

Building the TRIC database at Imperial College London

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The team



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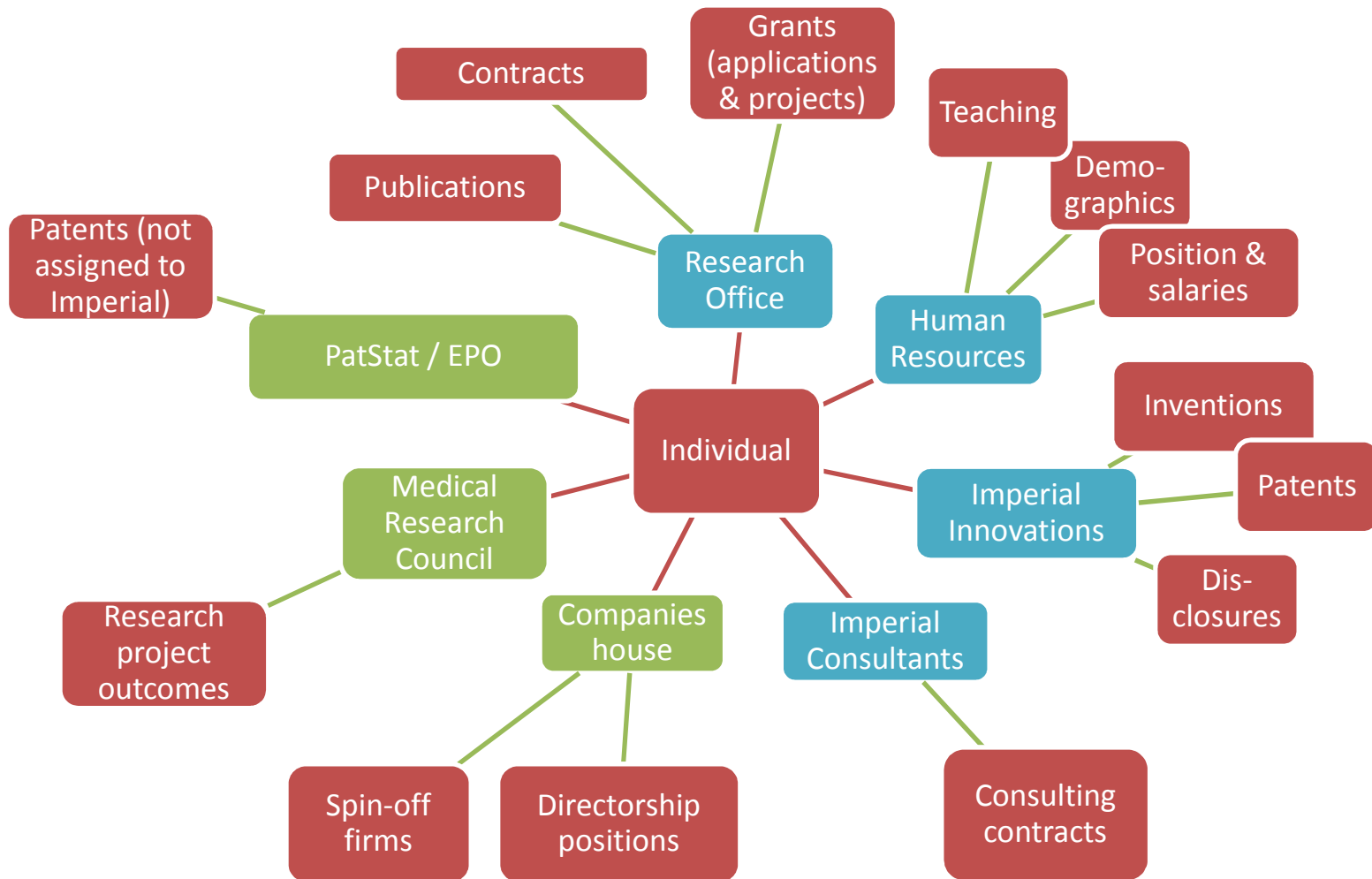
Transferring Academic Knowledge at Imperial College

- Pool archival records on Imperial scientists into a unified relational database
- Yearly records 2002 - 2012
- Approval by College Management Board
- Approval by Ethics Committee
- Link with external data records

Objectives

- Map research outputs and impact by Imperial academics
- Contribute to scholarship in university-industry relations, academic entrepreneurship, technology commercialization and organizational theory
- Help develop a model for deployment on larger scale

Data structure and sources



Record numbers

Type of information	Records
Unique individuals	9,000
Grant applications	33,000
Grants awarded	8,000
Research Contracts	3,400
Publications	280,000
Disclosures	3,800
Patents	700
Licences	400

Legal and ethical

- Comply with UK data protection law
 - No “sensitive” personal data
- Commercial sensitivity of some data
 - Licensees and licensing income
- Anonymity or confidentiality
 - Complete anonymity hard to maintain
 - Imperial ICT department acts as trusted intermediary
 - Anonymous unique identifiers
- Research only
 - Ethics restricts use of database as management tool

What TRIC will enable

- Comprehensive analysis of how science inputs (resources) relate to outputs
 - Interplay of different funding sources
 - Resource environments within departments
- How public science environments impact on people
 - Imprinting of human capital
 - Impact on junior faculty

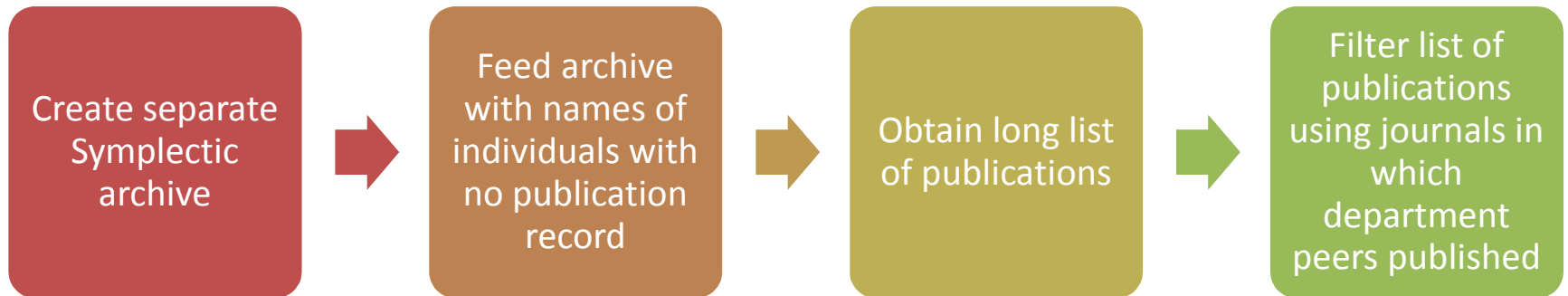
Challenge 1: Publications



Advantage of using institution-compiled lists of publications

- Lists confirmed by individuals
- Reliable co-author networks
- Resolves many problems with researcher-compiled records
- but: some people don't approve list; juniors have no webpage

Retrieving missing publications



Challenge 2: Patents

- Imperial only collects Imperial-assigned patent information
- Link with Patstat (Lissoni et al) to retrieve all patents by Imperial inventors
- Allocate inventor identities by ?
 - Co-author / co-investigator networks
 - Matching of research / invention topics

Challenge 3: Career information

- Staff personal webpage contents made available to TRIC
- However, patchy and not systematic
- Partial remedy:
 - Conduct survey amongst present staff

Outlook

Investigate linking with:

- Social media (Linked-in) to follow 'leavers'
- Employment data
 - Work and Pensions Longitudinal Study (WPLS)
 - HMRC datalab
- Closer collaboration with Research Councils and other funders