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Identity is collaborative

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Perfect security in isolation

Collaborations

There are the good

- Gaining of “self”
  - Resources
  - Time
  - Skills
  - Capacity

⇒ ***Gaining CONTROL***

And there are the bad

- Loss of “self”
  - Resources
  - Capability
  - Skills

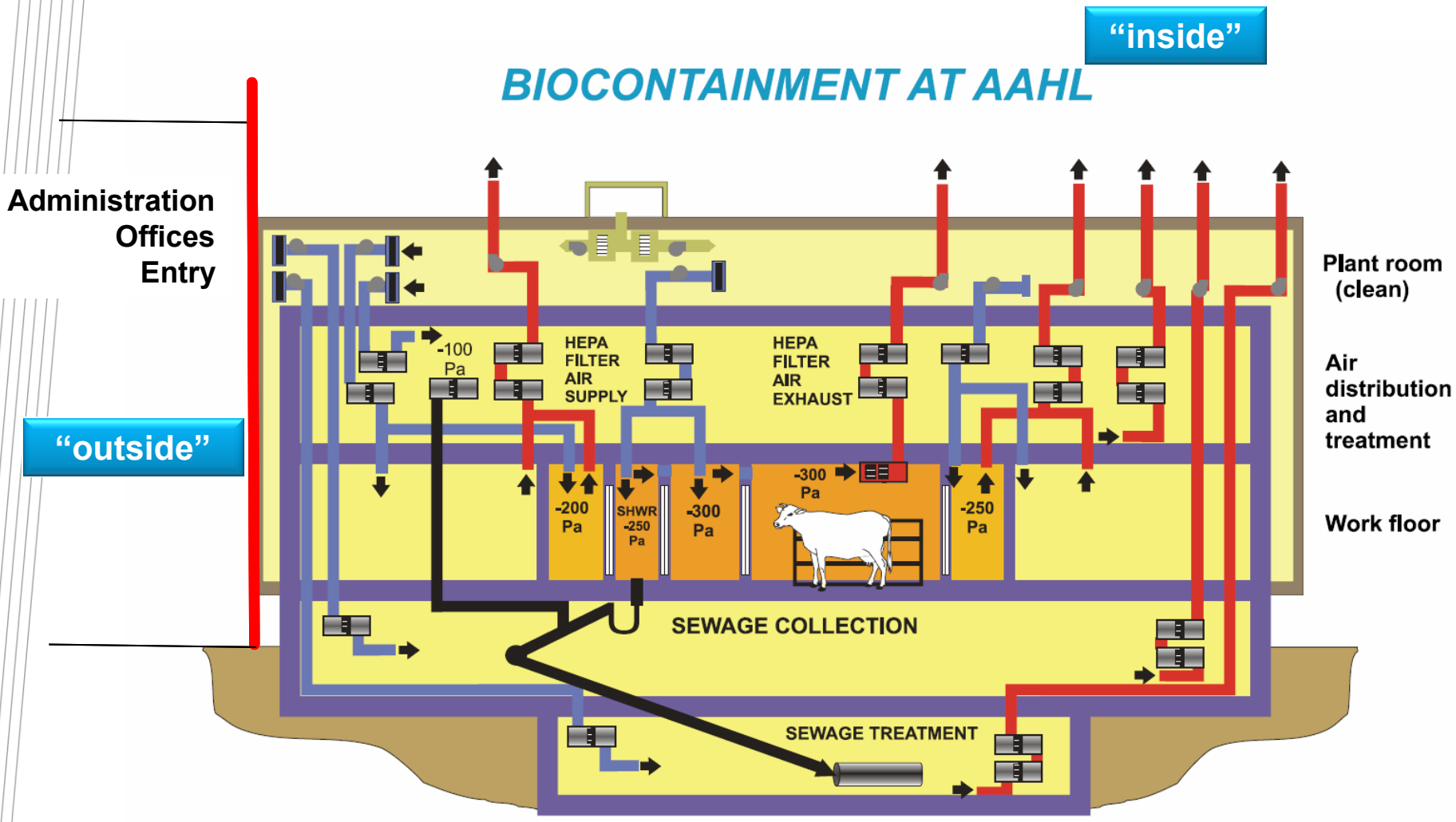
⇒ ***Loss of CONTROL***

The need to collaborate: Responding to emergency diseases

- **AAHL - vital in maintaining Australia's response to exotic, new and emerging animal diseases.**
- **High level biocontainment facility – PC 4**

The Outside and Inside of AAHL

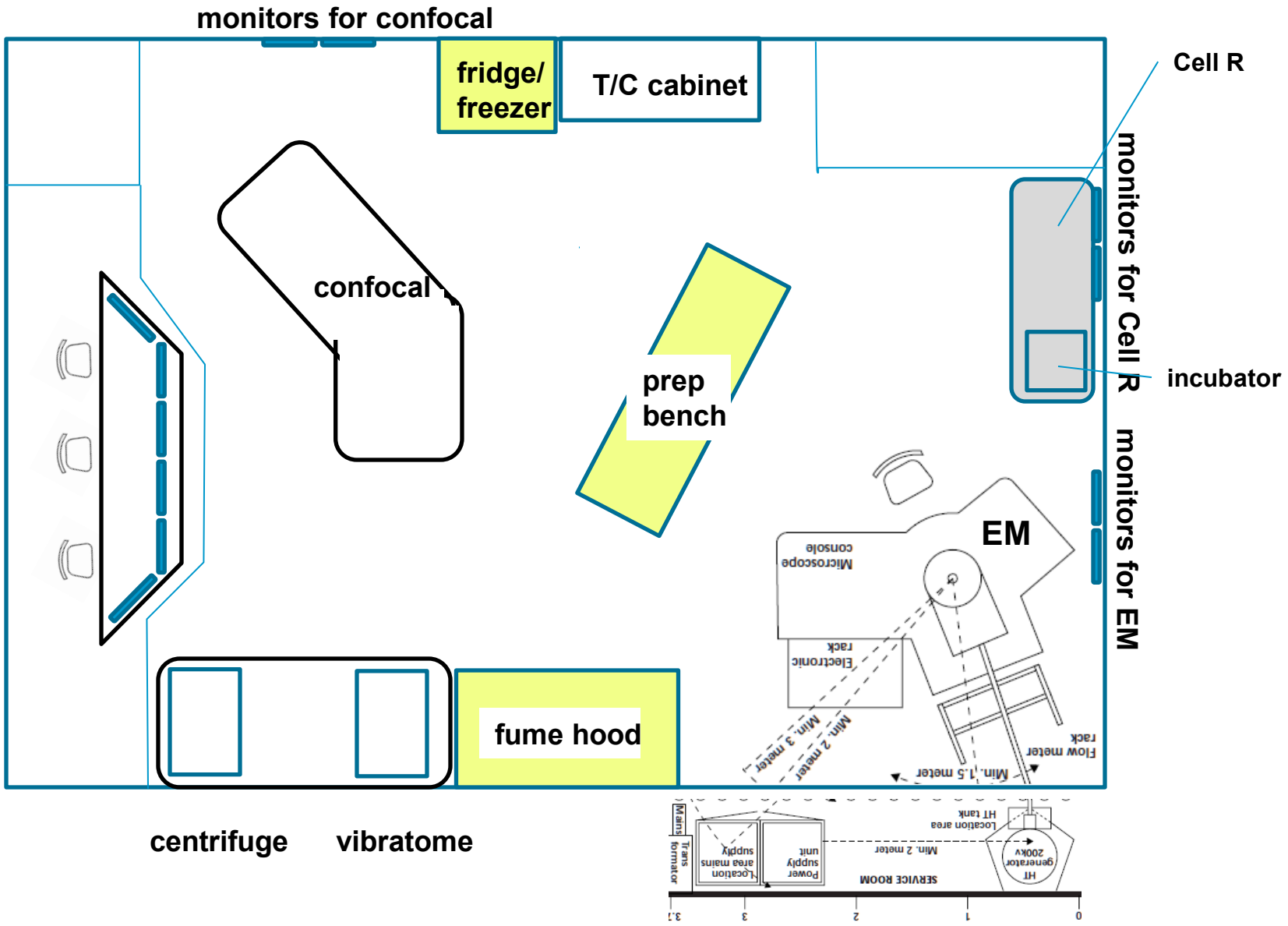
Containment Barrier



Walk through Airlock Doors at AAHL

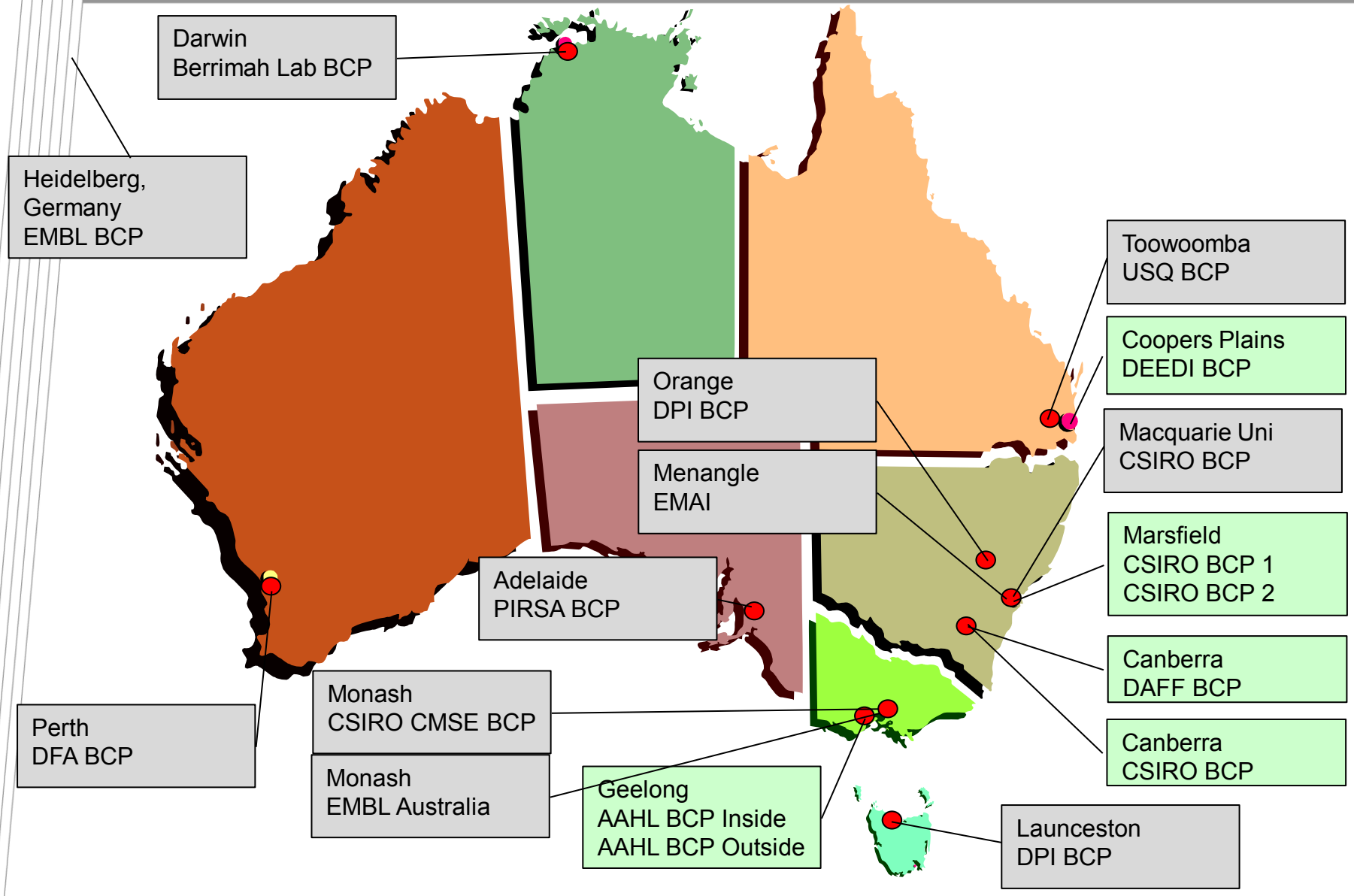
Walk through an Airlock Doors at AAHL

PC4 biocontainment – current laboratory

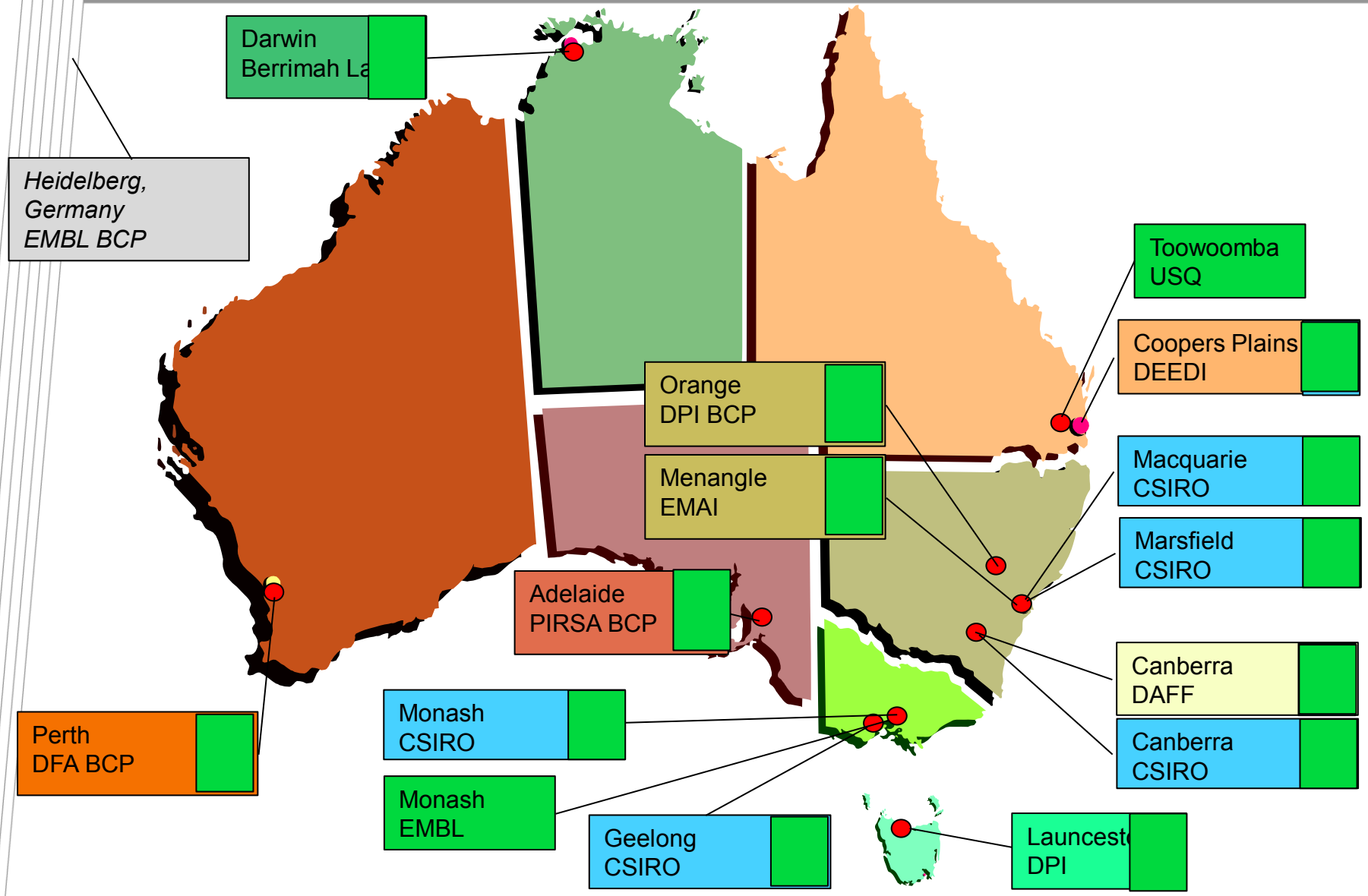

monitors for confocal
fridge/
freezer
T/C cabinet
Cell R
monitors for Cell R
monitors for EM
incubator
confocal
prep
bench
EM
Microscope
console
Electronic
rack
Min. 3 meter
Min. 2 meter
Min. 1.5 meter
Flow meter
rack
fume hood
centrifuge
vibratome
Mains
Trans
formator
Location
area mains
supply
Power
supply
unit
Min. 2 meter
SERVICE ROOM
HT
generator
200kV
Location area
HT tank
3.1
3
2
1
0

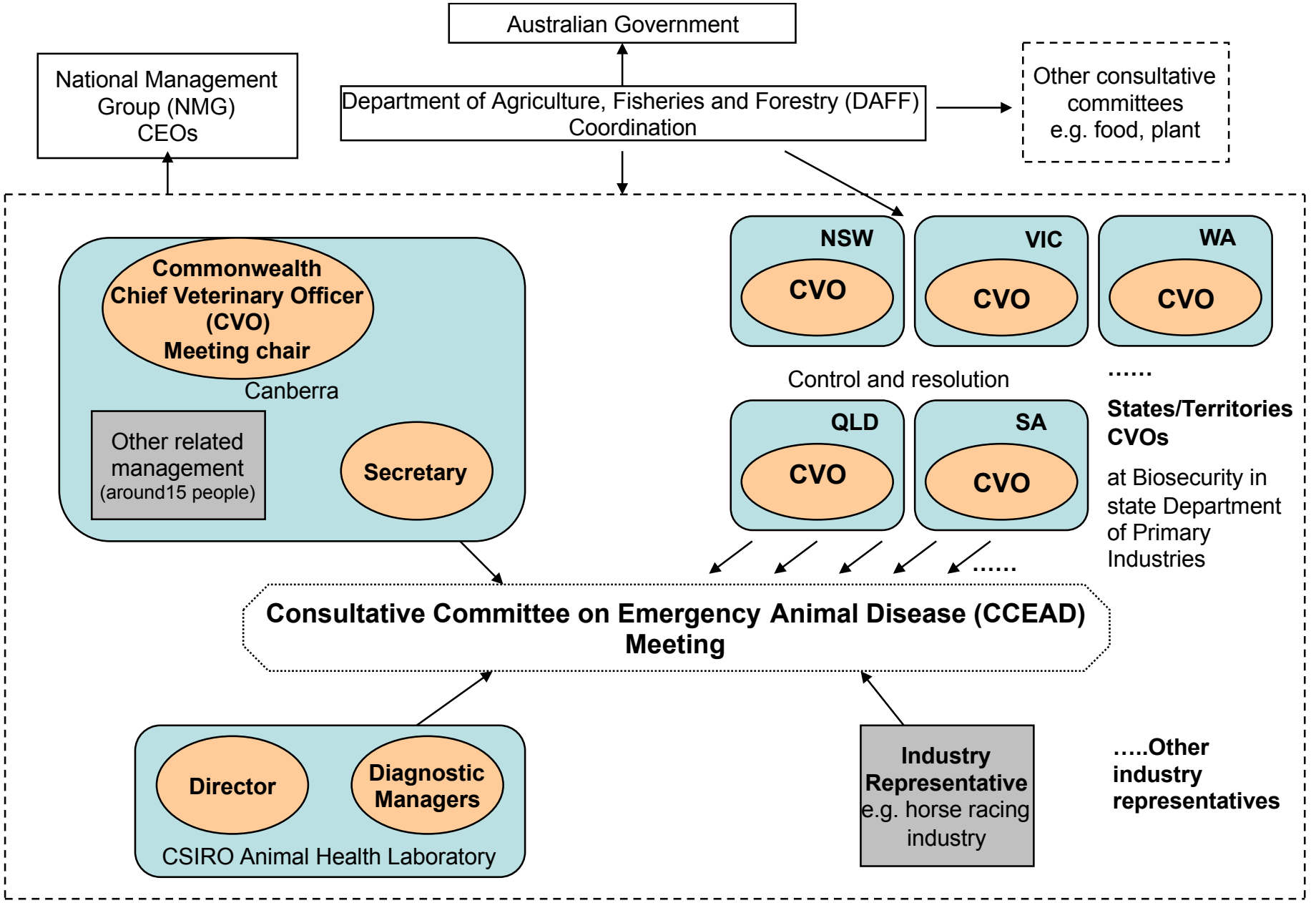
BCP at Work – Geelong “outside” meeting room

Collaborative Biosecurity Laboratory – Partner Sites

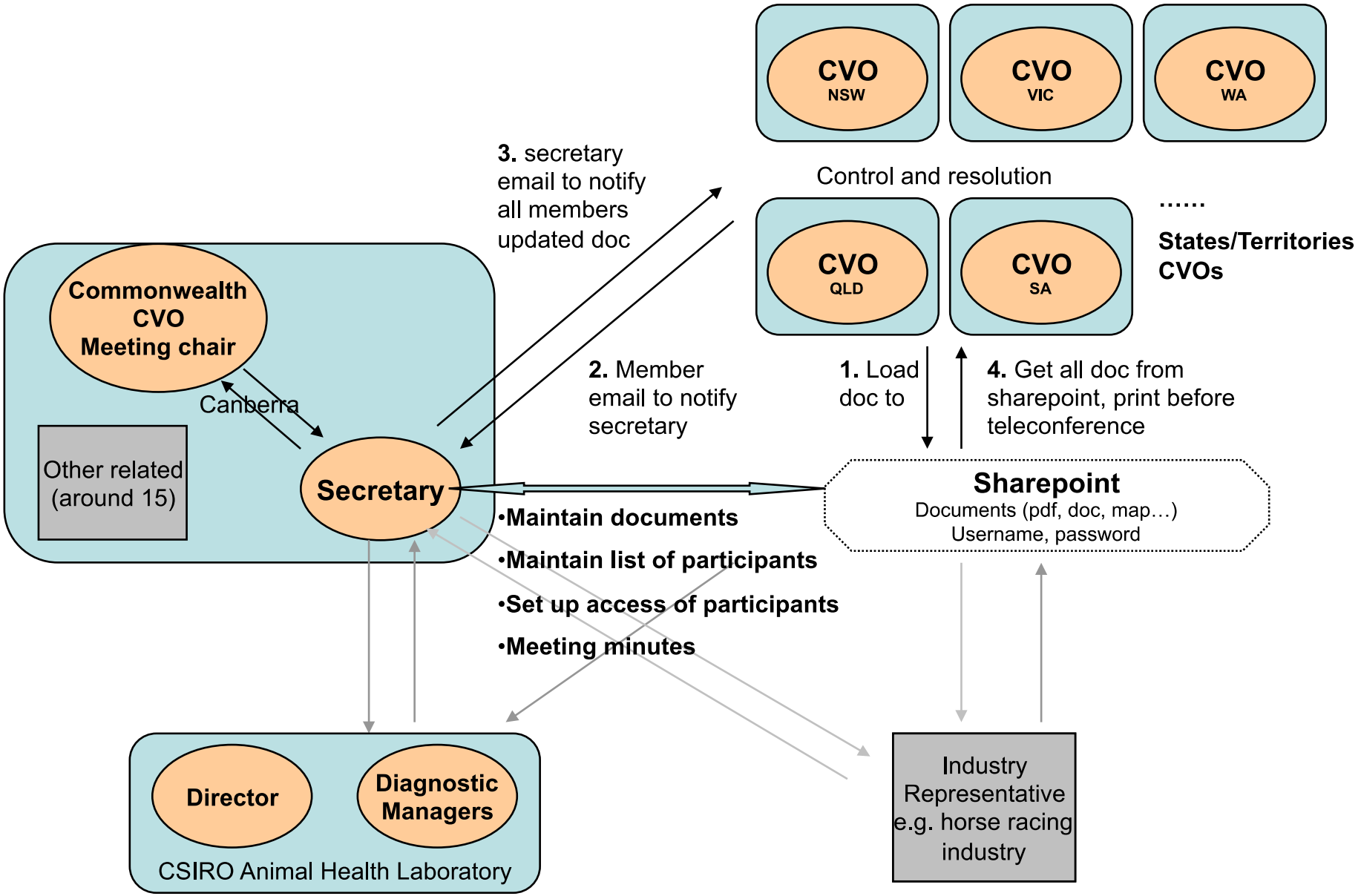


National Biosecurity Virtual Laboratory – Authentication Domains




Australian Government
National Management Group (NMG) CEOs
Department of Agriculture, Fisheries and Forestry (DAFF) Coordination
Other consultative committees e.g. food, plant
Commonwealth Chief Veterinary Officer (CVO) Meeting chair
Canberra
Other related management (around15 people)
Secretary
NSW
CVO
VIC
CVO
WA
CVO
.....
Control and resolution
QLD
CVO
SA
CVO
States/Territories CVOs
at Biosecurity in state Department of Primary Industries
.....
Consultative Committee on Emergency Animal Disease (CCEAD) Meeting
Director
Diagnostic Managers
CSIRO Animal Health Laboratory
Industry Representative e.g. horse racing industry
.....Other industry representatives

- Information Sharing -



Information sharing

- ***Multiple*** **methods of conducting research in real-time using the BCP**

- **Interactions with information from different locations:**
  - Specialised Instruments
  - PCs
  - Databases
  - People
- **Ease of use – reliability -- no time to ring the help desk.**

Extreme care is required in about who sees the information

- **Identity in these collaborations is KEY!**

Single identity is as likely as a magnetic monopole

The 'traditional' identity paradigm considers *identity* outside any *context*.

Often unstated assumption that a person has a *single identity*, and that they choose how disclose different parts of this at different times.

Classic Formalisation (?) of Identity

- **Let *L* be a First Order Logic language, ϕ(_) be a predicate in *L***

- **Identity formalised in a two place predicate of *L*, rewriting it as " = " and adopting the universal closures of:**

  REF: $x = x$

  Liebniz's Law: $x = y \rightarrow [\phi(x) \rightarrow \phi(y)]$

- **But that gets us into paradoxes!**
  - E.g. Plutarch's *The Ship of Thesus*
  - The paradox of change (ϕ is static)

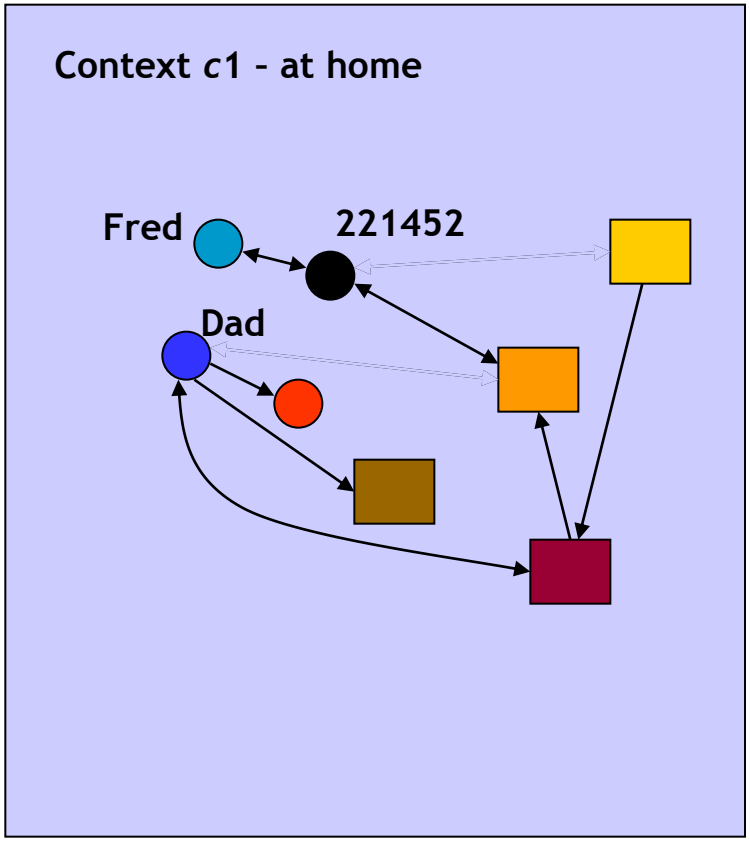
Identities: relative, absolute, …

Suppose that we allow *F, G* predicates in *L* then propose

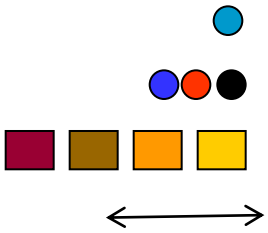
RI (relative identity): ***x* and *y* are the same *F* and *x* and *y* are *different* Gs**

- **Geach, P.T. (1967/8). *Identity*. Review of Metaphysics, 21, 3-12.**
- **Geach, P.T. (1973). *Ontological relativity and relative identity*. In M.K. Munitz (Ed.). Logic and Ontology (pp. 287-302). New York: New York University Press.**
- **Deutsch, H (2009). *Relative Identity.* Stanford Encyclopedia of Philosphy. Spring Edition 2009. Edward N. Zalta, Principal Editor. Online http://plato.stanford.edu/archives/spr2009/entries/identity-relative/**
- **Noonan, H. (2009). *Identity.* Stanford Encyclopedia of Philosphy. Winter Edition 2009. Edward N. Zalta, Principal Editor. Online http://plato.stanford.edu/archives/spr2009/entries/identity/**
- **…**

Identity is a digraph *



One **individual**
One **context**



"One True Name"

Names - pseudonyms

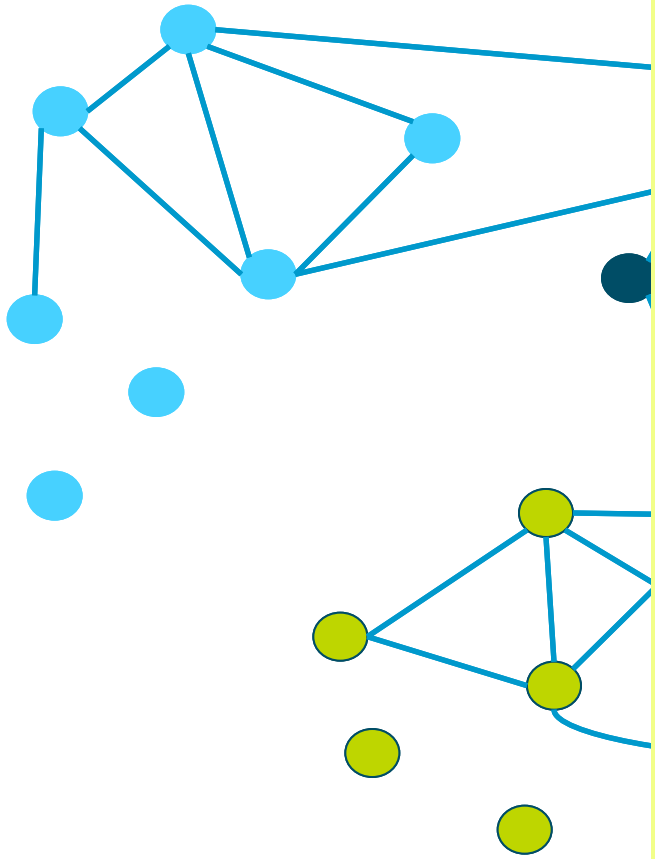
Information & Resources

Edges - relations

* …and "*Language is a virus*"

(With apologies to L. Anderson)

Identity



Complete identity

- **Relation over a set of *all information* associated with an entity that can be used to describe the entitity in *all possible contexts* of use.**

Relative identity

- **Relation over a *subset of information* associated with an entity in a *particular context* that can be used to uniquely characterise that entity**

Context

- Geographic
- Temporal
- Social & Cultural
- Legislative
- Resources

Geographic

- Rel
- Lat
- Lar

Social & Cultural

Average young Australian
- Middle income
- Urban
- 18-24 year old

Business user
- Travelling sales rep
- 24-30 year old

Academic …

Identity Construction

- User control
- External or other controls

Activities

Type

Interactive
- Social networks
- Content production & management

Personal

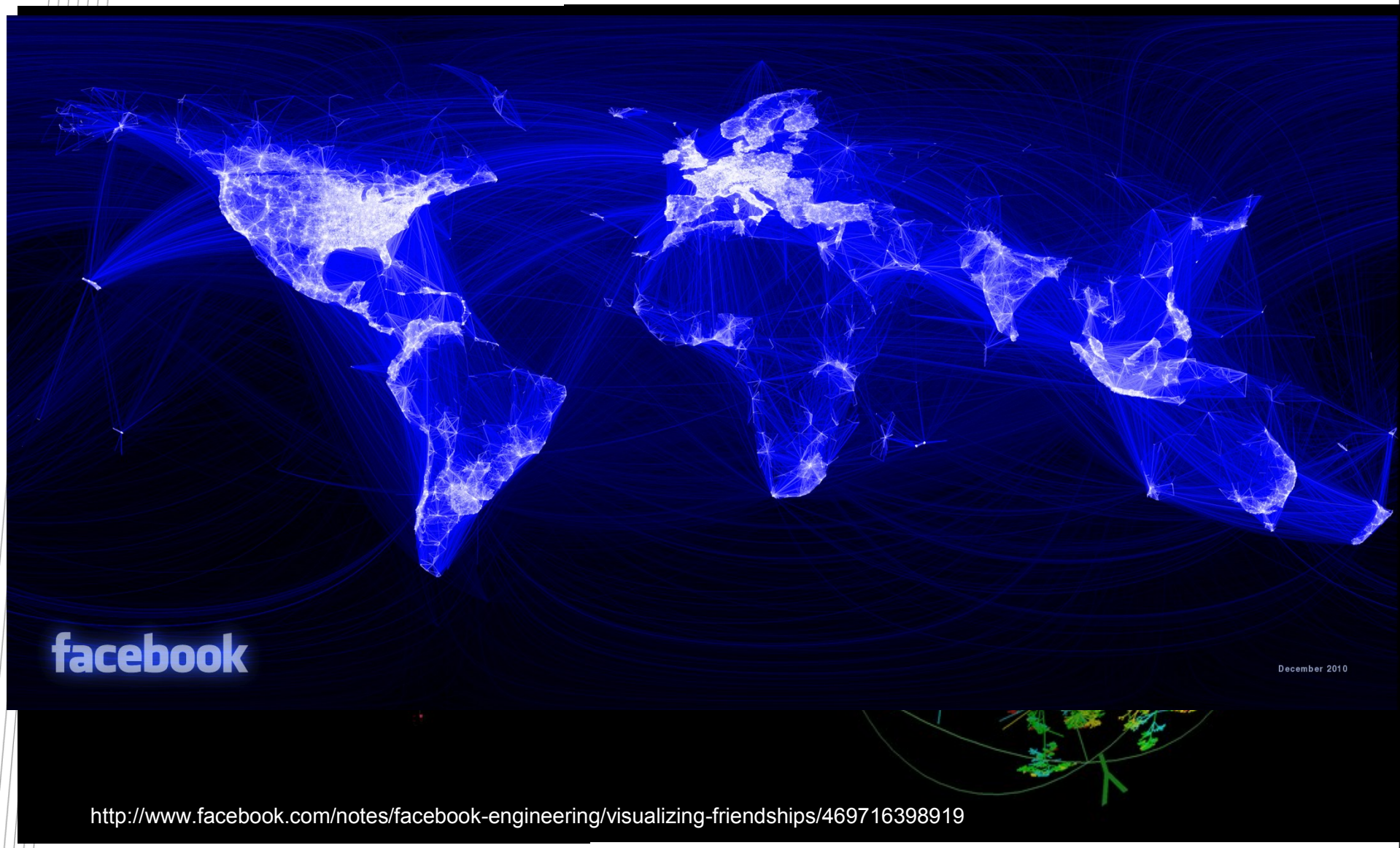
Information Retrieval

Modality

- Recipients
- Content
- Regularity

Domain

- Entertainment
- Personal
- Business
- Banking
- Health
- Education



http://www.facebook.com/notes/facebook-engineering/visualizing-friendships/469716398919

Collaborations and identity

H1: a *collaboration identity* is an agreed upon union of disjoint *relative identities*

H2: A collaboration identity has a *higher level of assurance* about identity claims than any of the single relative identities.

Need to develop a theory of identity!

Most likely there will be a notion of congruences and equivalence classes

A different perspective?

Security

"There are only specific operations allowed on the collaborative identity graph."

Privacy

"Relative identities not in the collaboration identity graph cannot be discovered or disclosed."

Trust

"No one can use the collaboration identity graph in a surprising way"

Assuring good behaviours in a collaboration

1. **Contract**
   - Negotiate ahead of any collaboration or formation of a collaborative identity
   - Needs authentication of relative identity claims

2. **Proof of good behaviour - appeal to agreed upon contract then prove:**
   - *no change* to individual relative identity and/or
   - *no violation* against collaboration identity

3. **Compliance, Accountability and Provenance**
   - Maintain evidence of behaviours
   - Allows checking of behaviour against contract
   - Able to replay “what happened”

BUT

It’s an implementation issue

- **Ensuring “good graph management” requires careful risk/benefit assessment**
- **Otherwise…**

Conclusion – watch your graph!

- **Collaborations are inevitable. Resistance is useless.**
  - *Identity* is always associated with a collaboration
- **Assuring "good" collaborations is possible**
  - Contract
  - Proof of adherence to the contract
  - Compliance, accountability and provenance
- **Remember the "but"…**
  - Need to consider the *total impact* of the collaboration on "your" relative identity contribution