

# Mandates: an Australian example of the Queensland University of Technology



## CERN Workshop in Innovations in Scholarly Communication (OAI6)

June , 2009



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Brisbane, Australia



Queensland University of Technology



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# QUT has ...

## 7 x Faculties

- Built Environment and Engineering
- Business
- Creative Industries
- Education
- Health
- Law
- Science and Technology

## 4 x Research institutes

- Health and Biomedical Innovation
- Creative Industries and Innovation
- Sustainable Resources
- Information Security

# Cost complications in Australia

- Costs of scholarly communication already high in these disciplines
- Further compounded by need to import
- Currencies at points of origin generally stronger than Australian Dollar

# Open Access

## - Origin and Inevitability of the Concept

- Explosion in scholarly communication
- Artificial nature of the scholarly publishing market
- Revolutionary impact of technology
- BUT ... where would change happen first?

# Open Access – journey at QUT

- Watching the debates
- Exploring the need to act

# The Key Issue

- Understanding core business of research institutions and their communities
- In particular, understanding the motives and drivers of researchers and the difference between the “give-away” and the “non give-away” literature.



# Institutional repository policy at QUT

Address [http://www.mopp.qut.edu.au/F/F\\_01\\_03.jsp](http://www.mopp.qut.edu.au/F/F_01_03.jsp) Go Links

**QUT** Queensland University of Technology  
Brisbane Australia

a university for the **real** world<sup>®</sup>  
**Manual of Policies and Procedures**

QUT Home Contact us Search

MOPP Home Protocol for MOPP Policy Recent Updates

## Policy F/1.3 E-print repository for research output at QUT

[\[Print-friendly version\]](#)

Contact Officer	Associate Director (Information Resources), Library
Approval Date	24/03/2006
Approval Authority	University Academic Board
Date of Next Review	01/07/2009

**Chapters**

- A - Governance/Organisation
- B - Human Resources
- C - Teaching/Learning
- D - Research/Development
- E - Student Administration
- F - Information Management**
- G - Financial Management
- H - Physical Facilities
- I - International/Community
- MOPP Appendices

MOPP Protocol  
MOPP Updates

[1.3.1 Application](#)  
[1.3.2 Policy](#)  
[1.3.3 Responsibility](#)  
[1.3.4 Operational Guidelines](#)  
[Modification History](#)

### 1.3.1 Application

QUT staff and post-graduate students produce research and scholarly output as a contribution to their discipline and/or as part of scholarly discourse. A significant proportion of this is intended for publication for the general purpose of recognition and impact. The following policy applies to this process, only where such output is not intended for commercialisation or individual royalty payment or revenue for the author or QUT. In effect it applies to the corpus of refereed research literature, conference proceedings, and other non-refereed output, as contributed by QUT to the outside world.

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# Institutional repository policy at QUT-1

## 1.3.2 Policy

Material which represents the total publicly available research and scholarly output of the University is to be located in the University's digital or " E print " repository, subject to the exclusions noted. In this way it contributes to a growing international corpus of refereed and other research literature available on line, a process occurring in universities worldwide.

# Institutional repository policy at QUT-2

## ■ 1.3.2 Policy

**The following materials are to be included:**

- Refereed research articles and contributions;
- Un-refereed research literature, conference contributions, chapters in proceedings, etc (the accepted draft).
- Theses as prepared for the Australian Digital Theses (ADT) process.



# Institutional repository policy at QUT-2 ... cont'd

## ■ Materials to be included ... cont'd

- Access to these contributions will be subject to any necessary agreement with the publisher.
- The material is to be organised in the repository according to the same categories used for the reporting of research to DEST
- Material to be commercialised, or which contains confidential material, or of which the promulgation would infringe a legal commitment by the University and/or the author, should not be included in the repository.

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# QUT's Institutional Repository - QUT ePrints

- Established in 2003
- <http://eprints.qut.edu.au>
- Focus is currently on providing open access to the 'postprint' versions of QUT's peer-reviewed scholarly publications



# Motivating researchers to self-archive to the IR



- Download statistics provide data on the number of additional readers they have reached.
- More readers = more potential citations

**QUT** Queensland University of Technology

QUT home QUT Library Home About Browse Search Register User Area Help

### Top 50 Authors

Date range : 4/04/2007 - 03/04/2008

Rank	Author	File Downloads
1	Frost, Ray	102188
2	Skitmore, Martin	62672
3	Worthington, Andrew	52713
4	Dumas, Marlon	45065
5	Ferreira, Luis	42068
6	Watters, James	39769
7	Cunningham, Stuart	38473
8	Kloprogge, J. Theo	37831
9	Courtney, Mary	34908
10	Pham, Binh	33915

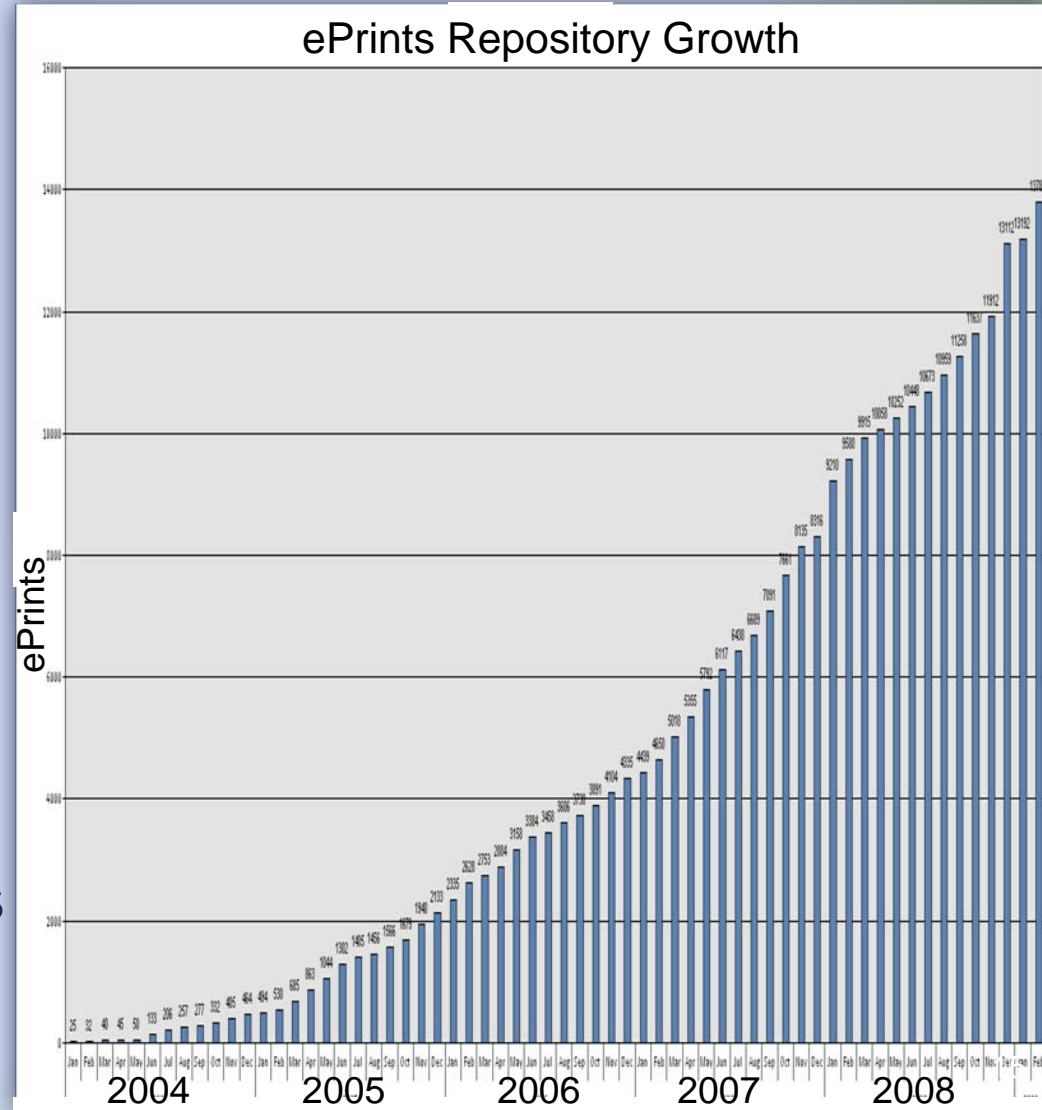
**Download statistics**

14



# From QUT - 5 years on.....

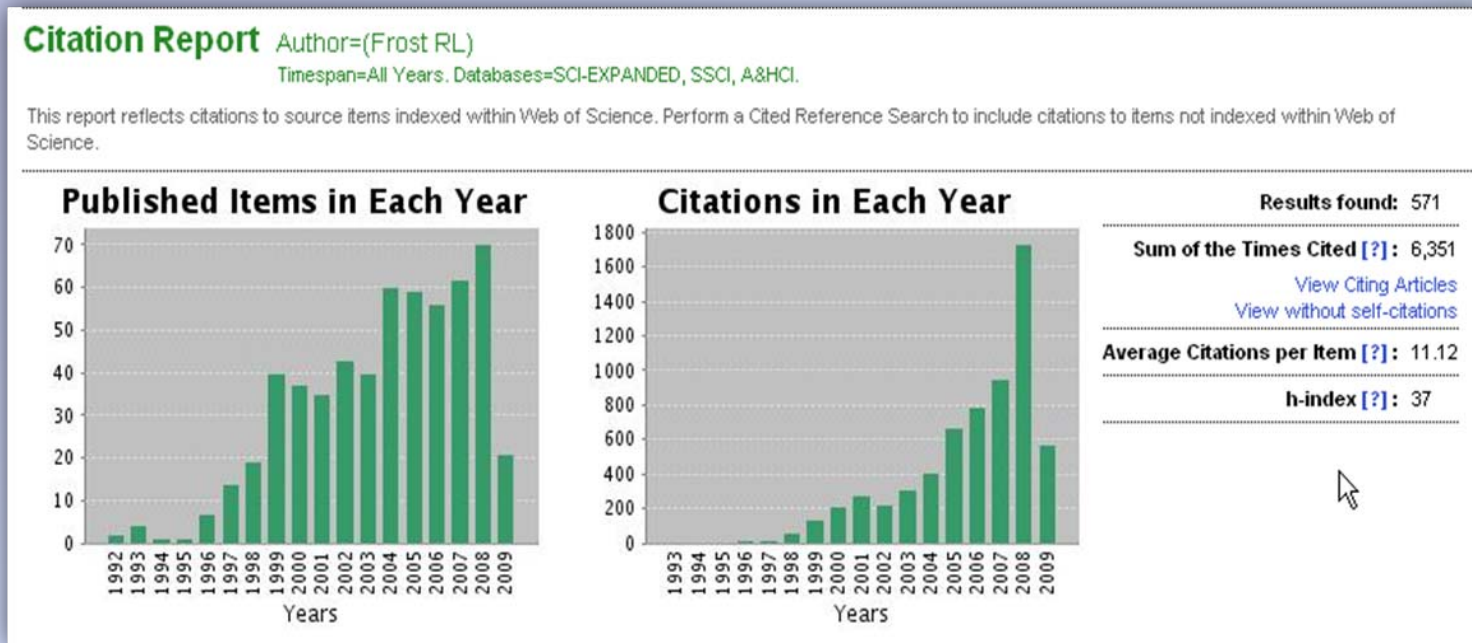
- QUT ePrints
- March 2009
  - 14,269 records
  - 8784 with open access full-text attached
  - (plus over 1,000 additional with restricted access full-text attached – includes embargoes)
  - 2088 active depositors



# Open access and citation frequency (Gargouri)

1. OA adds an independent positive increment
2. There is no difference for mandated and unmandated OA
3. The citation advantage is greater for high impact journals

# Citation impact for a mature researcher (QUT)



- Prof. Ray Frost began uploading the accepted manuscript versions of his published articles to **QUT ePrints** in 2004
- The open access copies have been downloaded 173,615 times.
- Annual citation rate increased from 308 citations in 2004 to **1727** citations in 2008.



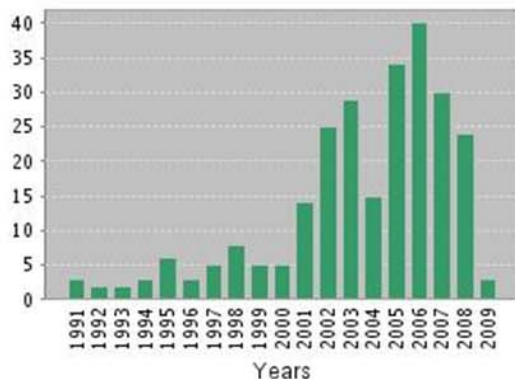
# Citation impact for an early career researcher (QUT)

## Citation Report Author=(martens W\*)

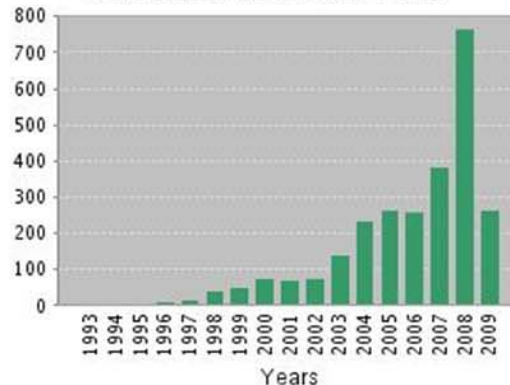
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI.

This report reflects citations to source items indexed within Web of Science. Perform a Cited Reference Search to include citations to items not indexed within Web of Science.

**Published Items in Each Year**



**Citations in Each Year**



Results found: 256

Sum of the Times Cited [?]: 2,676

[View Citing Articles](#)

[View without self-citations](#)

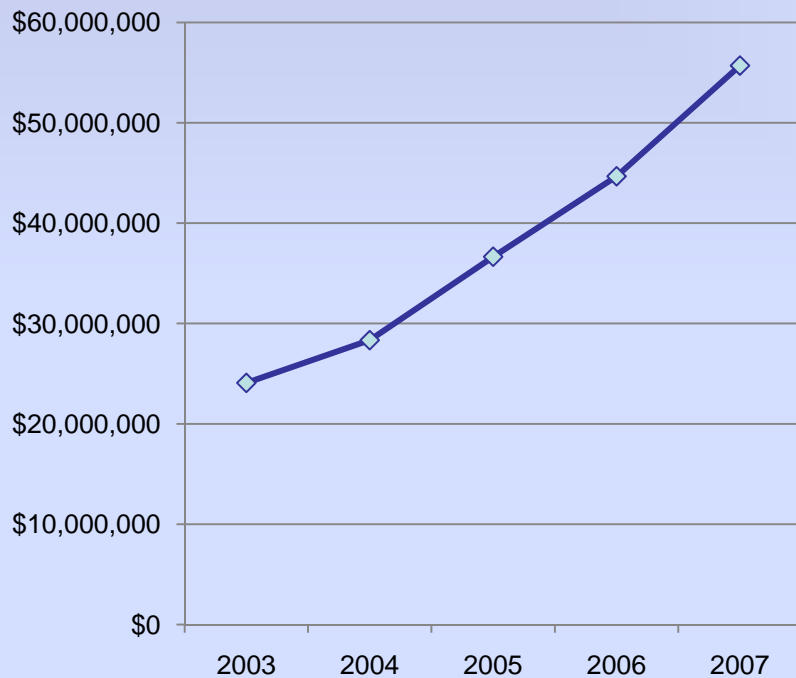
Average Citations per Item [?]: 10.45

h-index [?]: 28

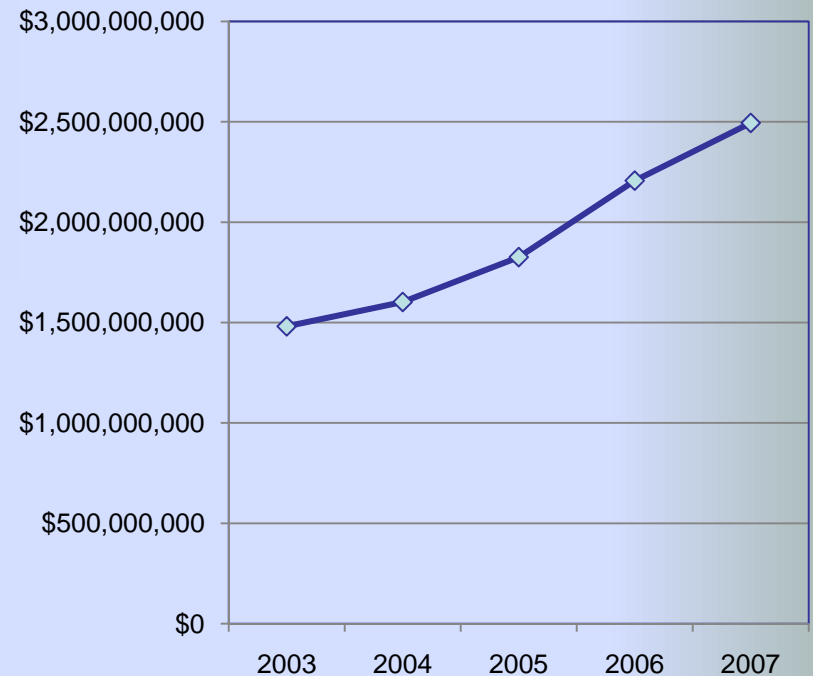
# Total Research Income Comparison

## – QUT and Sector, 2003 to 2007

**QUT 2003 – 07**  
**(increase of 132%)**



**Sector 2003 – 07**  
**(increase of 68%)**

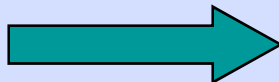


# A QUT ePrints record...

“Open Access” to  
the author’s final  
draft version



Linked access to  
the published  
version





Available online at [www.sciencedirect.com](http://www.sciencedirect.com)  
**SCIENCE @ DIRECT®**  
Journal of Colloid and Interface Science 294 (2006) 47–52  
[www.elsevier.com/locate/jcis](http://www.elsevier.com/locate/jcis)

Journal of  
Colloid and  
Interface Science

## Modification of fibrous silicates surfaces with organic derivatives: An infrared spectroscopic study

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Available online 8 August 2005

**Abstract**

This contribution explores the interaction of the fibrous silicates, pyrogenic silica, sepiolite and chrysotile with a wide range of organic agents. Infrared spectroscopy (IR) methods are essential for the characterization of solid surfaces and for the investigation of the kind of bonds formed between the surface of these silicates and the organic molecules. Thus, when sepiolite or pyrogenic silica are treated, e.g., with polyurethanes, alcohols, isocyanates, amines or pyridines, specific Si–NH–C or Si–O–C bonds are derived from the linkage of the differently located OH groups in these fibrous silicates with the organic molecules. On the other hand, more stable, covalent Si–O–Si–C linkages are formed when the fibrous silicates, especially chrysotile, are reacted with heterofunctional silylating agents like chlorosilanes or siloxanes carrying, alkyl, alkoxy or silyl groups. Such reactions may occur in the presence or absence of HCl. An absorption band at 960 cm<sup>−1</sup>—which we assigned to Si–OH groups—is detected only in the presence of HCl. The evolution of this band is related to the degree of grafting of the organic radicals with the silanol groups of the silicates. HCl-generated silanol groups are the main bridges for the coupling of organosilyl groups on chrysotile and other silicates by covalent bonding, leading the way to the preparation of interesting new materials, including fibrous sheet polymers. © 2005 Elsevier Inc. All rights reserved.

**Keywords:** Nanotechnology; Nanomaterials; Organosilanes; Modification of clay surfaces; Infrared spectroscopy; Pyrogenic silica; Chrysotile

### 1. Introduction

Organically modified silicates have selective applications in many areas and have thus called the attention of a number of investigators in the last three or four decades. Organic derivatives of fibrous silicates like pyrogenic silica (also known as *stapulite*), sepiolite and chrysotile deserve a special chapter because of their interesting applications. As infrared spectroscopy has been an important tool to study and characterize the structure of such fibrous organomineral products, we undertake here a review of works done in this field.

Two kinds of organic treatments of these fibrous silicates will be considered. Treatments with organic agents are based mostly on carbon, nitrogen, arsenic, etc. (e.g., amines, isocyanates, alcohols, polyurethanes, organic acids) and with organosilicon compounds, based mostly on silicon and carbon (e.g., siloxanes, chlorosilanes, alkoxy-silanes, etc.). The presence and absence of HCl in the mentioned treatments will also be discussed. Acid treatments per se may result in solids with increased surface areas, high porosity and acid centers. Such acid-treated silicates may find applications in catalysis, as bleaching agents, etc. Covalent bonding (and/or H bonding) between the zeolite water/OH–functional groups on fibrous silicates and organic derivatives is emphasized in this review. However, it is known that many silicate minerals might carry a negative charge (as a result of isomorphous substitution) and can have siloxane cavities. These will provide attractive adsorption centers especially when small polar organic derivatives are considered.

Whilst it is not strictly correct to describe the fixation of different organic derivatives on silicate surfaces as if it was solely covalent in nature and disregard the possibility of ionic or dipole-ion fixation, it does provide the basis for a big picture point of view.

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<sup>b</sup> Emeritus Investigator, IWC, Caracas.



# Main Issues Arising

- distractions arising from government research assessment and open access agendas becoming confused
- distractions arising from less relevant conversations about repositories
- well-known confusables

# Misunderstandings

## – Suber's field guide

1. All OA is gold OA
2. Low levels of spontaneous self-archiving reflect opposition to OA
3. OA archiving will kill journal subscriptions
4. OA is about bypassing peer review

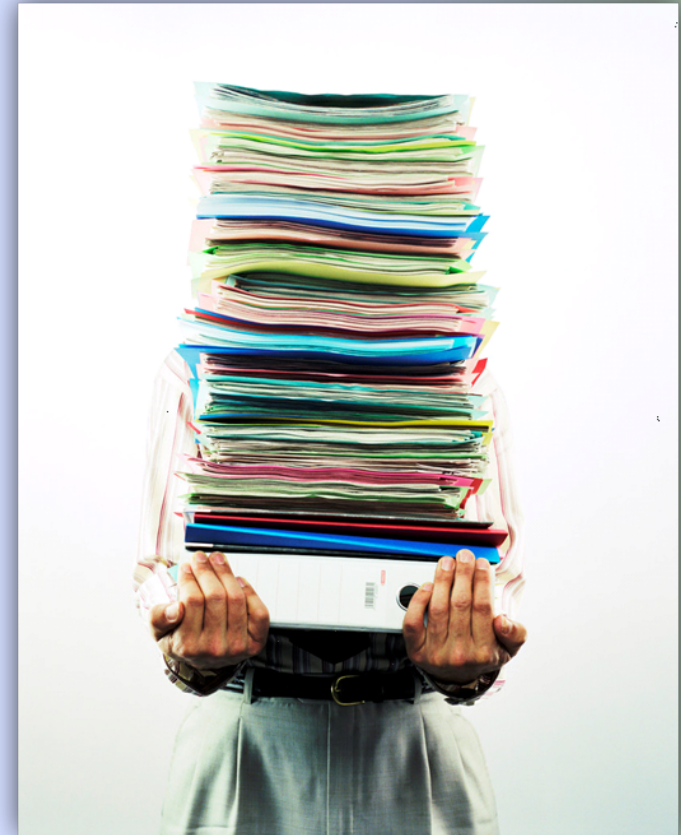
# Misunderstandings

## – Suber's field guide ..(cont'd)

5. Okay, then, but OA journals skimp on peer review
6. Okay, then but at least green OA is about bypassing peer review
7. OA is about punishing greedy or obstructive publishers
8. OA journals couldn't possibly pay their bills

# Addressing concerns about copyright...

- At QUT, the Library offers to help authors to manage the copyright issues
- Authors are encouraged to deposit a 'postprint' version of **all** their journal articles
- The Library enables a level of access consistent with the publisher's policy



# Copyright as an enabler

- QUT was also the lead institution in Australia in the global Creative Commons Project, and sees a clear link between providing material in open access and the rapid development of open content licencing.
- Oak Law project was a result of the Australian Government's recognition of this and its own interest in advancing accessibility.
- See - <http://www.oaklaw.qut.edu.au/>



# Open Access taking root in QUT

- The champion researchers become the main advocates
- The exemplar research growth faculty rewards academics for depositing
- The library and the research portfolio (research office) unite to improve metrics

## Queensland University of Technology +Repository +Incentive +Mandate

Green line: total annual output

Red line: proportion self-archived



# Questions?

The background of the slide is a complex, abstract composition. It features a light blue and white color palette. Overlaid on this are several elements: a faint, repeating pattern of binary code (0s and 1s) in a light blue color; a series of blue musical notes and stems that appear to be floating or moving across the frame; and a prominent, stylized blue DNA double helix structure that winds its way across the center and towards the right side. The overall effect is one of digital connectivity, science, and creative thought.