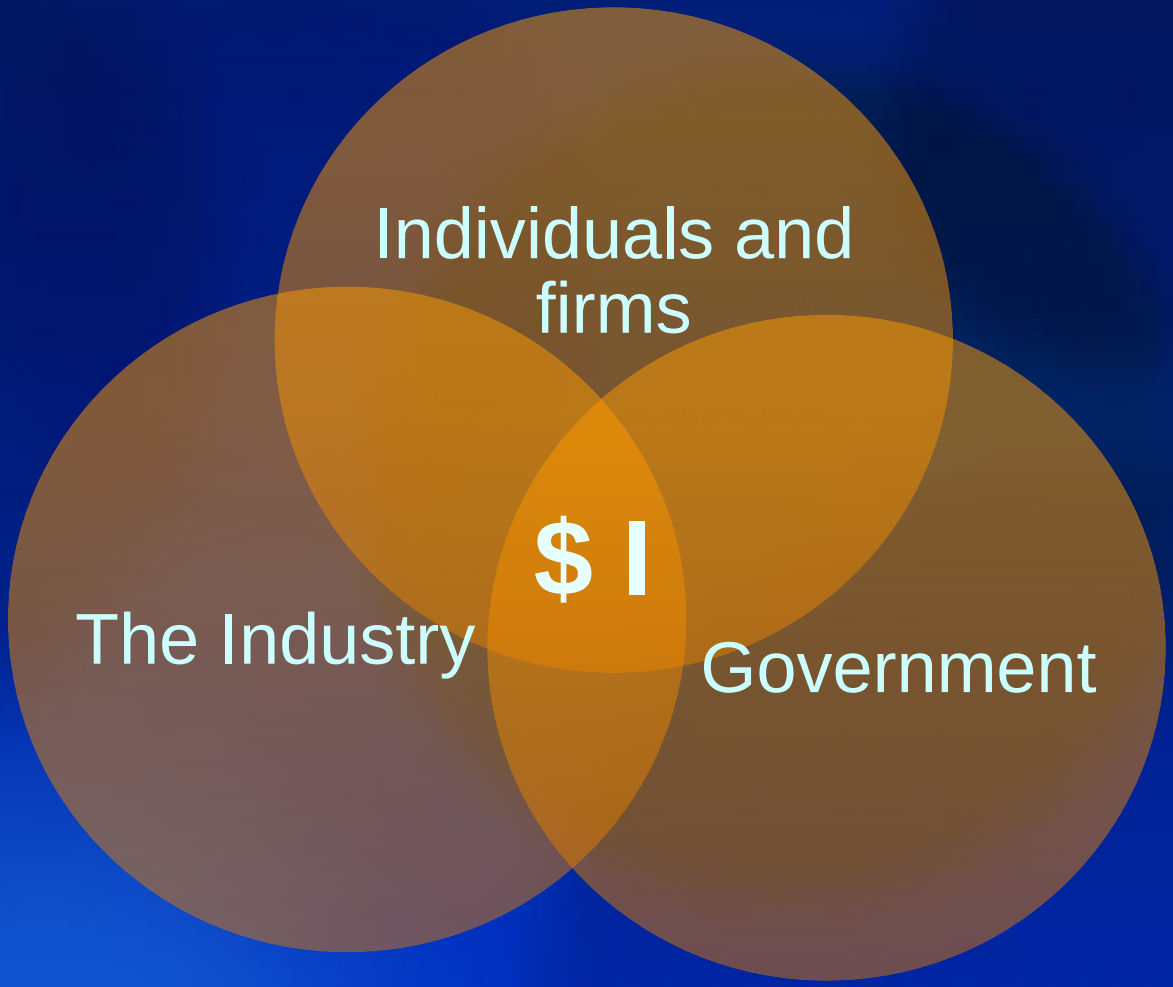
Genomic analyses require lots of infrastructure of capital and skill and the public partnership can't justify doing this alone, and farmers' involvement improves confidence that outcome will be beneficial.

Dairy Futures CRC

Success depends

- public funding
- industry funding and;
- farmers providing access to herds, part-paying for genotyping, and providing access to years of records of on-farm performance from which the analyses can be run that deliver on the desired outcomes of economic development, biosecurity and biodiversity.

This often also requires third parties that have long associations in working with farmers to build this information network (breed societies, local herd improvement businesses).


Individuals and firms
$ I
The Industry
Government

It’s the institutions, it’s the interface stupid