Exploitation and Innovation in Research

http://www2.warwick.ac.uk/services/ventures/presentations

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Programme

- Introduction to Warwick Ventures
- Why do Universities do Commercialisation?
- Identifying & Assessing Opportunities
- IP Protection
- Commercialisation Routes
Warwick Ventures Ltd

- We commercialise the University’s intellectual property (IP) from its research
- A service for academics -- and other University innovators
- A source of opportunities for industry
What is Technology Commercialisation?

- The traditional activities of a University are:
  - Teaching
  - Research

- These first two streams of activity effectively generate and transfer knowledge.

- The newer ‘third stream’ activities are revenue generating:
  - Consultancy
  - Knowledge Transfer Partnerships
  - Research Contracts
  - Material Sales
  - Technology Commercialisation
The Benefits for the University and its Academics

- Impact of research
  - Future research funding
  - Development funding
- Reputation
  - Public good
  - Attract researchers and students
  - Enhance careers
- Financial Returns
  - For University innovators and their Departments
  - For the University centre & Warwick Ventures
An Academic’s Needs

- Reputation
- Good REF
- Public Good
- Funding
- Research
- Employment & Salary
- Publication
An Academic’s View of the TCO’s Needs

- **Clean Funding**
  - Research Councils
  - No Commercial

- **Confidentiality**
  - IP Protection
  - No Publication

- **Exploitation**
  - Exclusive use by commerce
  - Mega bucks to the TCO
The Real Situation For A Successful Academic

- Good Funding Contracts
- Employment & Salary
- Good REF Including Impact
- Research
- IP Protection
- Publication
- Development
- Reputation
- Public Good
Our Commercialisation Service

- Identify & understand commercial opportunities
- Define, protect and manage the university’s IP
- Develop an exploitation route
- Market opportunities to industry
- Find partners, raise finance & grants, negotiate contracts, manage the process
- Distribute the proceeds of knowledge transfer & commercialisation
How do we find the Opportunities?

- Departmental events
- Enterprise Champions
- Audits of departments
- Campus publicity
- Word of mouth
- Leads from Research Support Services

This generates around 80 disclosures per year at Warwick
Opportunity Assessment

- Initial interview
  - Market
  - Protection
  - Ownership

- Commercial Opportunity Appraisal Process (COAP)
  - Document: background, invention, market and next steps
  - Objective scoring tool
  - Peer review in weekly meetings
  - Further review at every cost point
What is IP?

- Intellectual
- Property
How do we protect IP? (Hard)

- **Patent**: inventions – file application at IP office, if granted and renewed provides 20 years of protection.

- **Trade Marks**: names, logos and slogans – file application with IP office. Unlimited duration if renewed every 10 years.

- **Plant Breeders Rights**: new plant variety, file application with FERA. Protection for 25/30 years from date right is granted.
How do we protect IP? (Soft)

- **Copyright**: software, artistic and literary work – arises automatically, but can also be registered. Provides protection until 70 years after the author’s death, or 50 years from publication.

- **Database Right**: for original selections and arrangements of contents. Provides protection for 15 years from making or publication.

- **Design rights**: designs for a commercial purpose – arises automatically, but advisable to register. Protection for up to 25 years.

- **Know How**: a general term for everything in your brain; a trade secret – keep confidential
What is Patentable

From the European Patent Office:

...patents shall be granted for **any inventions** which are susceptible of **industrial application**, which are **new** and which involve an **inventive step**.

**New or Novel:**
- An invention is new if it is not part of the state of the art
- “State of the art”: everything available to the public before filing date

**Inventive Step:**
- Has to be non-obvious to someone ‘skilled in the art’
- Beware of hindsight analysis
Disclosure

- To prevent disclosure before a patent has been filed you must not:
  - Describe the invention to outside parties (ok under cover of non-disclosure agreements, and to some specific types of advisors)
  - Publish details of the invention
  - Talk about it down the pub
  - So be careful who you talk to, even internally
Patent Process Timeline

Day 1 – File GB application (priority date) £3K

12 months – File international PCT application £4-5K

18 months – Publication

30 months – File national application in every country where you need protection: £1-5K per territory
Develop; Manufacture; Export; Sell

3 – 8 years – Examination and possible grant £1k - ?K
Why do we protect inventions?

- To prevent other parties making financial gain from your technology without your permission.
- Having a temporary monopoly provides first mover advantage.
- System also forces publication so that inventions are not kept secret and die with the inventor.
- Even if you have no desire to make money, it can protect your position and safeguard your future rights.
- Helps establish title.
Patents at Warwick

- Patents registered in Warwick’s name
- File about 25 - 30 a year
- 34 granted patents, 426 applications in progress
- Seek a commercial partner within 2 yrs
- Rarely pursue national filing due to cost constraints
Trademarks

Trade Marks Act 1994 Section 1 (1):

“Anything capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of another”

BUT NOT:

- ‘The Coffee Shop’
- ‘The Cocaine Dealership’
- Nyke footwear
- fcuk is registered but only for some groups of product & service, i.e. not in group 10 – marital aids; and certainly could not register FCUKING
Trademarks

Brands
Straplines
Logos
Names
Shapes
Colours
Smells
Sounds
Gestures
Letters
Numbers
Word
Copyright

- About the right for **commercial exploitation** of an original “work”
- Written, dramatic, musical or artistic works (print, audio & various media).
- Presentation of others’ copyright work (translations, page layouts & arrangements).
- Plagiarism is bad practice: it is not necessarily illegal
- For help speak to the Library or go to http://www2.warwick.ac.uk/services/gov/legalservices/staffinfo/copyright/
Copyright Duration

- Literary works, dramatic works, artistic works: Creator’s life plus 70 years after death.
- Anonymous works: 70 years from publication
- Sound recordings and Films: 70 years from first publication
- Broadcasts: 50 years
- Published editions: 25 years from year of publication – to encourage new editions
- Crown copyright: 125 years
- Parliamentary copyright: 50 years
Design Rights

- Registered or automatic, design rights cover the outward appearance of an article.
- Design has to be ‘new and materially different’ e.g. usually applies to fashion, jewellery, and furniture designs but also white goods (e.g. Dyson vacuum).
- Lasts 5 years but can be extended to 25; £60 registration fee.
- Unregistered design rights apply automatically but last only 15 years.
- If you are commissioned or an employee then any designs that you produce are likely to be owned by the commissioner or the employer.
Design Rights

Which is the Designer Bag?

£9.50 or £495?

Jimmy Choo got upset by M&S copying its bag. They got an injunction & M&S had to stop selling this design of bags.
Who owns IP from University research?

- The University claims ownership of IP if created
  - By University employees
  - By students participating in research or research-based courses
  - By third parties acting on behalf of the University
  - With University resources

- For promising opportunities, the University funds IP protection, proof of concepts and provides Warwick Ventures’ services to commercialise

- Any proceeds are split between;
  - the inventor or inventors (50%)
  - the inventors’ Department(s) (25%)
  - University/Warwick Ventures

- Refer to Regulation 28 and, for staff, Financial Procedure 13 – Exploitation of Intellectual Property
Development of IP

- **Research**
  - Grant Funding

- **Development**
  - Proof of Concept Funding

- **Commercialisation**
  - Commercial Investment

**Proof of Concept Funding**
- **University Impact POC Fund**
  - £500k p.a. of which £300k for PoC
  - Maximum grants of £30k

- **WVL POC Fund**
  - £200k p.a.
  - Awards of about £10k each
Exploiting IP – the University’s strategy

Two main options

1. Negotiating **licensing deals**: third party develops and sells

2. Setting up **spin-out companies**: to develop and maybe to manufacture and sell
Licensing – Benefits

- Reduced risk: licensee develops technology
- Income in short/medium term
  - Up-front payment & future royalties on sales
  - Quick, cheap access to novel technology
- Can incorporate ‘claw back’ provisions
- Company take on remaining patent costs
- University/Company collaboration
- Less onerous for the inventor
Licences

- 92 licences have been signed by Warwick
- Current Warwick licences generate about £100-200k of royalties per year.
- UK universities make £84 million p.a. From exploitation of IP (1.3% of research resource), while US universities make over £1,123 million p.a. (3.7% of research resource)
- A few “blockbusters” tend to distort the average
Case Study - KingMark

- **Day 1** – File GB application (priority date) £2,460
- **12 months** – File international PCT application £4,083
- **30 months** – National Phase in EP and US £3,892
- **3 – 8 years** – Granted in US £12,820, total so far

Licence Income (so far) £20,000
What is a spin out company?

- Independent business usually limited by shares
- Set up specifically to exploit the IP
- University licences IP to company for a share in the company in the form of equity (shares)
Forming a spin-out company

Market, Management, Money

- Get advice first: talk to Warwick Ventures
- Register a company (Companies House)
- Build a business case, write a business plan
- Get key advisors: legal, accountants, IP
- Secure investment
- May need to find premises (Univ/ Science Park?)
- Commitment, risk and opportunity cost
Model Business Plan

Check List; include sections that address each of the following:

- Business Mission Statement
- Nature & Structure of the Business
- Location & Premises
- Key Staff
- Product Outline & Product Development Programme
- Addressable Markets & Marketing Strategy
- Competitor Analysis
- Sales Tactics & Pricing Policy
- Promotions Tactical Plans
- Sales Forecasts
- Operating Budget Forecasts
- Profit & Loss Forecasts
- Capital Expenditure Programme
- Cash Flow Forecasts & Financing Arrangements
- Plan Sensitivity Analysis (typically a SWOT analysis)

- INVESTMENT, EQUITY & EXIT (10x = 5y)
Spin-out companies

- Created 76 spin-outs since 2000
- Currently 30 active ones, with nearly £9m turnover, and ca. 187 employees
- Most active ones locate at the Science Park
- The University owns shares in 23 companies
Warwick Spin-outs

- sarissa Biomedical
- BASE 4
- SonemaT
- NEUROsolutions Ltd.
- allinea
- Anvil Semiconductors
- warwick Biotech
- goHDR
- molecular solar
- warwick warp

- 2 stops
- 0 stops
- 2 stops
- 4 stops
Summary

- It’s not just about money
  - Impact & Reputation
  - Research excellence
  - Securing future research funding streams
- IP development and exploitation an increasingly important part of research careers
- Warwick Ventures offers a free service for University innovators
  - Pays for patents
  - Provides Proof-of-concept funding
  - Negotiates commercial deals
  - Collects and distributes proceeds of exploitation
Warwick Ventures Contacts

Please contact Warwick Ventures for any questions on IP or commercialisation

http://www2.warwick.ac.uk/services/ventures/presentations

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