

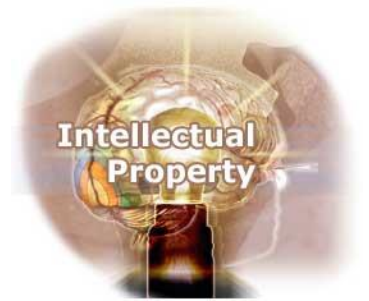
Protecting your idea: the concept of Intellectual Property

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What is Intellectual Property?

- Why “intellectual”?
 - Product of the mind, creative thought processes
- IP is an “intangible” asset
 - Can’t touch it or see it, but ...
 - It is property, it has value just like buildings, machinery etc
 - Employers own employee IP
- Types of IP include:
 - Patents, trademarks, designs, logos, copyright, inventions, data, know-how, trade secrets, etc



IP Case Study – Guinness can



IP Case Study – Guinness can

- TRADE MARK: Guinness Name and Harp
 - Part of the BRAND: qualities you associate with the name



- DESIGN RIGHT: Container shape
 - Coca-cola bottle



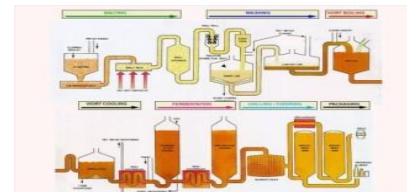
- COPYRIGHT: text and images, layout



- PATENTS: Widget & ring-pull

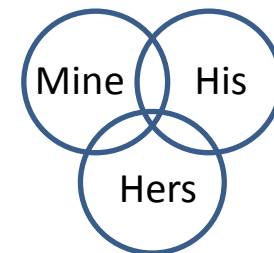
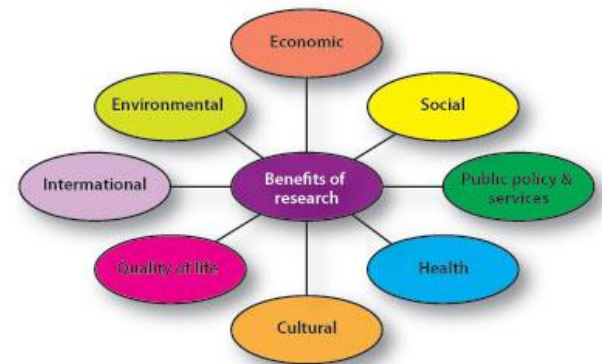


- KNOW-HOW: the recipe to make the beer and aspects of the brewing process



Why is IP important?

- For a University:
- Facilitate IMPACT
 - Protect the IP generated during your research
 - Without IP rights, can you achieve impact?
- Freedom to operate
 - Can you carry out your research without infringing the IP rights of others?
 - Can you exploit your research outputs?



Why is IP important?

- For a Company:
 - Direct benefits:
 - Protect your own products
 - Avoid infringing other people's IP rights
 - Indirect benefits:
 - Can enhance the value of the company
 - Brand recognition



Opportunity Assessment

Attractiveness

- Inventor Commitment
- Scope
- Readiness
- Value of the Market
- Royalty Rate / Profit Margin
- Intensity of Competition
- Competitive Edge
- Market Fit
- Customer Attractiveness
- Development Facilities
- Defensibility of IP

Licence or spin-out company?

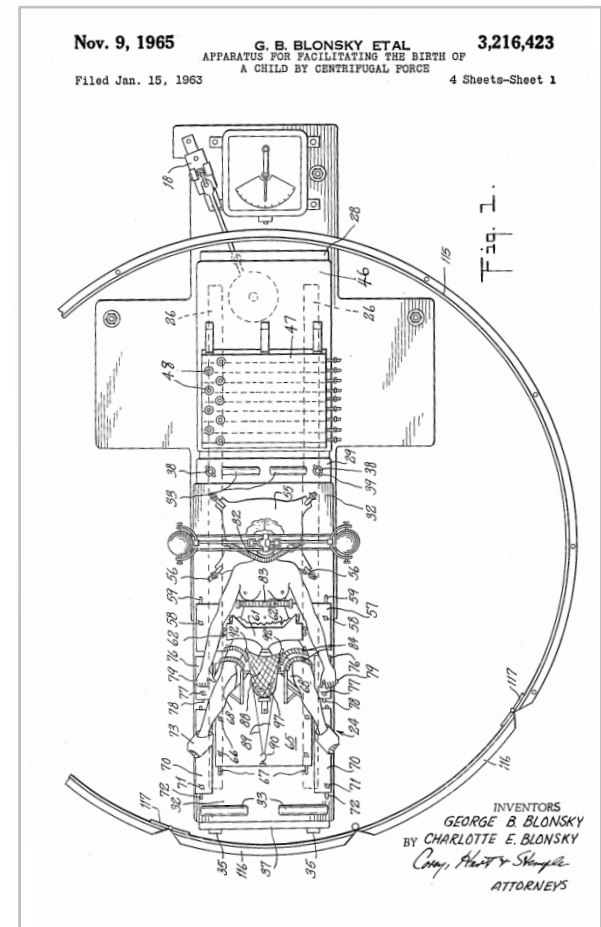
- Commitment of Team
- Scope
- Competitive Edge
- Customer Attractiveness
- Team Commercial Experience

Not all patents are useful...

According to the US Patent and Trademark Office, only 3,000 ideas out of every 1,500,000 are commercially viable – that's just 0.2%

Apparatus for facilitating the birth of a child by centrifugal force

- ✓ Novel
- ✓ Inventive or non-obvious
- ✓ Capable of industrial application
- ✗ Commercially viable



What is a patent?

- A patent is a “negative right”
 - Doesn’t give you the right to do something
 - Gives you the right to stop others doing something
- The rights you get are the “reward” for disclosing the invention
- Rights (normally) last until 20 years from filing date

What can you patent?

- New or improved:
 - Product
 - Process
 - Method
- New use of something already known
 - Dyson cyclone vacuum cleaner, industrial process (cyclone) applied to domestic appliance
- Only a small % of patents are “Eureka” moments
- The majority of patents are improvements to something already known or are solutions to known problems
- You can’t patent a discovery, theory or mathematical model
- You can’t patent things which are contrary to “ordre public” or morality, methods of treatment on the body, plant or animal varieties

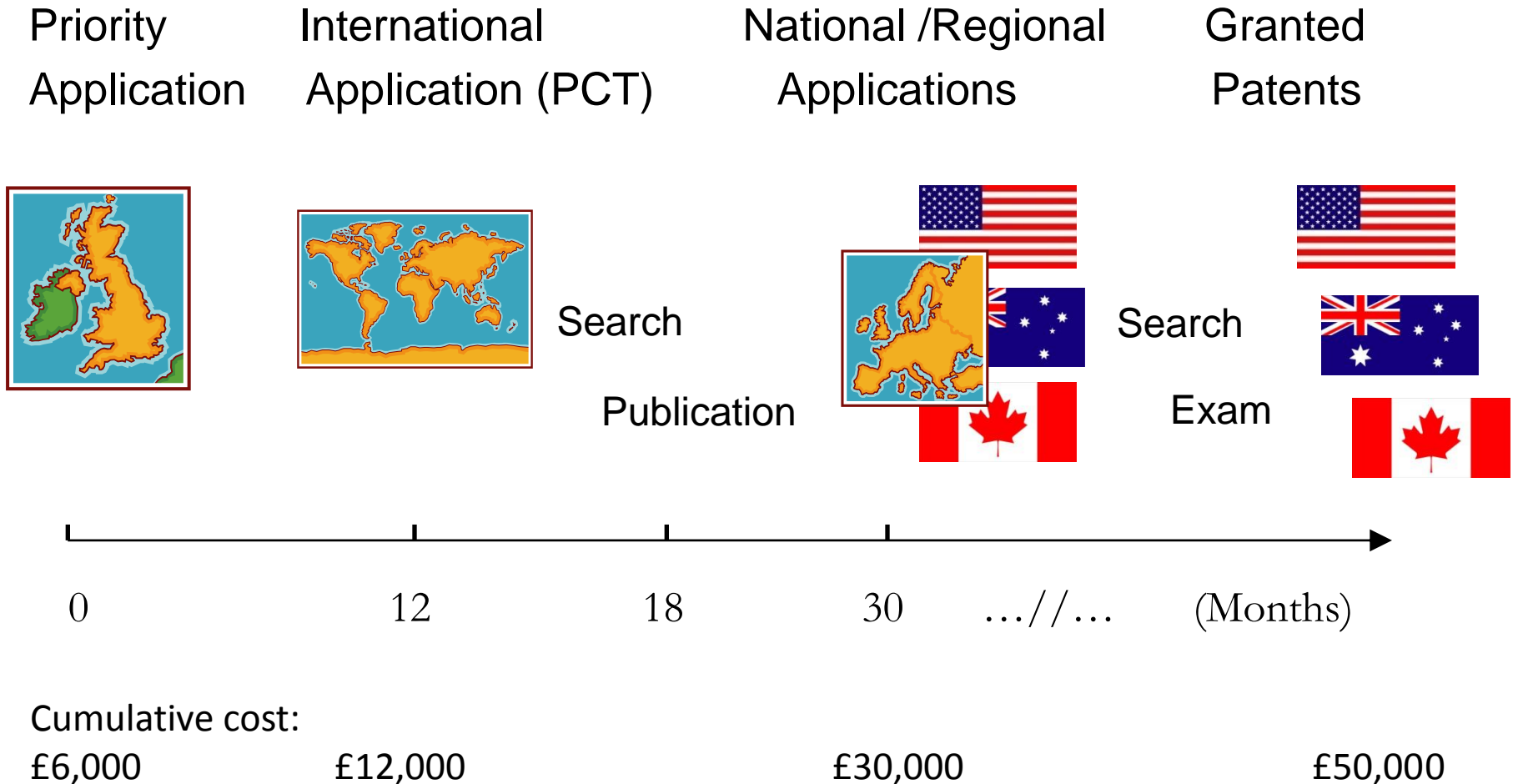
How do you get a patent?

- Have an idea – the invention
- Check to see if it has been done before
- Test it to see if it works
- Write a patent application, consisting of:
 - Background information; what is the problem being addressed and what has been done in the past to address the problem
 - Statements of the invention and preferred features
 - Description, including FULL DISCLOSURE of an example
 - Drawings to illustrate examples
 - Claims to define the scope of your monopoly
- File application at Patent Office
 - Priority date from which rights begin

How do you get a patent?

- Within 12 months of priority date decide on other countries
 - International application (PCT) can reduce cost and paperwork
- Publication 18 months after priority date
- After 30 months file at national patent offices
- Application goes through examination process
 - Examination reports and objections to patentability
 - You provide arguments against objections
- Proceed to grant **if** patentability requirements are satisfied
- Grant is typically 3 to 5 years after priority date
- Renewal fees to maintain patent

Typical Patent Timeline

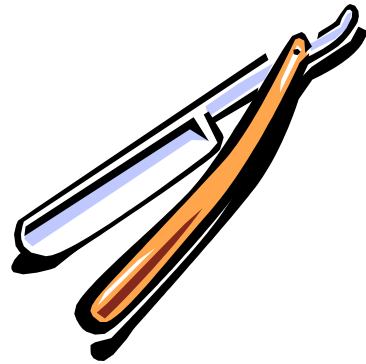


Requirements For Patentability

- Novelty (of patent claims)
 - Not previously disclosed to public
 - Disclosure includes publication, discussion and demonstration
- Inventive step (of patent claims)
 - Not obvious from what is already known (prior art)
 - Includes **combining teachings** from different sources
- Capable of industrial application
 - Not usually a problem
- Not subject to exclusions
 - Not a discovery, scientific theory, mathematical model, public order etc

Novelty

Prior art



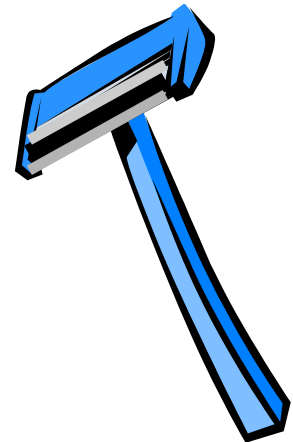
First Invention

1 blade



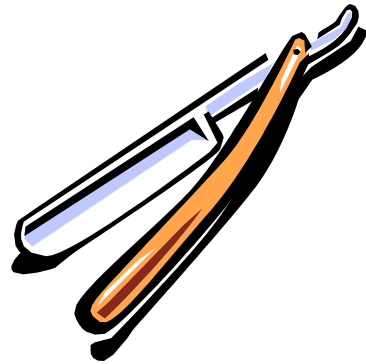
Second Invention

2 blades



Inventive Step

Prior art



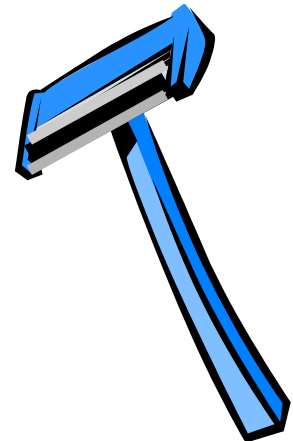
First Invention

1 blade



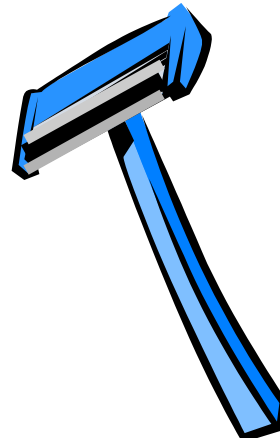
Second Invention

2 blades

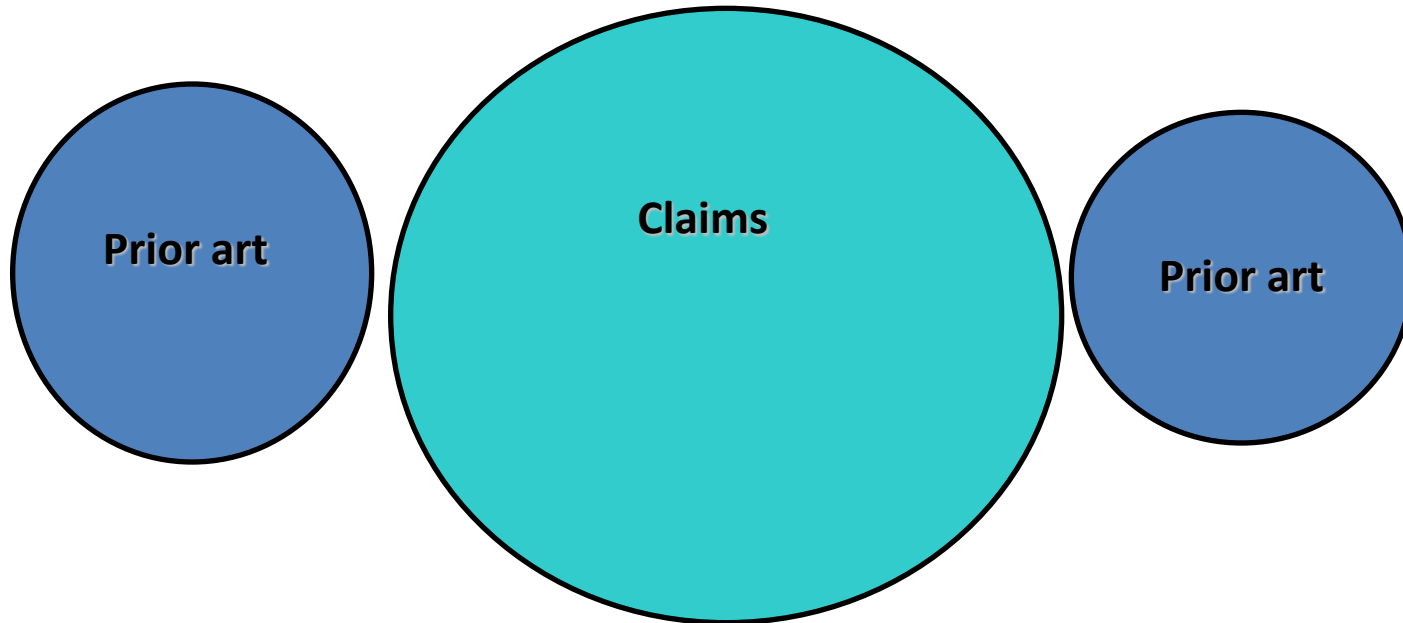


Third Invention

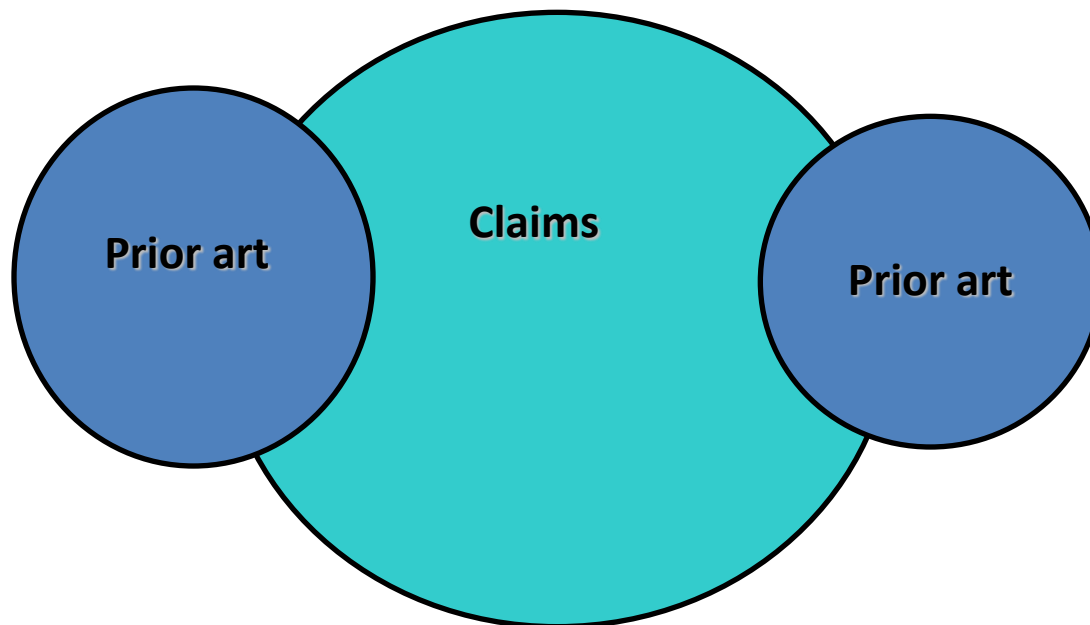
3 blades



Claims – define scope of monopoly

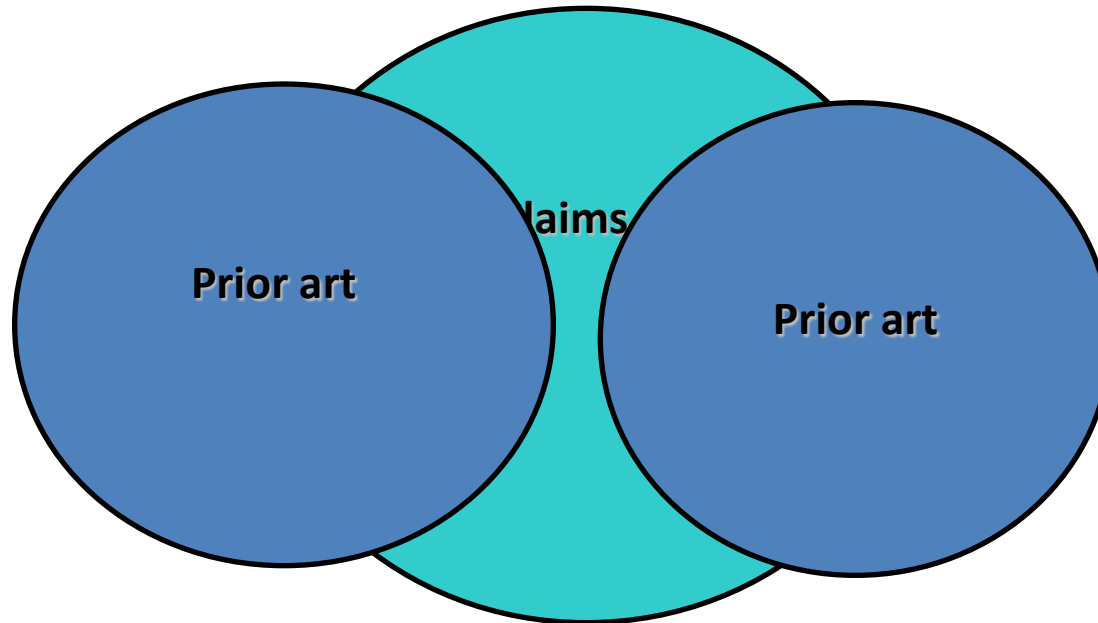


Claims



Claims restricted but still have a wide scope

Claims



Claims restricted to very narrow scope – is it worth continuing?

Things to remember

- First to file gets the patent monopoly
- Disclosure is an important issue
 - Generally, public disclosure is fatal
 - Confidential disclosure not a problem
- Naming Inventor(s) is important:
 - not the same as co-authors on a technical paper
 - Inventors must have contributed to the invention
 - Doing the work is not sufficient
 - Incorrect names can invalidate the patent
- Ownership
 - Any IP resulting from normal duties is owned by your employer

Freedom to Operate

- Other people/companies file patent applications.....
- They can stop you using their patented inventions
 - Frequently a question on grant applications
 - Can prevent launch of a new product
 - Do your due diligence
 - Patent searching
 - Avoid infringement
 - Buy or licence-in patent rights

Searches (DIY)

- **Internet:** anything similar in terms of brand or product name etc?
 - Translation is an issue
- **Companies House** (or foreign equivalent)
 - Has anyone registered a company using a word you want to use?
- **Trademark registries** (country specific)
 - How close to other people's trademarks are you?
- **Patent databases**
 - A number of good free ones
 - Prior art and Freedom to operate



Searches (professional)

- Useful to build confidence:
 - Patent:
 - Prior art searches (inexpensive)
 - Freedom to operate (potentially very expensive)
 - Patent landscaping
- Branding
 - Trademarks
 - Designs
 - Word usage



Strategy

- What is your objective?
 - Launch product?
 - Licence out?
 - Cross-licence?
 - Freedom to operate?
 - Secure investment?
- What IP rights do you need access to?
 - Patents?
 - Trademarks?
 - Copyright?

Strategy

- Patents
 - How many?
 - Cost vs. benefit
 - Where to file?
 - Manufacturing location?
 - Size and location of the market?
 - Type of coverage?
 - Product
 - Process
 - Method
 - New application

Strategy

- Requirements for any project

- Management



- Technology

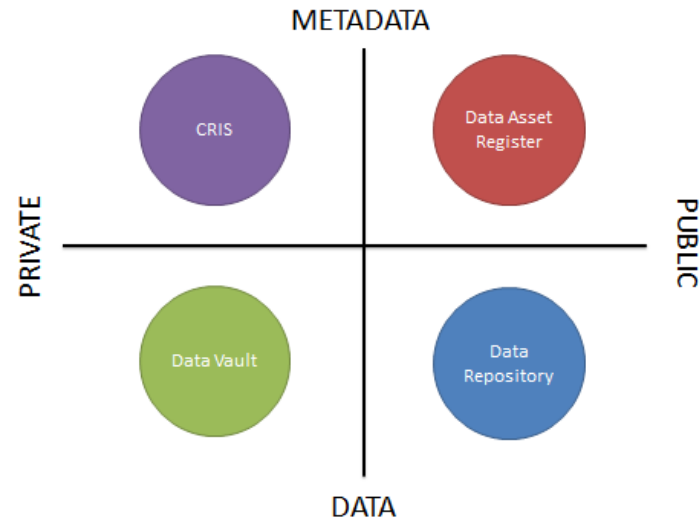


- Money



Last but not least....

- Research data management
 - Access
 - Integrity
 - Confidentiality
 - Security



Case Study 1: Rolls-Royce

- Power systems (not cars)
- University Technical Centre
- > 20 years
- Across a number of engineering disciplines
- Standard terms



Case Study 2: Bioscience Ventures Ltd

