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IP & Innovation: challenges presented by open collaboration

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ACC Association of Corporate Counsel AUSTRALIA

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IP and Innovation

The challenges presented by open collaboration

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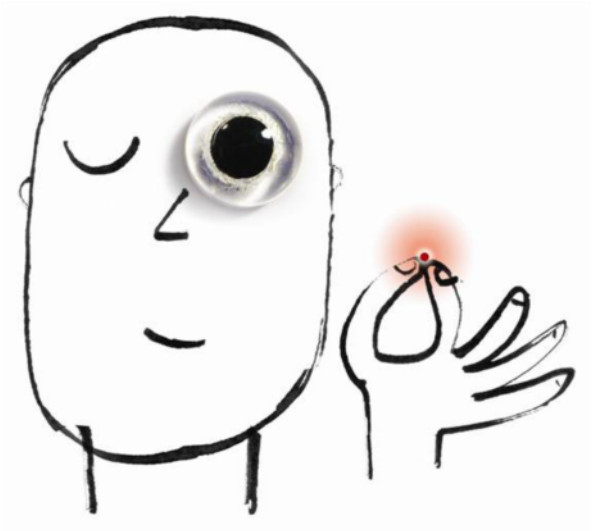
Overview

watermark
Intellectual Asset Management

- Models of Open Collaboration
- Pre collaboration preparation
- Background IP
- Ownership of IP
- People management
- Exploitation of the outcomes
- Exit, Termination and Winding Up

Open Collaboration



Procter & Gamble

- In 2000 P & G's stock price collapsed as a consequence of a failed merger with two drug companies, amid rising costs of raw materials and the announcement of a 6 year restructure plan. The CEO resigned.
- By 2005 the share price doubled by the introduction of 'open innovation'
- Did so by dramatically increasing the number of partnerships, licensing arrangements increasing the rate of innovation 3-fold
- In 2005, >35% of new P&G products have elements originating outside the company (up from 15% in 2000)
- 45% of initiatives in its product development had key elements discovered externally
- Cost of innovation fell and innovation success rate doubled
- R & D productivity increased by nearly 60%

> Teams that are large, virtual, diverse and composed of highly educated specialists are crucial to challenging projects

> Members of complex teams are less likely – absent other influences – to share knowledge freely, to learn from one another, to shift workloads flexibly to break up unexpected bottlenecks, to help one another complete jobs and deadlines, and to share resources – in other words, to collaborate.

> ...the greater the proportion of experts a team had, the more likely it was to disintegrate into non-productive conflict or stalemate.

HBR 2007/11 Gratton and Erickson

What is open collaboration?

- The sharing of risks, resources, responsibilities and rewards
- The co-creation of intellectual assets
- Collaboration across existing corporate/structural boundaries
  - within an organisation
  - across different organisations

Dimension	Advantages	Challenges	When to use
Open	Attracts a wide range of possible ideas from domains beyond your experience	Screening all ideas is time-consuming and expensive The best idea generators prefer closed systems where their ideas are more likely implemented	Proposed solutions can be evaluated cheaply You don't know what users want necessarily or users conflict
Closed	Able to obtain the best solution from a select knowledge domain	Need to know how to identify the right knowledge domain and pick the right parties	You need a small number of problem solvers Correct knowledge domain and parties to draw upon are known
Hierarchical	Kingpins control the direction and value of innovation	The right direction may be unclear	You have the capabilities and knowledge needed to define the problem and evaluate solutions
Flat	Players share the costs, risks and technical challenges of innovating	All parties must arrive at mutually beneficial solutions	No single player has the necessary breadth of perspective or capability to solve the innovation problem

Open Innovation types and mechanisms

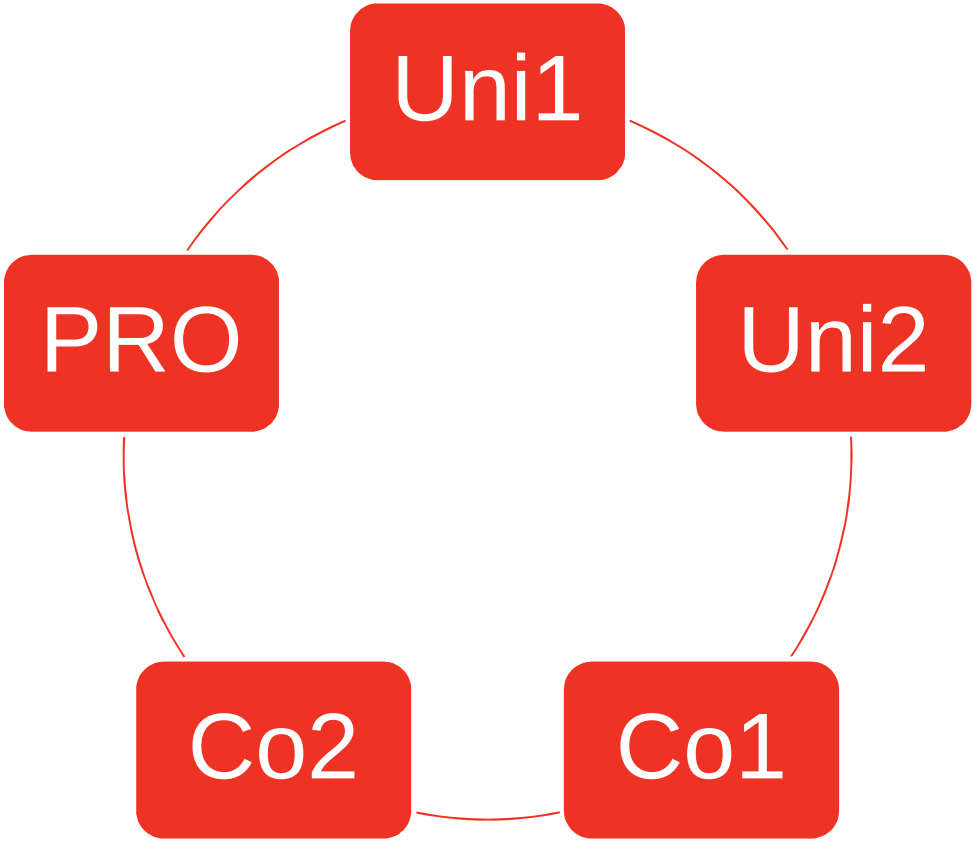
Open Innovation Type	Description	Mechanisms
Inbound • Pecuniary (acquisition) • Non-pecuniary (sourcing	Requires organisation's innovation processes to external inputs and contribution	• In-licensing IP • Scouting • Crowdsourcing • Brokers
Outbound • pecuniary (selling) • non-pecuniary (revealing)	Allowing unused and under utilised ideas and assets to go outside the organisation for others	• out-licensing • 'donating' • Incubator models • Spin outs
reciprocal or multidirectional Interactive/joint outcomes	Involves purposive inflows and outflows to collaboratively develop and/or commercialise innovation	• Strategic alliances • Joint ventures • Consortia

Adapted from Cheeseborough & Bogers, 2014

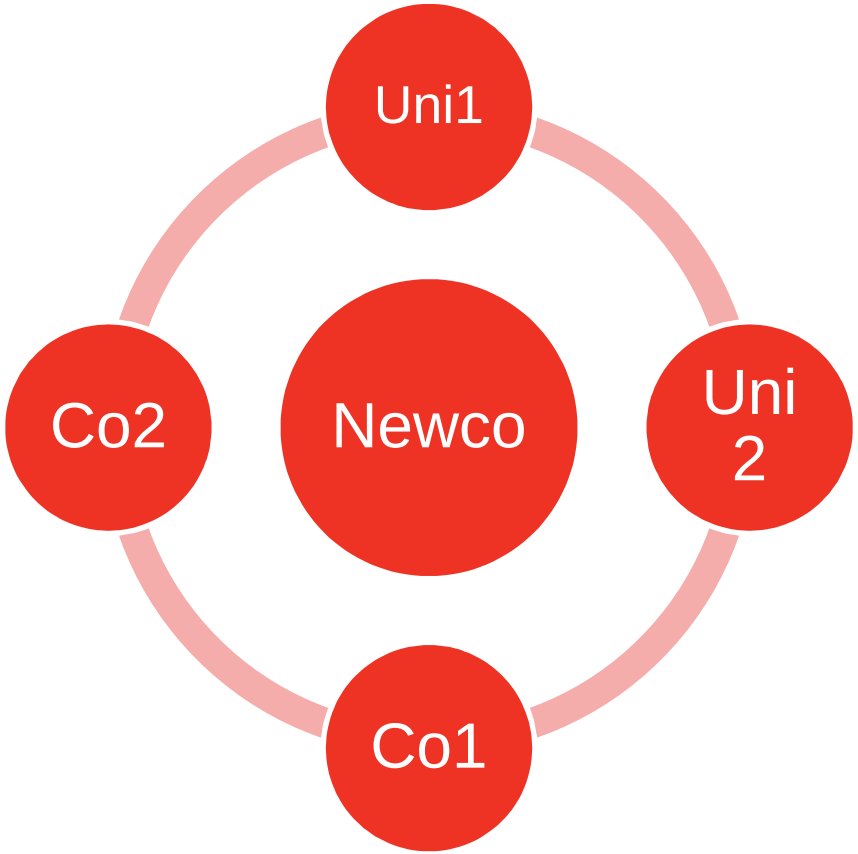
Structural considerations

- Ease of decision making
- Fair and equitable governance
- Ability to take advantage of tax structures
- Employment of personnel
- Responsibility (to manage IP)
- Ease of commercialisation
- Ease of revenue distribution
- Ability to exit/wind up/terminate
- Bayh Dole considerations

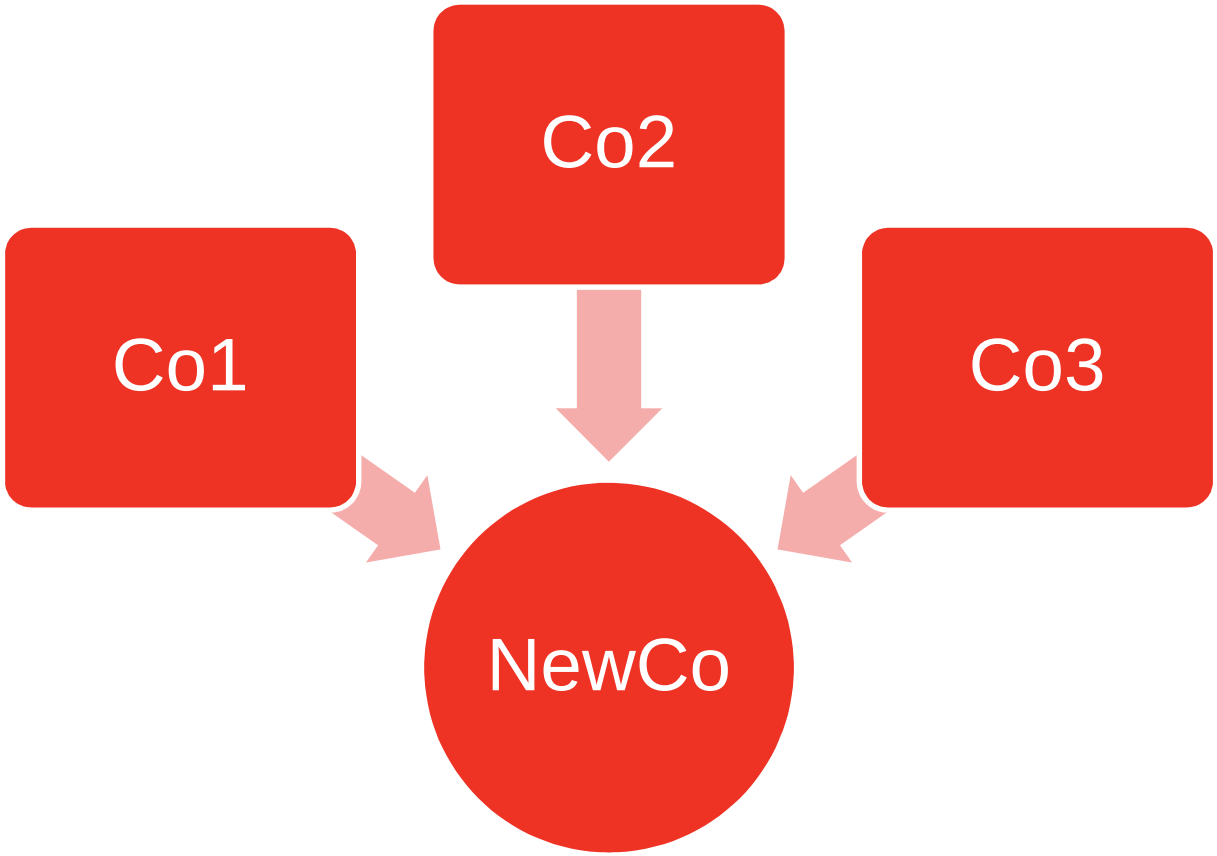
Research Consortia



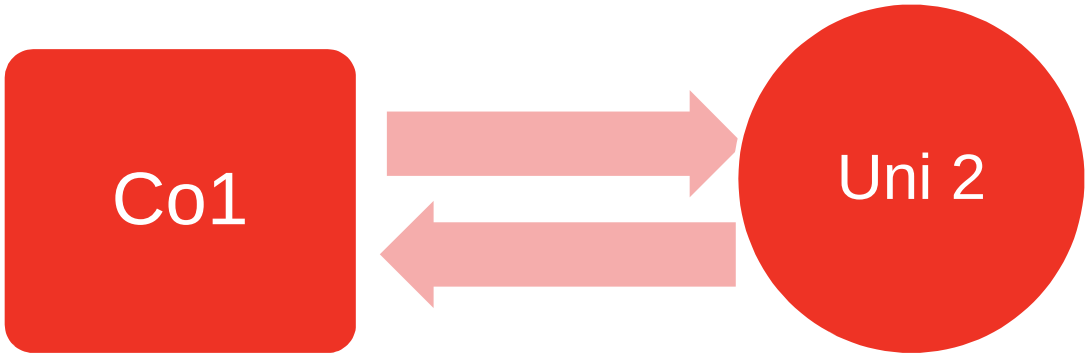
Co-Operative Research Centre



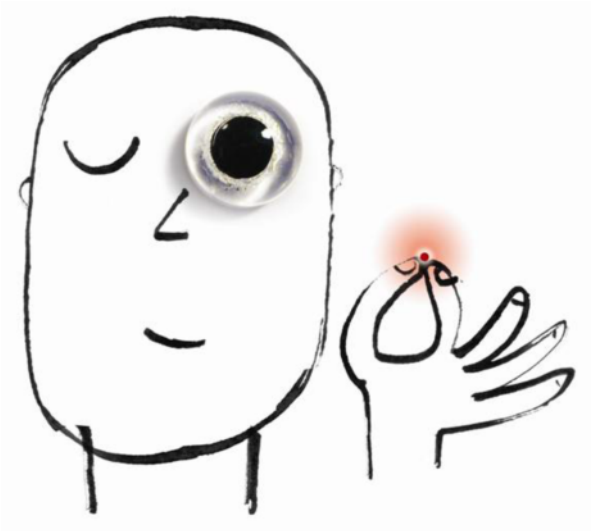
Patent Pool



Straight Research Collaboration



Pre Collaboration preparation



Before you execute any agreement

- Clearly understand purpose, drivers and outcomes in a strategic context. Yours and the other party's.
- Understand the collaborative landscape - IP positions of the competitors and of collaborators
- Identify key personnel* and understand their drivers
- Ensure key personnel arrangements align with strategic goals and understand the risks of placing them into a new entity.

General drivers for business and research collaborators

General drivers for researchers	General drivers for businesses
Publication and learning opportunities	Competitive advantage
Income stream from licensing	Speed of commercialisation
Sponsored funding for current and future research	Increasing enterprise value
Challenging research problems to solve	Access to expert knowledge and highly skilled researchers
Research work-integrated learning opportunities for post-doctorates and students	Productive use of resources
Employment opportunities for graduates and early career researchers	Patent rights for market exploitation
Access to company data for further market relevant research	Funding access or funding business case
Commercialisation expertise in research (e.g. prototyping)	Access to cutting edge equipment and facilities
Raising the institution's reputation and profile (domestic and international)	Market image and reputation

Source: Australian IP Toolkit for Collaboration Guide
www.buisness.gov.au/iptoolkit

General research organisation focus	General business focus
Advancement of knowledge	Market-driven
Academic freedom	Return on investment
Publication of results	Very cost conscious
Education of students	Profit-based
More relaxed approach to time frame and milestones	Particularly sensitive to timing and milestones
Competing demands on research resources	Time and research constraints

Source: Australian IP Toolkit for Collaboration Guide
www.buisness.gov.au/iptoolkit

Diagram 3 – Five components of collaboration projects

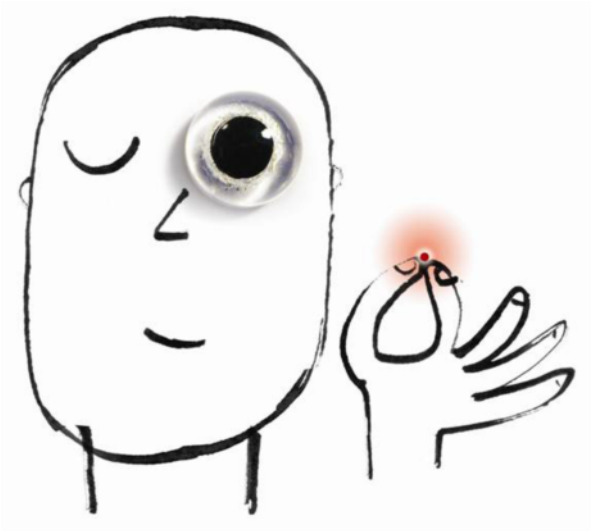
COLLABORATION COMPONENT	COLLABORATION FOCUS
1. Purpose and scope – what is it for?	What is the aim and intended use of the outcome of the collaborative project?
2. Inputs – what do you need to use?	What input does each party bring? E.g. expertise, background IP, resources, equipment and facilities.
3. Project – how is it planned to work?	How will the project be managed and assessed by the project team and by the collaborating parties?
4. Outputs – what results are planned?	What is the result of the project? E.g. new or improved product, service, process and test.
5. Post-project – what needs to continue?	What are the post-project needs and obligations? E.g. confidentiality, licensing and IP protection.

Source: Australian IP Toolkit for Collaboration Guide
www.buisness.gov.au/iptoolkit

Know and control your IP position

- Understand your IP asset base, audit if necessary
- Be clear and quarantine IP which is not relevant
- Create IP you want to actively manage and/or which you wish to control. Adopt a ‘Blue Ocean’ Strategy.
- Own the IP…..
- Ensure clear title to Background IP *
- Agree what is Background IP
- Establish ground rules for invention – what is that your organisation wants to control

Background IP



Research Co

- Collaboration as a philosophy is important to academics, as is sharing of information
- NHMRC etc funding at least in part depends on academic publication
- Inventors worked on vector constructs including cytokines and antigens to improve their research
- At a conference, they talked to a Canadian group and followed up upon return to Australia to discuss collaboration
- Research Co was established on the back of research into Adenovirus vectors for vaccines to deal with bird flu. Inventors were not involved.

What Happened to Research Co?

What is Background IP

- IP that exists prior to the collaboration commencement
- IP that is comes into existence after the date of commencement of collaboration
- IP that comes into existence ‘other than in connection with the collaboration’

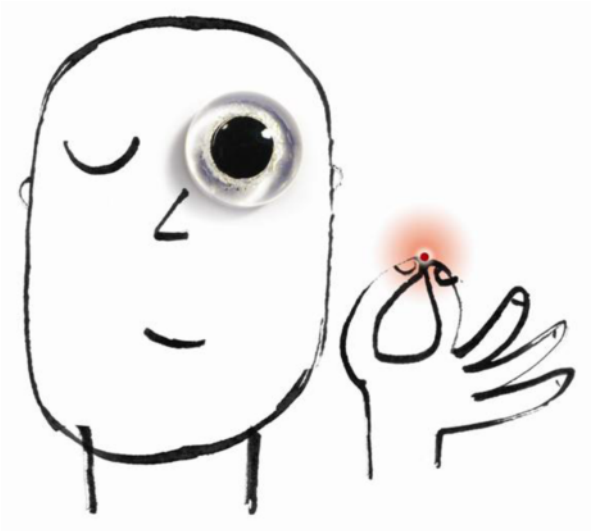
The people factor

- Carry out due diligence: understand your own and your collaborators' asset base(s)
- Know the networks of your inventors, and their strengths and weaknesses
- Monitor the patent landscape including your competitors including collaborators
- Be clear about obligations to the collaboration

How will Background IP be accessed?

- Exclusive/Non-exclusive access for the purposes of the collaboration
- Royalty-free?
- Field and/or territory restriction
- Time limited?
- Retention of research and/or teaching rights for an academic or public research organisation
- How to deal with/manage Improvements of Background IP

Ownership of IP
(‘foreground’ or ‘project’ IP)



CRC IP conundrum

- Four organisations including a PRO, two universities and a corporation collaborated to produce new IP in polymer extrusion technology
- In each organisation at least two people were involved in their part of the research: a supervisor and one or more staff, not all of whom were permanent
- Research meetings were attended by Supervisors in the labs
- When it came time to identify inventors, the list was long and surprising
- An expensive and comprehensive inventor analysis was undertaken
- Each organisation and person had conflicting interests

What Happened to CRC IP?

Consider strategic purpose of the collaboration

- Resolving ownership issues will depend on the strategic purpose of the collaboration
- Ownership will be closely linked to and influenced by revenue/income expectations
- Issues include
  - Who brings what to the collaboration, and how is to be used/exploited
  - Who is to own new IP ('Project IP')
  - What are the rights and obligations of each party in respect of the IP
  - Who gets a benefit from commercialised IP, and how
  - What happens to the IP if the collaboration terminates or fails

Project IP

- Consider:
  - IP ‘created or arising in the course of’ the collaboration
  - IP ‘associated with any outcomes of the project in relation to’ certain areas of the project
  - IP created ‘for the purposes of’ the project
  - IP created or arising in the course of the project including all the IP in the Deliverables
  - Developments originates or conceived during the Agreement but completed or reduced to practice after the conclusion of the Agreeement Board of Trustees of the :Leland Stanford Junior University v Roche Molecular Systems Inc et al (US Sup Crt, 6 June 2011)

Jointly owned IP - Australia

16 Co-ownership of patents

(1) Subject to any agreement to the contrary, where there are 2 or more patentees:

(a) each of them is entitled to an equal undivided share in the patent; and

(b) each of them is entitled to exercise the exclusive rights given by the patent for his or her own benefit without accounting to the others; and

(c) none of them can grant a licence under the patent, or assign an interest in it, without the consent of the others.

(2) Where a patented product, or a product of a patented method or process, is sold by any of 2 or more patentees, the buyer, and a person claiming through the buyer, may deal with the product as if it had been sold by all the patentees.

(3) This section does not affect the rights or obligations of a trustee or of the legal representative of a deceased person, or rights or obligations arising out of either of those relationships.

35 U.S. Code § 262 - Joint owners

- In the absence of any agreement to the contrary, each of the joint owners of a patent may make, use, offer to sell, or sell the patented invention within the United States, or import the patented invention into the United States, without the consent of and without accounting to the other owners
- Enforcement of patents requires BOTH owners to co operate by filing the infringement suit
- *Inventors may apply for a patent jointly even though (1) they did not physically work together or at the same time, (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.*

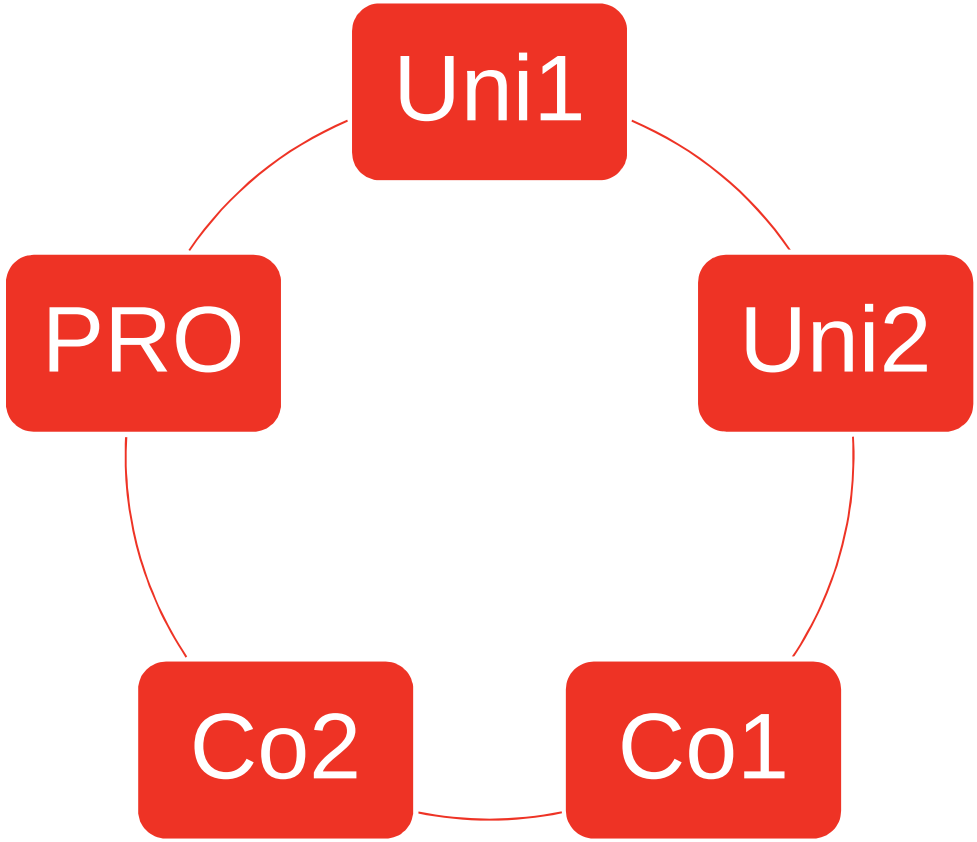
Inprovements to Background IP

- Consider defining improvements by reference to:
  - Function (improves performance, reduces production cost, reduces side effects, improves consumer experience or acceptance, broadens market appeal)
  - Scope of licensed IP (eg other products within the scope of licensed patent)
  - Technical specification (eg formulation)
  - Field of use (eg a method or process that may be used in a test to detect a specific cancer
- Be pragmatic based on your organisation's needs
- *Ferriscan v James [2009] NSWCA 355*

Assignments

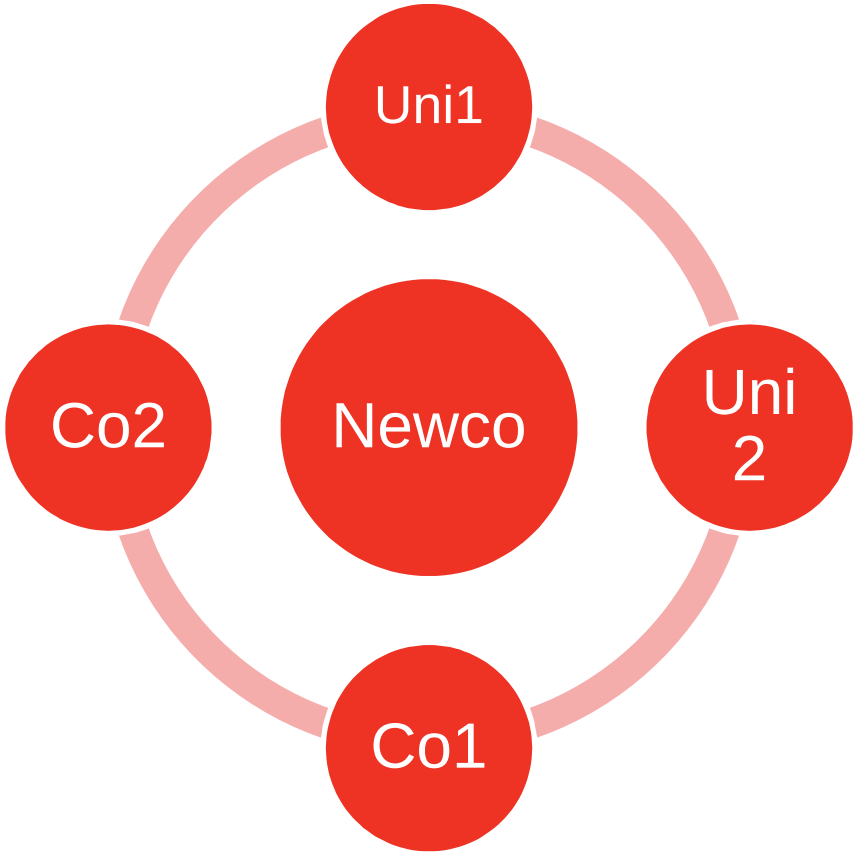
- Commercialising entities/venture capitalists will insist on ownership
- Assignment cannot be retroactive *Black & Decker Inc v GMCA Pty Ltd (No.2) [2008 FCA 504 (18 April 2008)*
- If not assigned, the right to sue remains with the assignor
- Novate rights of a licensee if it is intended the licence will continue on foot after the assignment
- Confidential information is not property and cannot technically be assigned. It can be disclosed subject to further restrictions as to further use and disclosure. TS & B Retails Systems Pty Ltd v 3Fold Resources Pty Ltd (No 3) [2007] FCA 151 (20 February 2007)
- Consider time limited assignments or grant back/grant forward arrangements including right of first refusal

Research Consortia/Networks



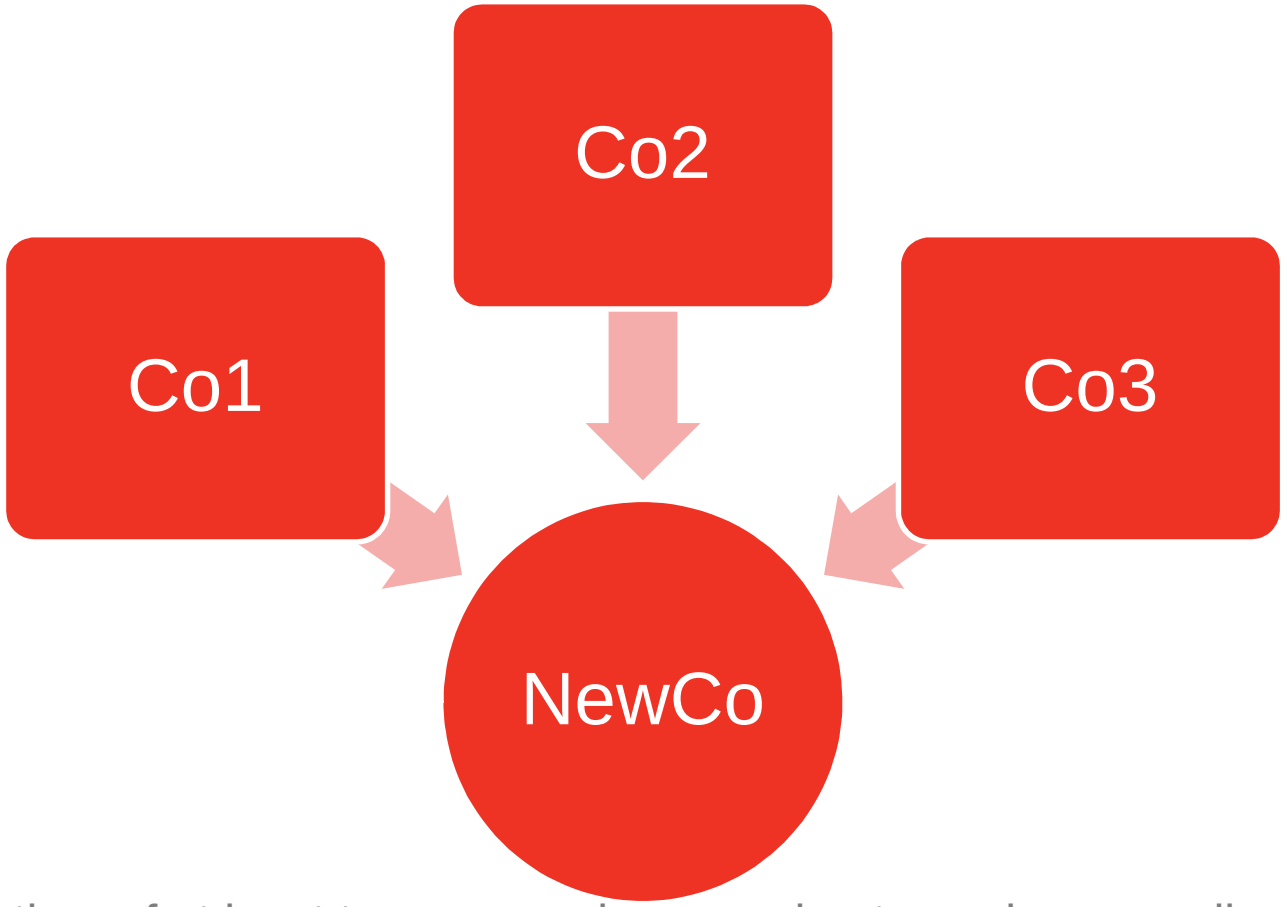
Each institution to keep it’s own? Subject to IP conflicts

Co-Operative Research Centre



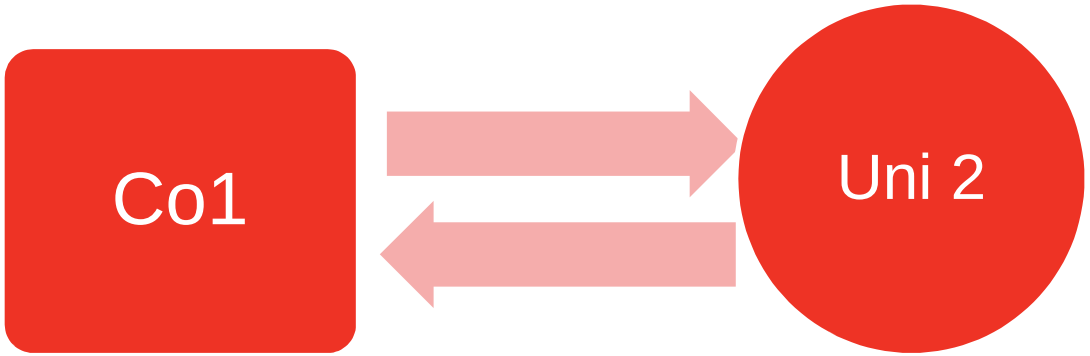
Quarantines the IP in a single vehicle better suited to apportioning and managing ownership and commercialisation

Patent Pool



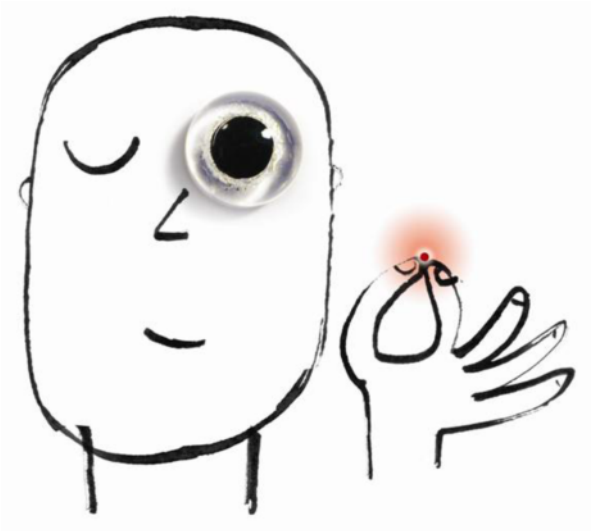
A consortium of at least two companies agreeing to pool or cross licence patents relating to a particular technology. The creation of a patent pool can save patentees and licensees time and money, and, in case of blocking patents, it may also be the only reasonable method for making the invention available to the public

Straight Research Collaboration



IP often owned by the funding organisation with academic Rights remaining with the Uni.

People Management



“Spin Out Co”

- PRO created IP, part- funded and majority owned Spin Out Co
- Executive Management was new, but Chief Scientific Officer was seconded into Spin Out Co from the PRO with an option to stay with Spin Out Co or return to PRO within 5 years of the start of Spin Out Co when it was intended that PRO would reduce to a minority holding in Spin Out Co
- 5 years passed and the CSO was lead inventor on a number of patent applications. All were pending in critical stage of prosecution
- CSO elected to return to PRO

What Happened to Spin Out Co?

Challenges to Implementing Open Collaboration Strategies

- Effective collaboration will take time
- Agreeing common goals can be difficult
- Leadership needs to think differently
- Organisational culture may need to change
- Developing trust can be difficult
- Resourcing projects can be tricky
- Providing correct outcomes and incentives to the stakeholders and employees is a must

Key strategic considerations

- Ensure strategy is an organisational one
- Connect collaboration outcomes to the organisation’s strategy
- Ensure governance aligns with outcomes
- Develop clear leadership messaging
- Develop a culture of trust and openness
- Align people to strategy and outcome
- Contract and reward in alignment with strategy and outcomes

From networking to collaborating – the differences

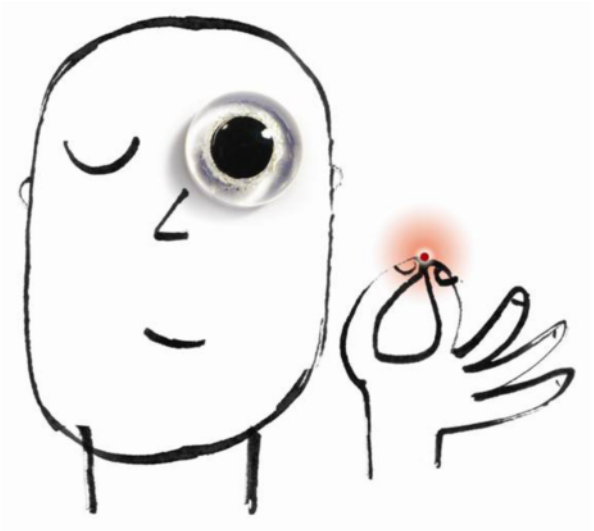
	Activities	Goals	Trust
Networking	Exchanging information for mutual benefit		Low trust
Coordination	Exchanging information Modifying activities Regular Meetings	Goals are complementary (not in conflict)	Some trust
Cooperation	Exchanging information Modifying activities Sharing Resources	Goals are compatible	Moderate trust
Collaboration	Exchanging information Modifying activities Sharing Resources Co-creating (sharing risk and reward	Some goals are equivalent	High trust

Prahalad and Ramaswamy, *The Collaborative Continuum,* Collaborative Strategies Nov 2001

What to do?

- Control employment conditions: all in or all out!
- Consider the position of students or contracted personnel
- Reward in alignment with objectives
- Clearly set out expectations and responsibilities
- Meet frequently, as well as formally
- Put in place formal information exchange models
- Control confidentiality and publication – set out clear guidelines
- Insist on proper documentation of work

Exploitation of the outcomes



Nanotechnology Victoria

- Established 2004 with a $12M State Government grant to address the inability of Victorian research institutions to commercialise their nanotechnology.
- Monash, RMIT, Swinburne, CSIRO matched this with $16M
- Institutions retained ownership over their own IP, and other IP was held ‘on trust’ for the consortia by NanoVic.
- A Members Agreement and a Management and Trust Agreement set out how members would deal with the IP.
- PIP owned legally by NanoVic and beneficially by the project participants and the Members in proportion to their cash and in kind contributions to the project. NanoVic will have the right to manufacture, sell, hire, license, sub-license, engage in a joint venture, or undertake any other exploitation of the intellectual property at the absolute discretion of the board of NanoVic
- Project Agreements were struck around ‘clusters’ of BIP and PIP
- Most project agreements gave NanoVic the ‘first and exclusive right to commercialise’ PIP developed.
- Even PIP ended up being filed in Participant names

What Happened to NanoVic?

What Happened to NanoVic?

"A high degree of risk is associated with the fact that there is no clear pathway by which PIP may be transferred into the commercial venture proposed. In the case in which NanoVic has the right to assign the rights acquired by it as a result of the project agreement, any investor seeking to obtain a majority position in the venture may find itself having to negotiate access to technology with several different Members, as well as parties not bound by the Members Agreement such as ……."

> "….property owned by tenants-in-common passes to the legal successor of the deceased party (not strictly applicable in this case), who is free to do as they wish with their share of the property, including "sale, mortgage or transfer". Such a right would not, at least in Australia, be available to the co-owner of a patent …."

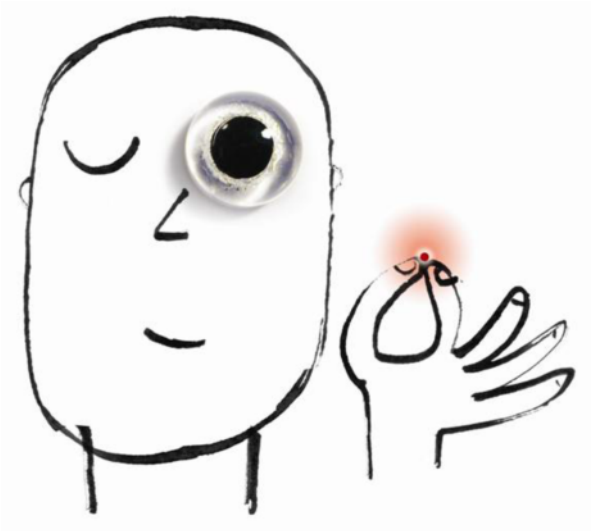
No clear pathways

“In many cases, NanoVic cannot deal fully in the intellectual property it is charged with exploiting, and this may prevent optimum extraction of value. A fundamental issue in this respect is that investors are unlikely to invest in ventures where there is no clear ownership by the venture of the intellectual property underpinning it. This is because the risk of loss of access to the intellectual property is too high”

What to do…..

- Understand the commercial objectives of the collaboration, and each party within it.
- Make sure ownership of IP is clear, and commercialisation pathways are enabled by ownership structures (see previously)
- Don’t overcomplicate ownership structures – centralised legal title will often be best
- Be clear about:
  - Scope of the rights granted (exclusive/non exclusive, retention rights), preferably assign rights in
  - Performance obligations under the agreement
  - Term of the agreement
  - How rights are ‘returned’ to participants if not commercialised, e.g. grants-back and grants-forward

Exit, Termination & Winding Up



Early Stage Co

- In early stages of corporatisation, Early Stage Co executes a licence agreement on a platform technology for upfront fees with a major multinational – good for investor relations
- Multinational will develop in their field of interest
- Years go by and patent application remains pending in a key jurisdiction – no royalties have been paid
- Multinational never progresses the technology
- Discussions to reclaim the technology are commenced

What Happened??

- No performance clauses
- No exit clauses
- No termination clauses

- What next?

Exit & Termination

- No collaboration ever succeeded after the relationship went sour. Work on it.
- Understand risk appetite of your organisation and the applicable business plan
- Build in trigger events for exit or termination
  - Performance-based
  - Financially-based
  - IP-based
  - Time based
  - Regulatory milestones
- Consider building in independent arbitration to force an end

Records Management

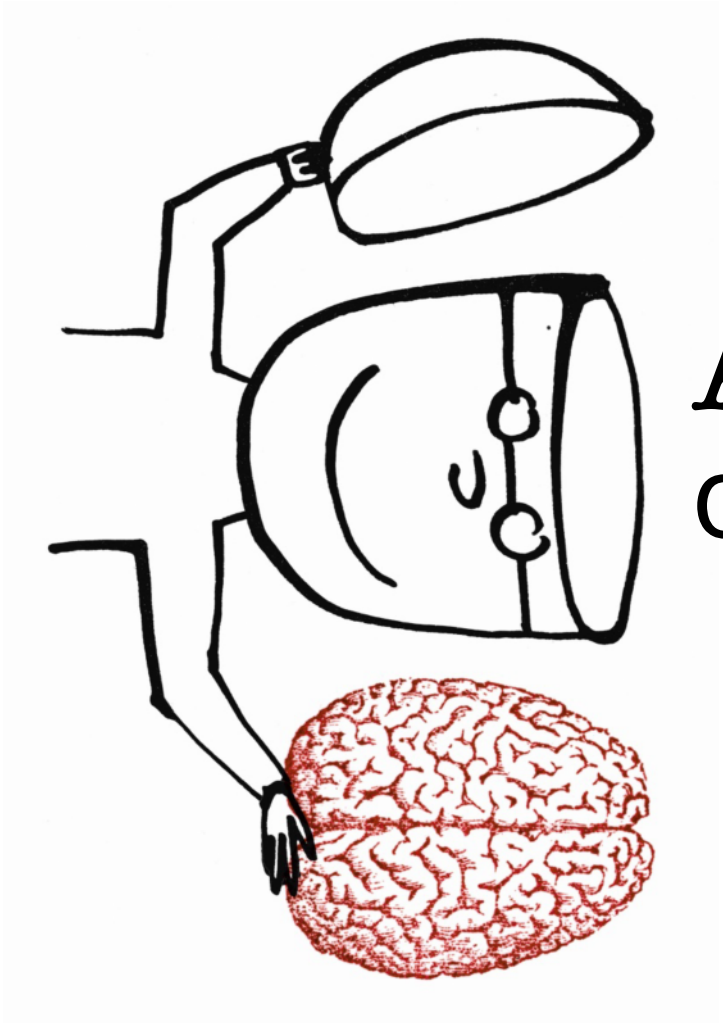
- Strong records management throughout will make wind up or termination more straight forward
- IP position and status
- Chain of title is clear and evidenced
- Complete prosecution records
- Proof of title where applicable

What to do with the IP?

- Grants back to participants
- First rights of refusal
- Grants forward to new owners (if any)
- Options to acquire for each of the collaborators
- Trade Sale
- IP owned by an entity that is deregistered is technically owned by ASIC if not sold off. ASIC can sell if a valuation can be agreed. ASIC will encourage the corporation to apply to reinstate the company in preference

Summary: some themes emerge

- Understanding objectives is critical
- Aligning collaboration structure and personnel with objectives is key to freedom to commercialise
- Simple IP ownership trumps complicated arrangements every time
- Pre preparation can help preserve clear IP lines
- Strong administration will always make decision-making easier
- People and culture are critical, but if all else fails, know what the end looks like



Any questions?

Thank you!

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ACC Association of Corporate Counsel AUSTRALIA

watermark
Intellectual Asset Management

IAM: more than patents, beyond trade marks, way past IP.....