

Preamble

A **researcher** was always looking for a good idea...

**THE RESEARCHER'S
SIDE**

I am looking for
a good idea!

**THE PUBLISHER'S
SIDE**



When a **publisher** was always looking for good authors and readers...

**THE RESEARCHER'S
SIDE**

I am looking for
good clients!

**THE PUBLISHER'S
SIDE**



Sometimes, a **researcher** would find some really great ideas...

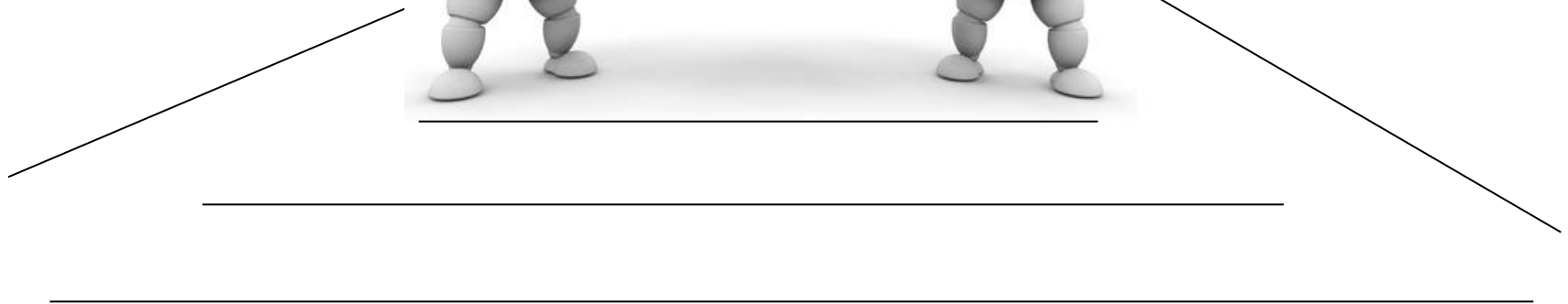
**THE RESEARCHER'S
SIDE**

I have a great idea!
Open Access!

**THE PUBLISHER'S
SIDE**



???



But which **Open Access**?

**THE RESEARCHER'S
SIDE**

Open Access?

**THE PUBLISHER'S
SIDE**

???



For the researcher : free **Open Access!**

THE RESEARCHER'S
SIDE

THE PUBLISHER'S
SIDE

**Free Open
Access!**



?!!



But also...

**THE RESEARCHER'S
SIDE**

**THE PUBLISHER'S
SIDE**



For the publisher: Gold **Open Access!**

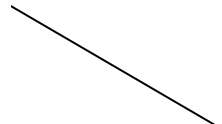
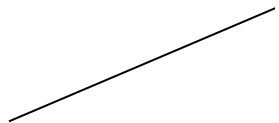
THE RESEARCHER'S
SIDE

THE PUBLISHER'S
SIDE

**Gold Open
Access!**

?!!

\$



To be continued...

OPEN  ACCESS



Open access scientific publishing: opportunities and risks for the users' community

ICIC
Barcelona, 23rd-26th October 2011

Antoine RAULIN, ara@bvdim.com
Martine DEJEAN, mde@bvdim.com
Bureau van Dijk Information Management



→ Today, the situation of Open Access publishing:

- Increase in **STI repositories**
- Increase in **Open Access Journals**
- Increase in "**multiplex uses**" (multiple and complex digital uses):
 - various sources and formats
 - multilingual information
 - multimedia data
 - different re-use conditions
 - ...



→ A **SWOT approach** to find answers to the following questions:

- Impacts for **researchers**?
- Advantages for **users**?
- Positions of **publishers**?
- Leading business models?
- Next steps for improvement?



➔ This presentation will focus on 4 elements:

1. The STI publishing **market**
2. The Open Access **routes and business models**
3. **Inventory** of the STI Open Access repositories
4. The **SWOT** analysis of the STI Open Access publishing



→ 1. The STI publishing **market**



- STM publishing market was **\$ 8 billion** in 2008
- An oligopolistic trend market : **3** main players generating **50%** of the turnover (Elsevier, Springer-Kluwer Academic Publishers and Thomson Reuters)
- **2 000** scientific journal publishers: **40%** of the publishers are European based, representing **50%** of the articles published
- **25 000** STI journal titles in 2010 (STI and Social Sciences) covering ~ **1,5** million articles published per year

- **with Open Access**
 - Classic publishing business model (the reader pays)
 - Open Access new business model (the author pays)



→ 2. The Open Access **routes and business models**



- Berlin declaration on Open Access to knowledge in the STI (2003): endorsed by **300** Universities in 2010
- Several types of supports and contents:
 - **Subject-based & Institutional Repositories**
(articles, theses, working papers, proceedings, multimedia material...)
 - **Open access journals**
(articles)
- Open Access stakeholders:
 - **2/3** of commercial publishers and **1/3** of scholarly and academic publishers.
 - Around **120 000** articles published in “full” or “hybrid” OA journals in 2009 (some **8-10%** of the estimated yearly global scientific output)

Three main Open Access routes:

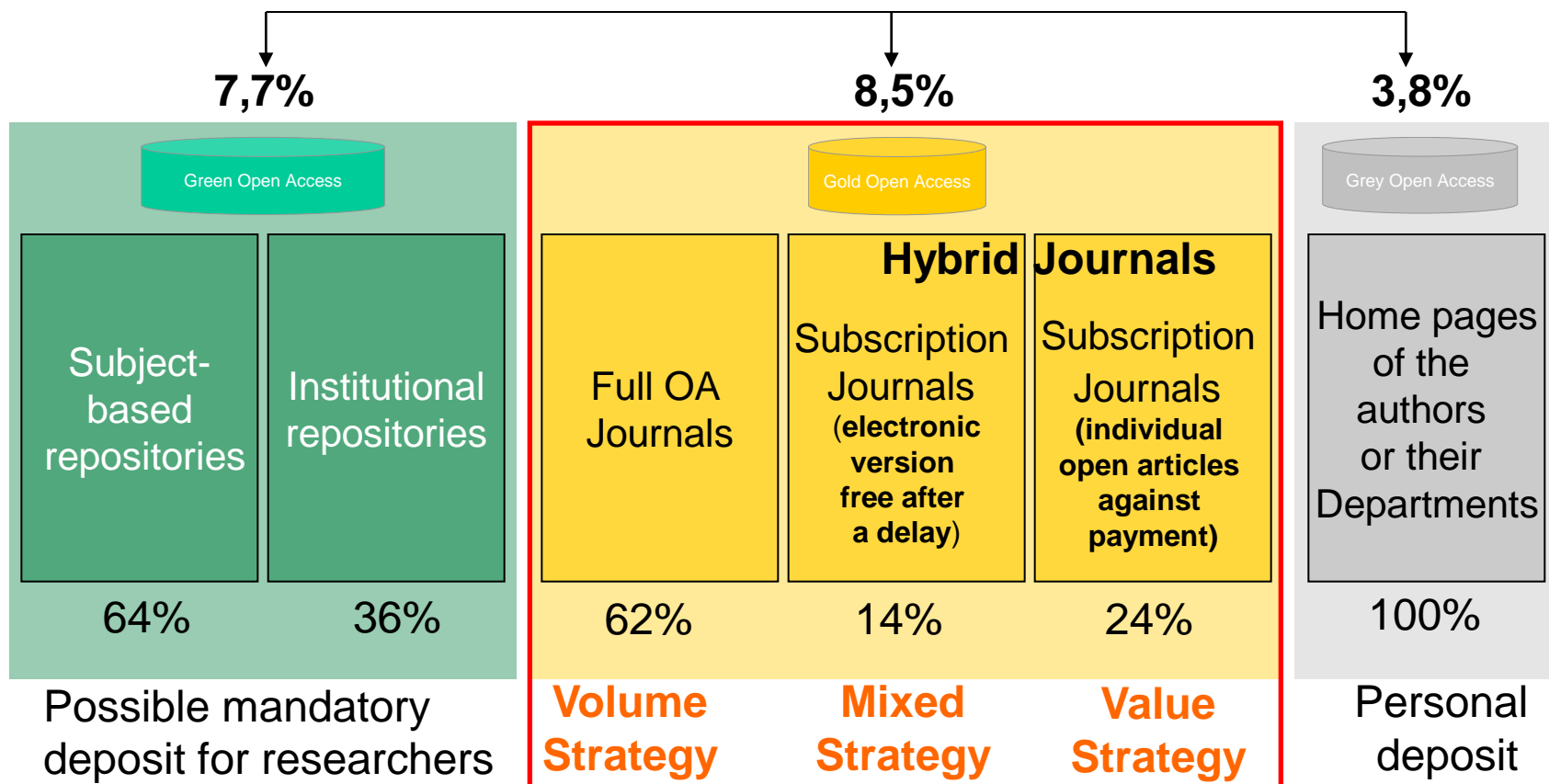
- **Gold** Open Access
- **Green** Open Access
- **Grey** Open Access



Basic principle :

(from the study "Open Access to the Scientific Journal Literature: Situation 2009")

20% of the total output of peer-reviewed articles
"Openly Accessible"



- **20%** of the total output of peer-reviewed articles "Openly Accessible" (from the study "Open Access to the Scientific Journal Literature: Situation 2009")
- On the average, the distribution of these 20% OA peer-reviewed articles is:
 - Green Open Access: **40%**
 - Grey Open Access: **20%**
 - Gold Open Access: **40%**

} **60%**
- **60% of these OA articles do not have any additional costs**
 - Green and Grey Open Access: no business models
 - The deposit does not require a fee (free full text copies of the articles from Gold Open Access)
- **40% of these OA articles may have additional costs**
(1/4 of these 40% are linked to the author-pays model "to pay to be in")
 - Gold Open Access: linked to business models
 - The deposit of an OA article can be charged, depending on the positioning of the publisher (commercial or academic)





3 main strategies with 3 business models in the Gold Open Access: 2 offensive strategies, 1 defensive strategy

→ **Offensive strategies**

- **Full Open Access positioning (offensive strategy based on volume):**
 - **Offensive strategy:** increase Open Access content on its website / portal
 - **Objective:** capture new readers who will become new clients
 - **No cost should be applied** to this Open Access deposit

- **Selective Open Access positioning (offensive strategy based on value):**
 - **Offensive strategy:** deal individual open articles with the author (against payment)
 - **Objective:** select the best Open Access output because it is the key to success to compete against other Journals
 - **Each demand (rejected or validated) would be charged** per deposit or per year



→ **Defensive strategy**

→ **Mixed** Open Access positioning (defensive strategy based on **mixed offer**):

- **Defensive strategy**: control the value chain of the STI publishing
- **Objective**: allow free open access content after a delay in order to keep actual clients and attract new ones
- **No cost should be applied** to this Open Access deposit



Open Access deposit prices and re-use conditions:

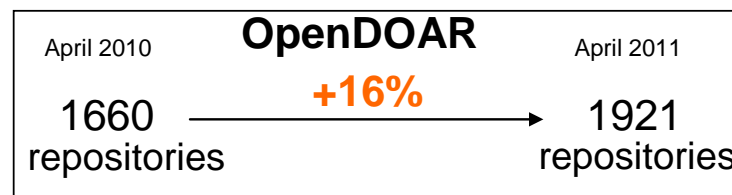
- **Price range for the deposit of an OA article in a Hybrid Journal** (including publishing and scientific reading committee costs for validating or rejecting the article):
 - **An average cost of \$ 2300 per article**
 - **A fixed annual cost (from \$ 500)**
- **Full or optional Open access:**
 - **Gratis OA:** no-cost online access
 - **Libre OA:** some additional usage rights



→ 3. **Inventory** of the STI Open Access repositories



"No cost to be in"



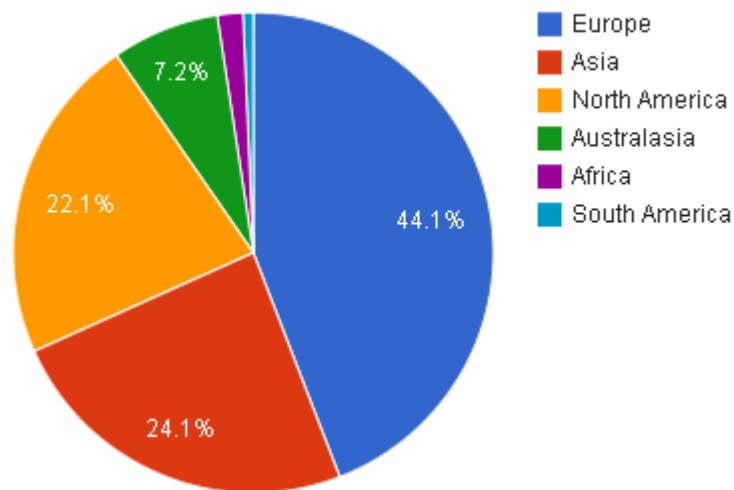
- Over **2100** Open Access Repositories as of October 2011
- TOP 5 countries:
USA (**19%**), UK (**9,5%**), Germany (**7%**), Japan (**6,5%**), Spain (**3,5%**)
- Over **18** million records
- Prevalence of Journal articles in over **66%** of the repositories
- Most represented languages in repositories:
English (**76%**), Spanish (**10%**), German (**9%**), Japanese (**7%**),
French (**6%**)



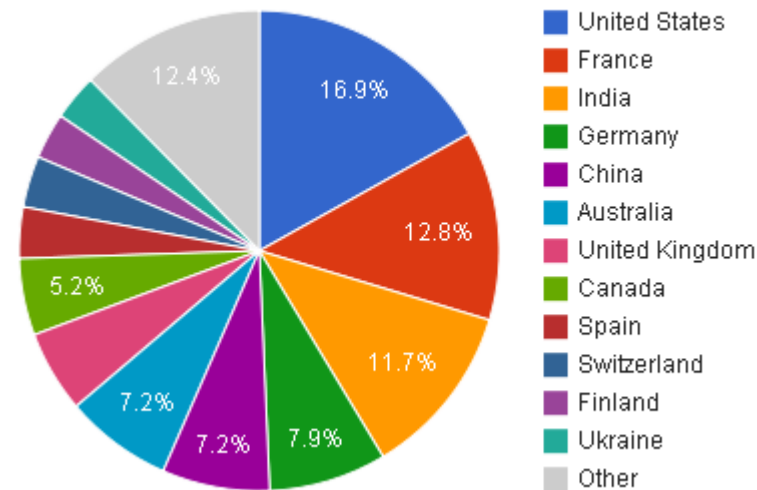
→ **Focus on Open Access in Chemistry and Chemical Technology:**

- **2,5%** of the worldwide open access repositories : **51 repositories** (**44%** in Europe)
- Over 1 million records
- The **6 TOP** contributing countries: **USA, France, India, Germany, China, Australia** (these 6 countries representing **63%**)

Proportion of Repositories by Continent - Worldwide, Chemistry and Chemical Technology



Proportion of Repositories by Country - Worldwide, Chemistry and Chemical Technology



"To pay to be in"



October 2010	DOAJ	October 2011
5452 titles	+31%	7179 titles

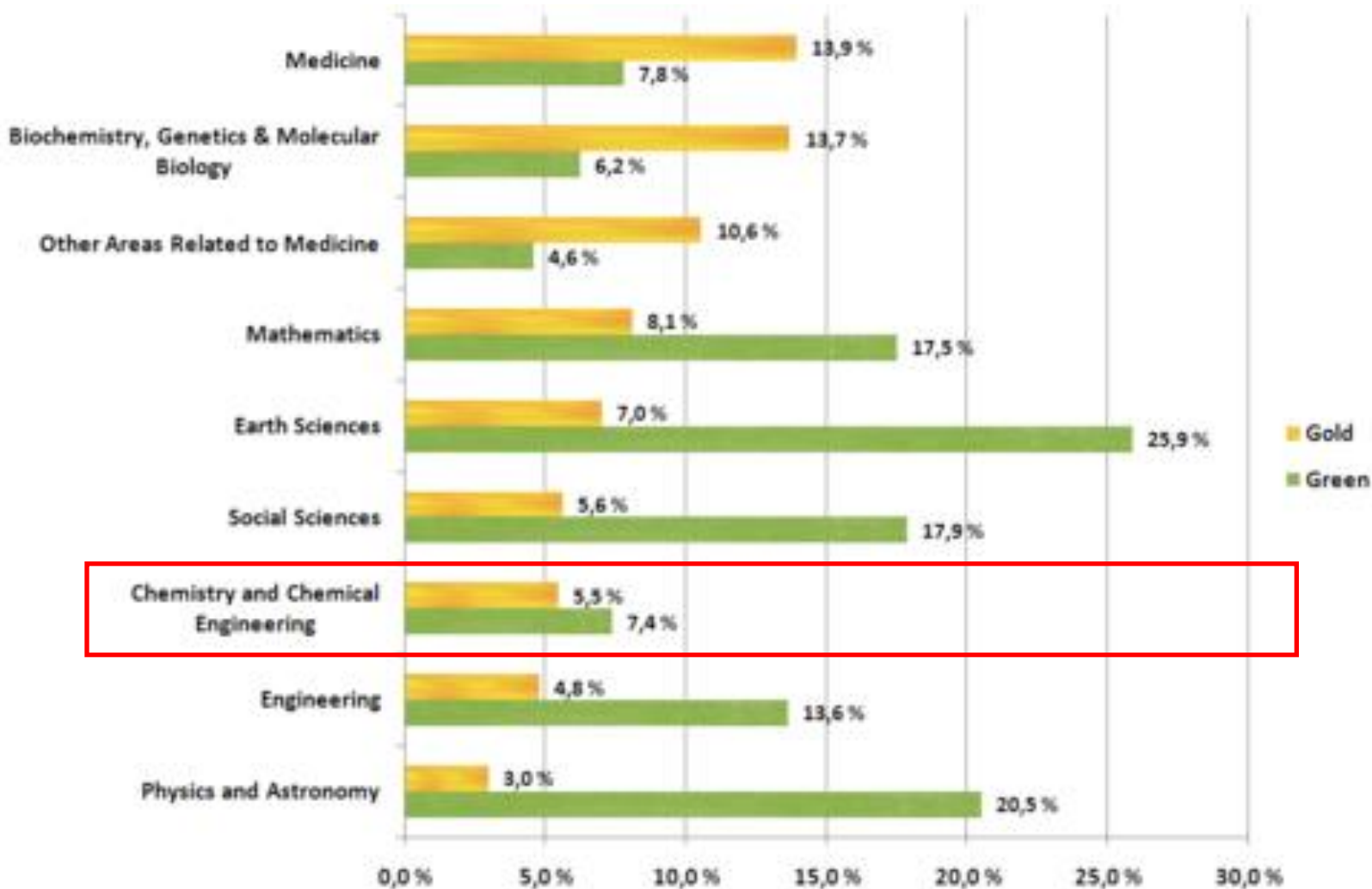
→ Over **7100 Open Access Journals** as of October 2011 (+31% since 2010)
(Directory of Open Access Journals : OA Journals with peer reviewing)

→ Over 650 000 articles as of October 2011

Subjects Chemistry: 145 journals (2% of DOAJ)

- Analytical Chemistry (15 journals)
- Chemical Engineering (15 journals)
- Chemistry (General) (97 journals)
- Inorganic Chemistry (4 journals)
- Organic Chemistry (14 journals)

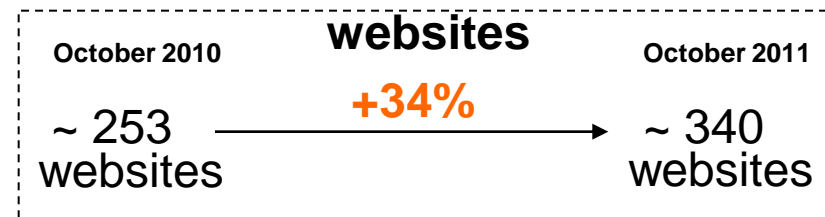




(from the study "Open Access to the Scientific Journal Literature: Situation 2009")



"No cost to be in"



Grey Open access

- Scientific publications available to users on the **author's personal websites**, Department's websites, blogs or social networks
- **Deposits can depend upon agreements** with the author's publishers
- **"Personal websites":**
 - Referencing poorly optimized for search engines
 - Not always a scientific reading committee to validate the documents
 - Long term permanency of these websites not guaranteed



The example of the **finest** Grey/Green Open Access deposit:

In November 2002, Perelman posted the first of a series of eprints to the arXiv, in which he claimed to have outlined a proof of the geometrization conjecture, of which the Poincaré conjecture is a particular case.

Grigori Perelman

Born: 13 June 1966 (age 45)

Leningrad, Soviet Union

Fields: Mathematics

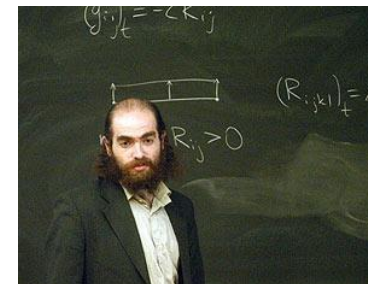
Alma mater: Leningrad State University

Doctoral advisor: Aleksandr Aleksandrov, Yuri Burago

Known for: Riemannian geometry and geometric topology

Notable awards: EMS Prize (1996), declined - Fields Medal (2006), declined - Millennium Prize (2010), declined

(WIKIPEDIA)



A high-value scientific article is no longer exclusively available on Publisher Journals.



→ 4. The **SWOT** analysis of the STI Open Access publishing



→ **Advantages for the author**

- Free availability of the content to readers
- Quality of the OA journal (in **several disciplines** including Life Sciences, Medicine, and Earth Sciences, journals have **Impact Factors** in the **top 1-2%** of their disciplines)
- Speed of publication
- In some cases, no fee to be paid directly by the author
- A better visibility and accessibility of the authors: Open Access encourages citations (linked to the **H-index** for the author...)

→ **Disadvantages for the author**

- Some Open Access journals require a fee to publish
- The lack of journals of sufficient quality (impact factor of the journal not often confirmed) : many fields of research have few or no good Open Access journals
- The author-pays model obstructs free and open exchange of scientific results



→ **Opportunities for the publisher**

→ **Enhances new Open Access content by:**

- Increasing the **interoperability** due to standards (OAI, XML,...) providing solutions for agregating data and metadata
- Creating **smart tools** and applications to connect databases and structure the information with a high-added value provided by human analysis

→ **Proposes 2.0/3.0 Web innovative applications to:**

- Promote editorial content with social contribution by the users (alternate reading committee)
- Improve the reliability of online documents in a collaborative mode with authors
- Develops intelligent multimedia search engines with innovative functionalities to assist the user (ontology, cross-lingual function, semantic web, multimedia search, ...)



→ **Risks for the publisher**

→ **Risk due to competition with its own author-pay readers**
(despite of other Journals or publishers)

→ **Publishing value chain** is moving towards to free open access

→ **Uncontrolled new business models:**

→ Risk of not having subscription income : should find an adequate revenue stream from fees versus from subscriptions

→ Subscription vs on-demand purchases vs fees vs advertising ?

→ **Asymetric evolution of the impact factor** for journals and the **H-index** of author



→ **Advantages for the user**

→ **OA offers a free & easy access to the full text**

(no IP tracking, no cost)

→ **OA complements competitive intelligence devices** by monitoring Open Access alternative sources in addition to publishers' offers by:

→ **Identifying the authors, laboratories, R&D centers and players**

→ **Tracking pre- and post-prints**

→ **Analysing STI publishing signs: mapping experts in territories, countries, topics and networks**

→ **Confirming trends**

→ **Predicting the evolution of the challenges, R&D ongoing works, partnerships and expert networks**

→ **Disadvantages for the user**

→ **Differences in the document quality and the re-use conditions, depending on the topics, repositories, and journals**

→ **Reliability and status of the documents available** (different versions)

→ **Spending a lot of time in searching** (no database links, no cross-lingualism)



→ **Preventive actions to be taken by the user:**

- Ascertain the presence of scientific reading **committees**
- Differentiate between the **final draft** & **published document**
- Verify the deadlines of the **documents' online settings** (time required to validate document by the reading committee) and the **data re-use conditions** (SHERPA/RoMEO database on self-archiving publishing policies)



→ **Prospective elements: "new economy" and Open Access**

→ **A continuous increase in Open Access use and offer:**

- Open Access data retrieval covers ~ **15%** of STI data retrieval
- Could increase up to **30% - 40%** in the horizon 2015-2020
- Main information searches are in **English** but **multilingualism** is becoming prevalent

→ **New devices should enhance the Open Access content with:**

- Semi-automatic translations
- Cross-lingual searches
- ICT innovative solutions (STT, TTS, multimedia searches...)

→ **Trends in Green and Gold Open Access should optimize:**

- The share in knowledge (web 2.0, web 3.0)
- The mobility of the users (multimode peripherals, social networks, web semantics...)



But uses are now **multiplex**...

The grid contains the following icons:

- Top-left: Various file format icons including Word, Excel, PDF, XML, CSV, and PPT.
- Top-middle: Three mobile smartphones (BlackBerry, iPhone, Android).
- Top-right: A megaphone, a film strip, and a play button.
- Middle-left: A mouth with various national flags on the tongue.
- Middle-middle: A group of 3D white figures holding hands, with one red figure in the center.
- Middle-right: A 3D white figure holding a megaphone.
- Bottom-left: A neon sign that says "OPEN 24 HRS".
- Bottom-middle: A shopping cart.
- Bottom-right: Three orange squares arranged horizontally.



OPEN  ACCESS



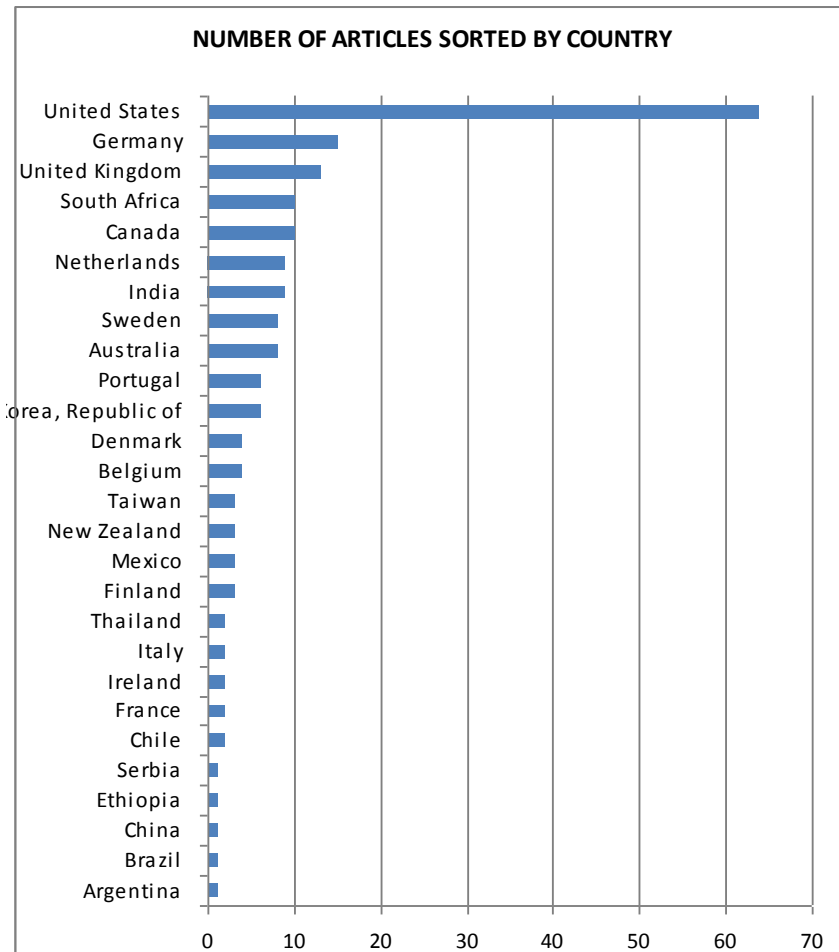
- **Ultimate Open Access keys to success:**
 - A **free access** to full-text documents,
 - A **better visibility** of the authors, encouraging citations
 - Important sources for complementing a professional **competitive intelligence***
 - An **additional high-value content** for publishers to be proposed in the professional databases, publishers' portals...

- **Several questions remain:**
 - The **status** of the document
 - The **time and the costs involved in reviewing** for approval by experts
 - **Conditions related to data re-use** following copyright prescriptions

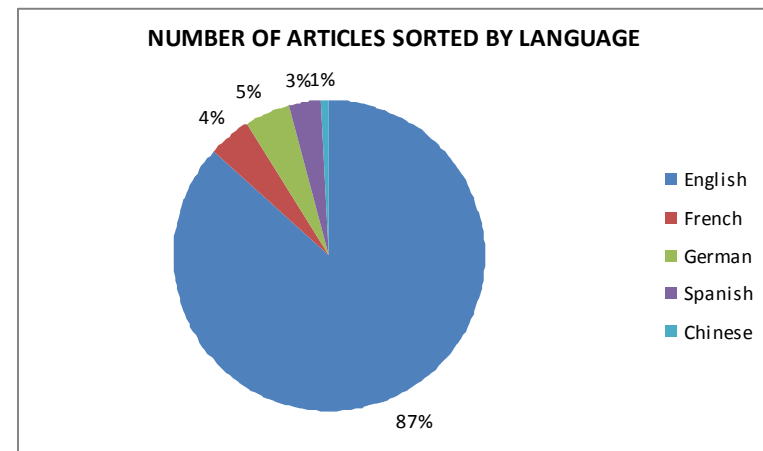
- **The challenges of Open Access are both organisational and financial depending upon:**
 - The evolution of the STI publishing **chain value**
 - The future of Open Access as a **mature and widespread process** in the prospective scenarios for STI within 10-20 years



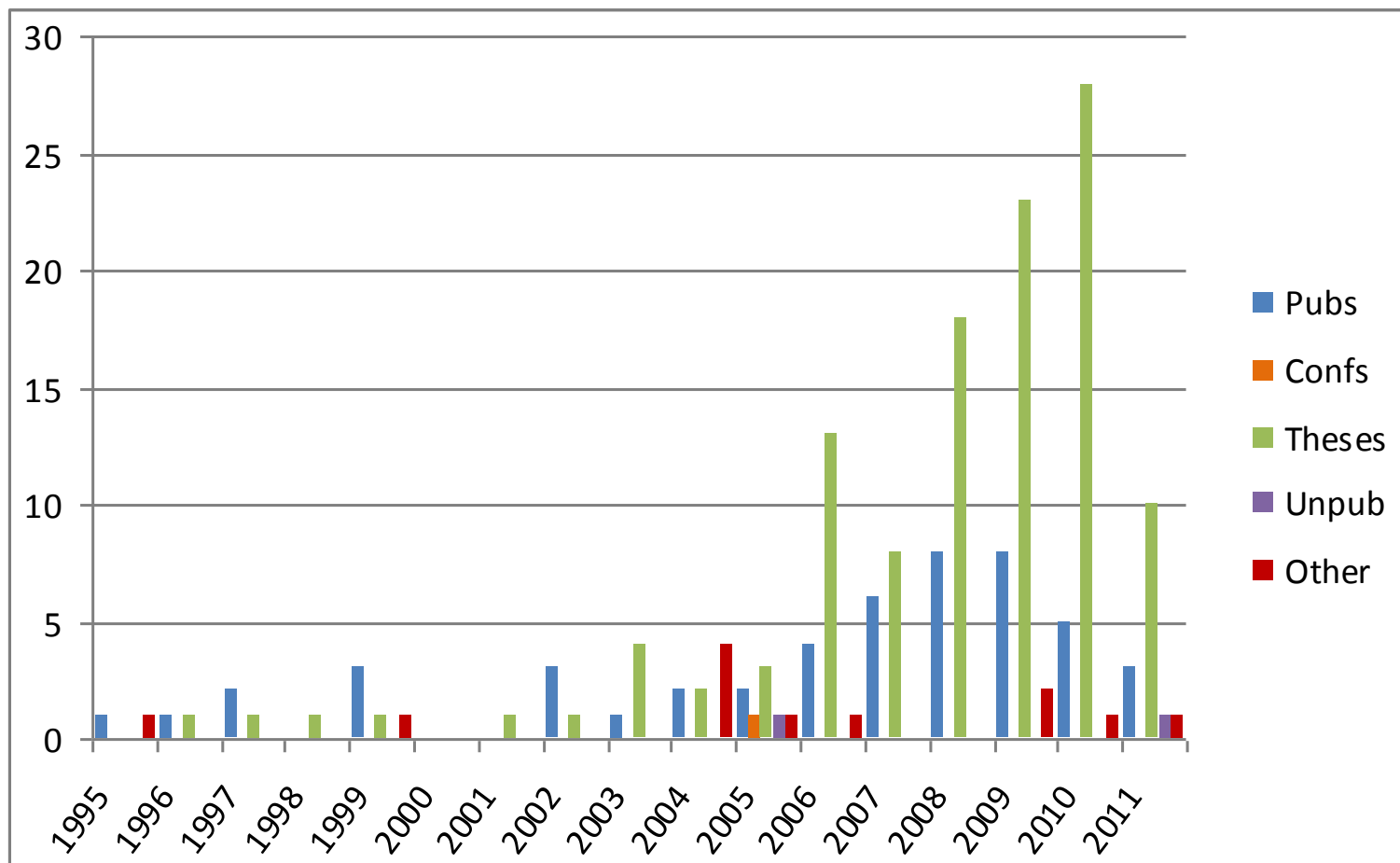
Succinic acid – Open Access results from Open DOAR (September 2011)



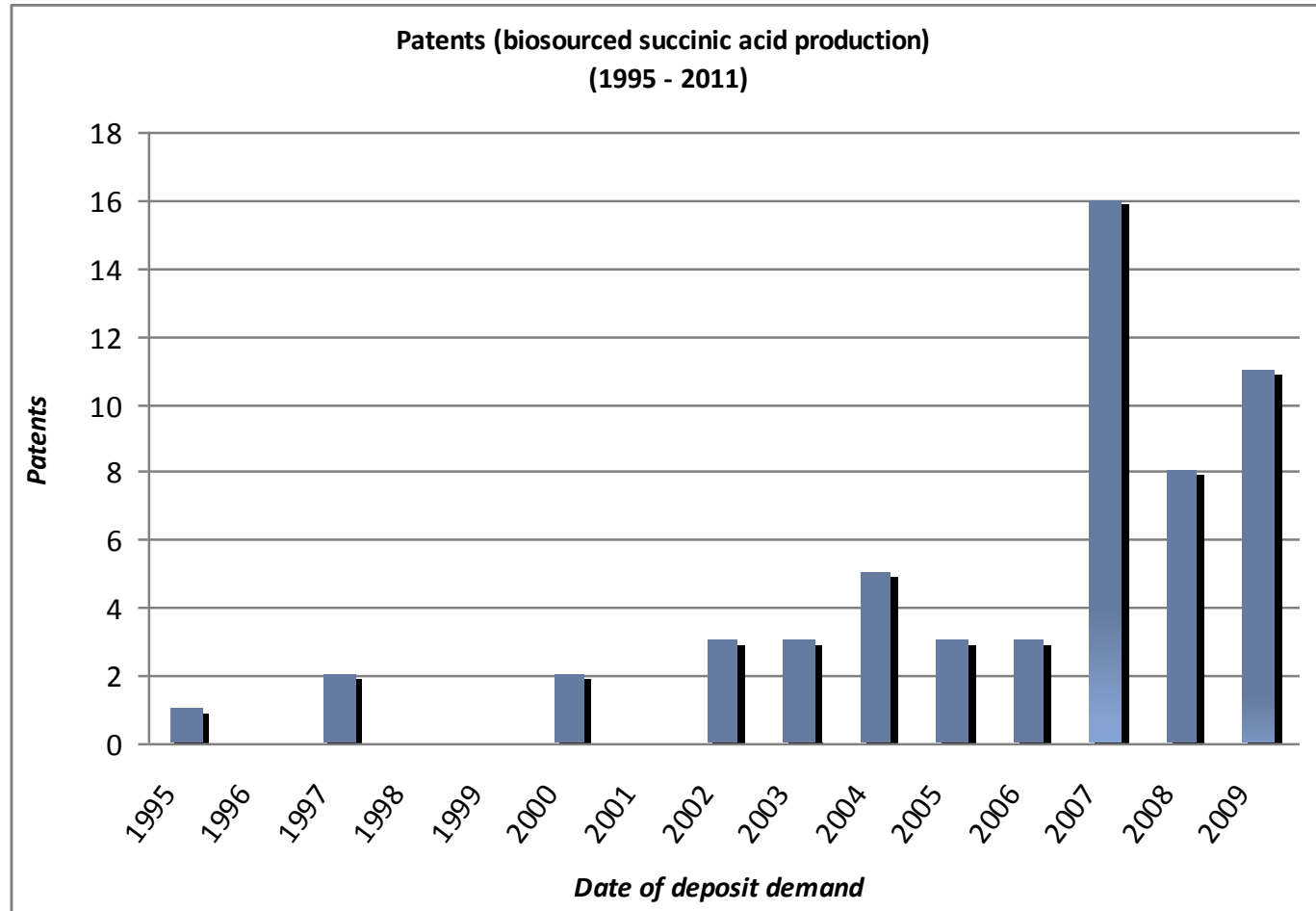
193 results
(number of records)



Succinic acid – Open Access results from Open DOAR (September 2011)



Succinic acid – Patent results from Espacenet, INPI (September 2011)



Thank you for you attention
Any questions ?

OPEN  ACCESS

