

o p e n a c c e s s

B E R L I N 1 2



Transformation Baseline and Mechanics: Financial Feasibility & Output Analysis

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Idea behind our white paper

If we want to get as many players as possible to support the proposed transformation initiative, they must all be comfortable and convinced about the relevant figures

A solid data analysis is a *conditio sine qua non* of any large-scale transformation approach

Thus we need to cover the two domains of:

Finances

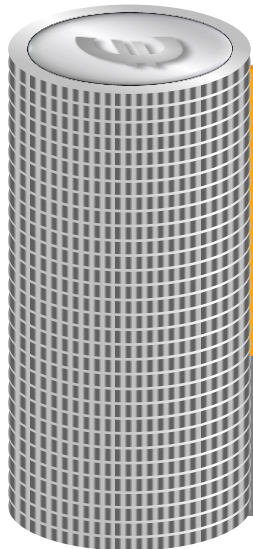
Publications

Our conclusion is that the current fear of OA to become even more expensive than subscriptions is not warranted

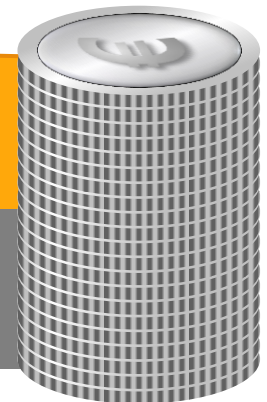
General financial feasibility

Main findings

- There is already sufficient money in the system of scholar communication
- Additional resources won't be necessary
- De facto, savings are likely to occur (technical simplifications, distribution & sales, etc.)

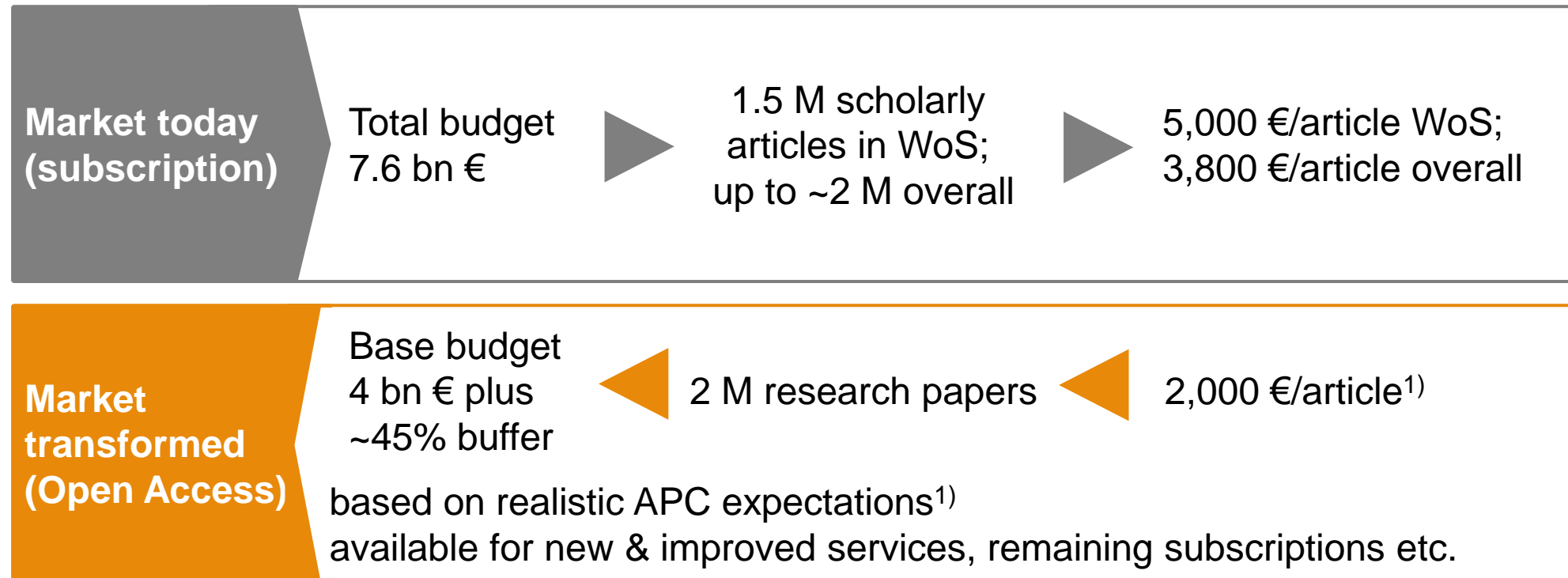


The transformation of existing journals can be organized on the basis of the current subscription spending



The global scholarly journal market and its financial dimensions

Scenario of transformation based on current global operating numbers per year



An OA transformation seems to be possible without financial risks

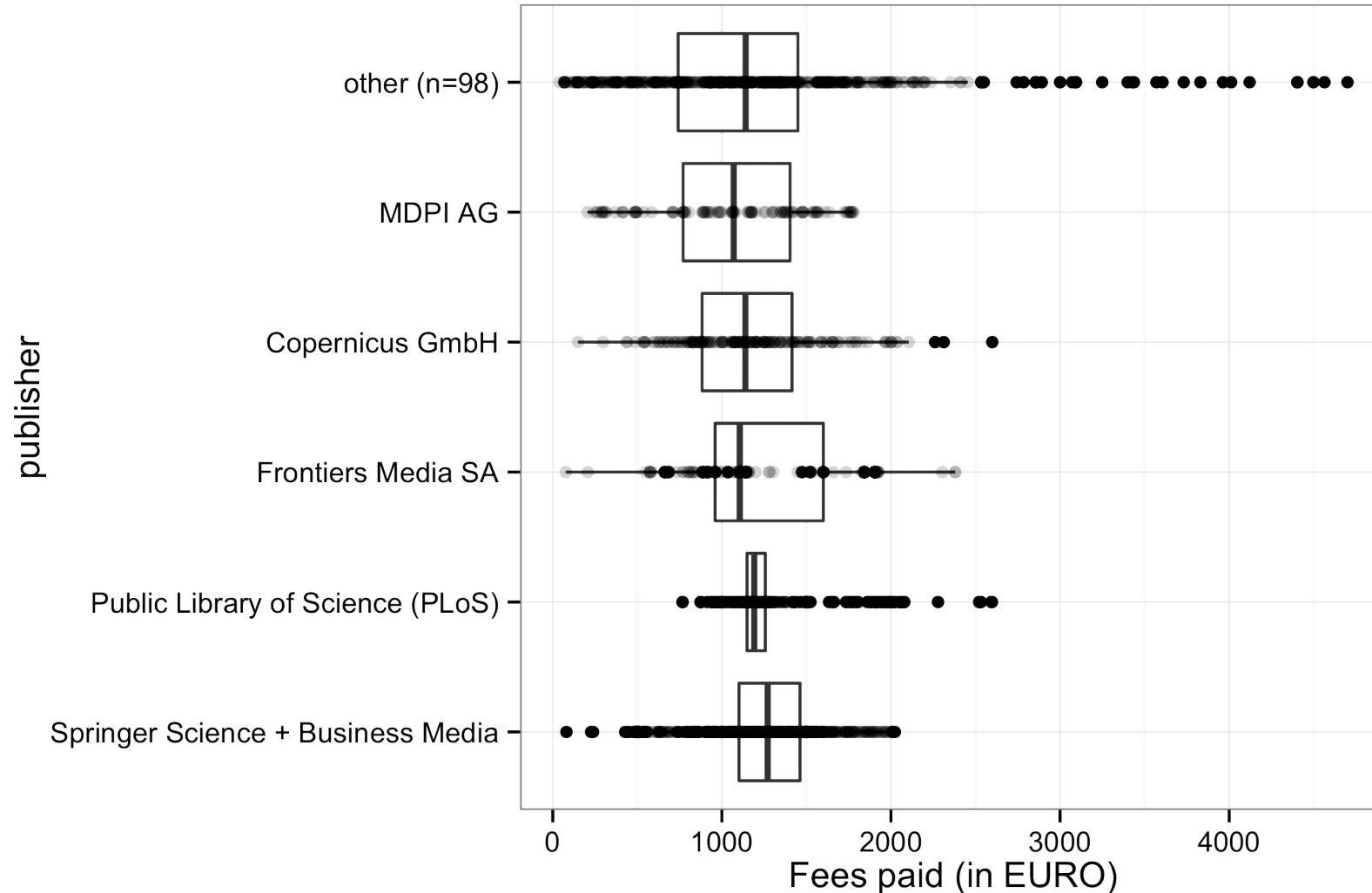
¹⁾ The empirical values of SCOAP3 are ~1,100 €/article; for MPG and for DFG funded universities in Germany they are ~1,250 €/article

APC levels, current evidence

- SCOAP³ < 1,100 EUR
- APC evidence published by Wellcome Trust and Austrian Science Fund (FWF)
- German OpenAPC Initiative; cap applied by German Research Foundation for APC funds = 2,000 EUR



APC levels, current evidence



German OpenAPC Initiative at <https://github.com/OpenAPC/openapc-de>

APC levels, current evidence

“In total, **€4,494,568 for 3,633 articles** were paid by the participating universities.

Average fee is €1,237 and the median €1,203 €.”

*German OpenAPC Initiative, December 2015 at
<https://github.com/OpenAPC/openapc-de>*

Transformation means re-allocation of budgets and conversion of journals and processes



Global
subscription journal
budget
7.6 bn EUR p.a.
(≥3,800 EUR/article)

Open Access volume:
~13% of articles;
~4% of budget

Today's global subscription market >> today's open access market

Transformation means re-allocation of budgets and conversion of journals and processes



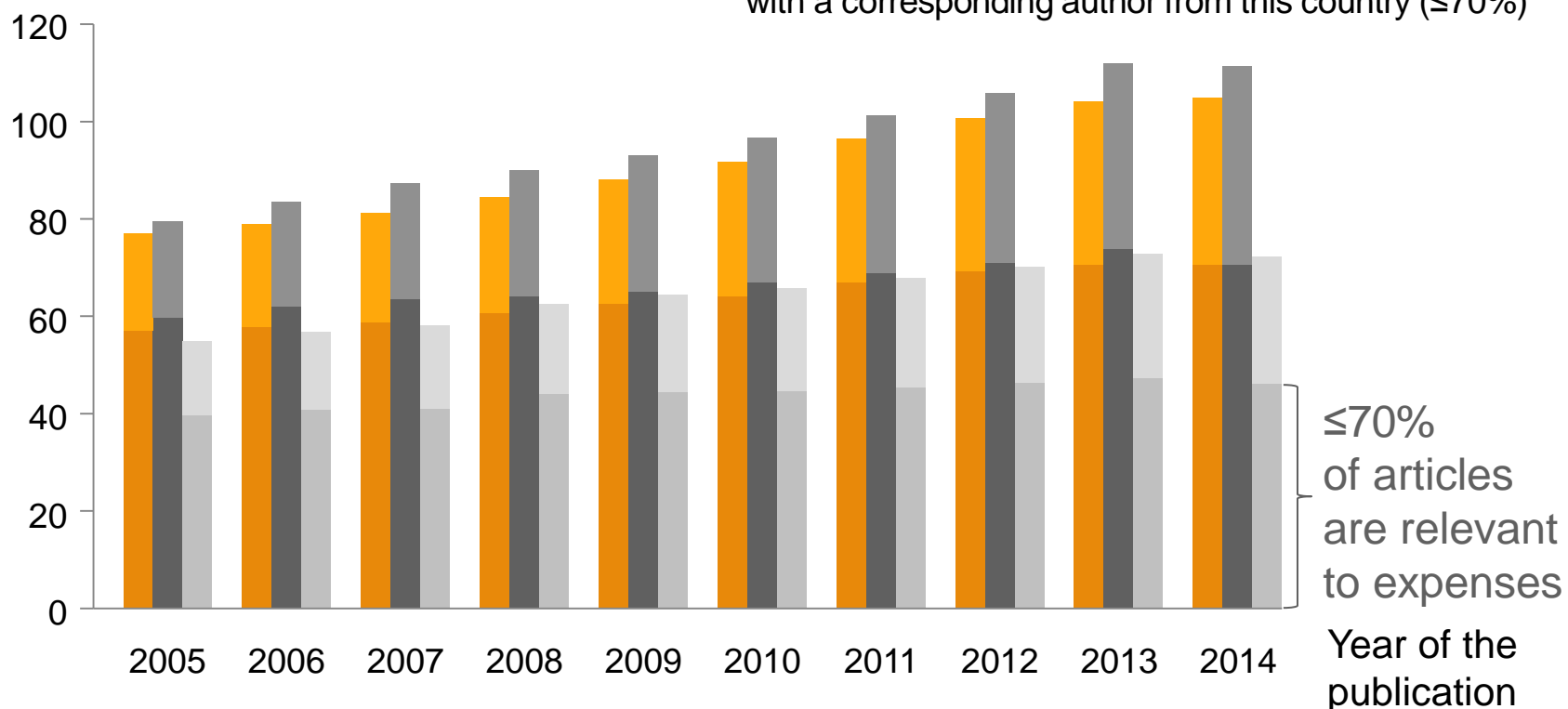
Assuming 90% conversion

Publication volume of selected European countries

Total publication volume

Articles and reviews in Web of Science

Number
of articles
p.a. (in K)



De-duplication of data needed since not all publications are cost relevant in an OA world, but only those of corresponding authors

Germany

Publication volumes and corresponding author shares Articles and reviews in Web of Science

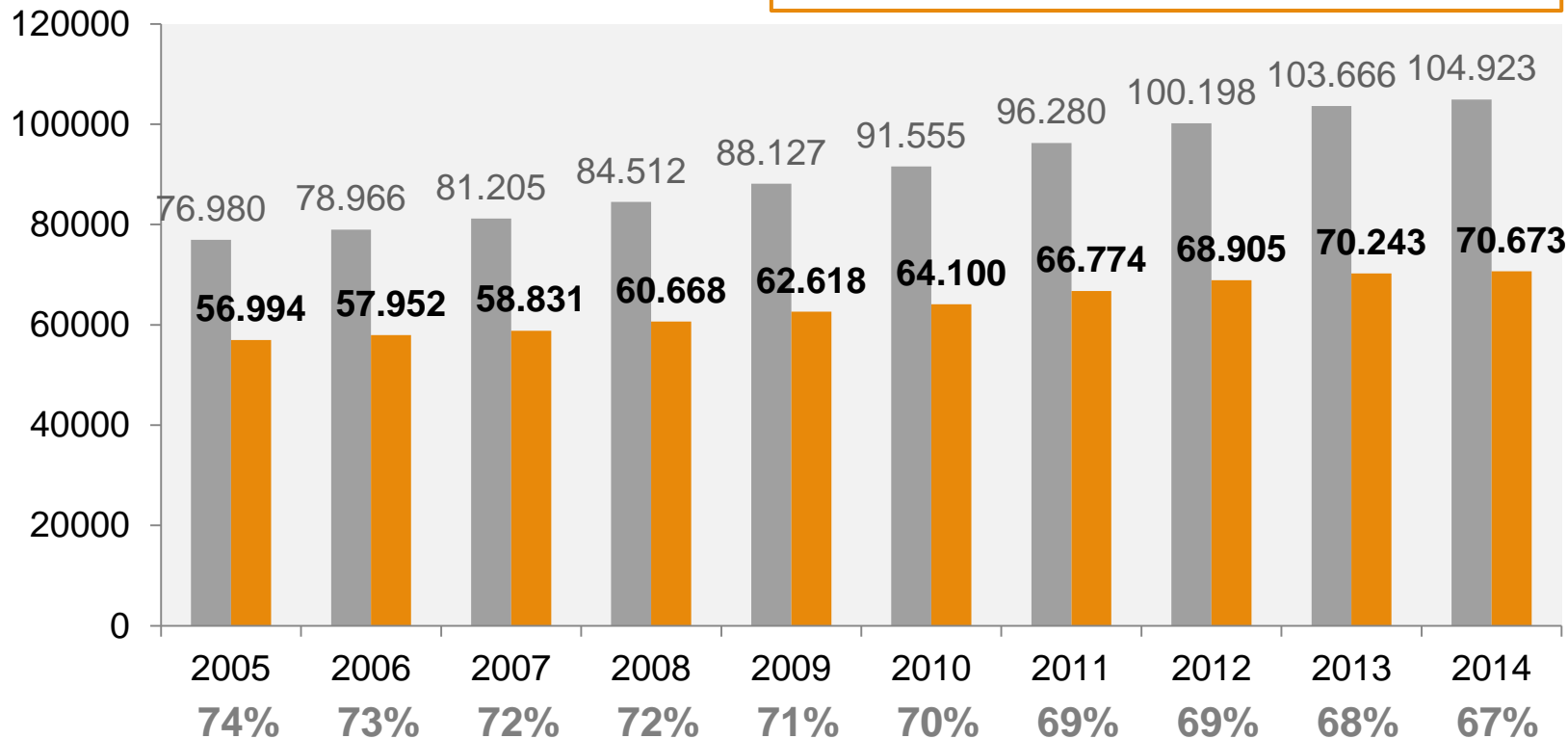


OA Transformation, 2014 calculation span

70,673 papers x 1,300 € = ~ **91.9m €**
70,673 papers x 2,000 € = ~ **141.3m €**

■ total
■ corresponding

Number of articles p.a.



Share of publications with a corresponding author from Germany

Great Britain

Publication volumes and corresponding author shares Articles and reviews in Web of Science

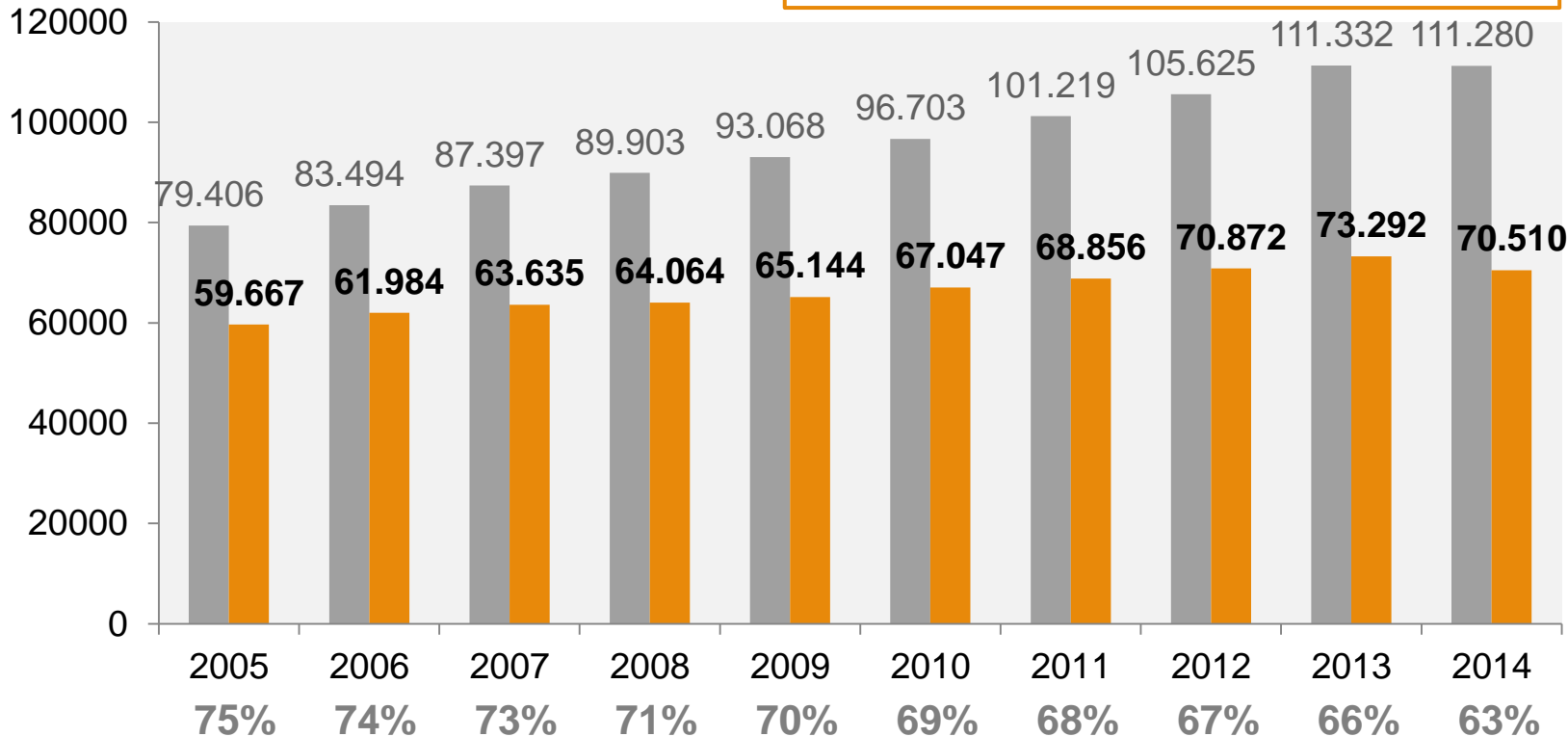


OA Transformation, 2014 calculation span

70,510 papers x 1,300 € = ~ **91.6m €**
70,510 papers x 2,000 € = ~ **141.0m €**

■ total
■ corresponding

Number of articles p.a.



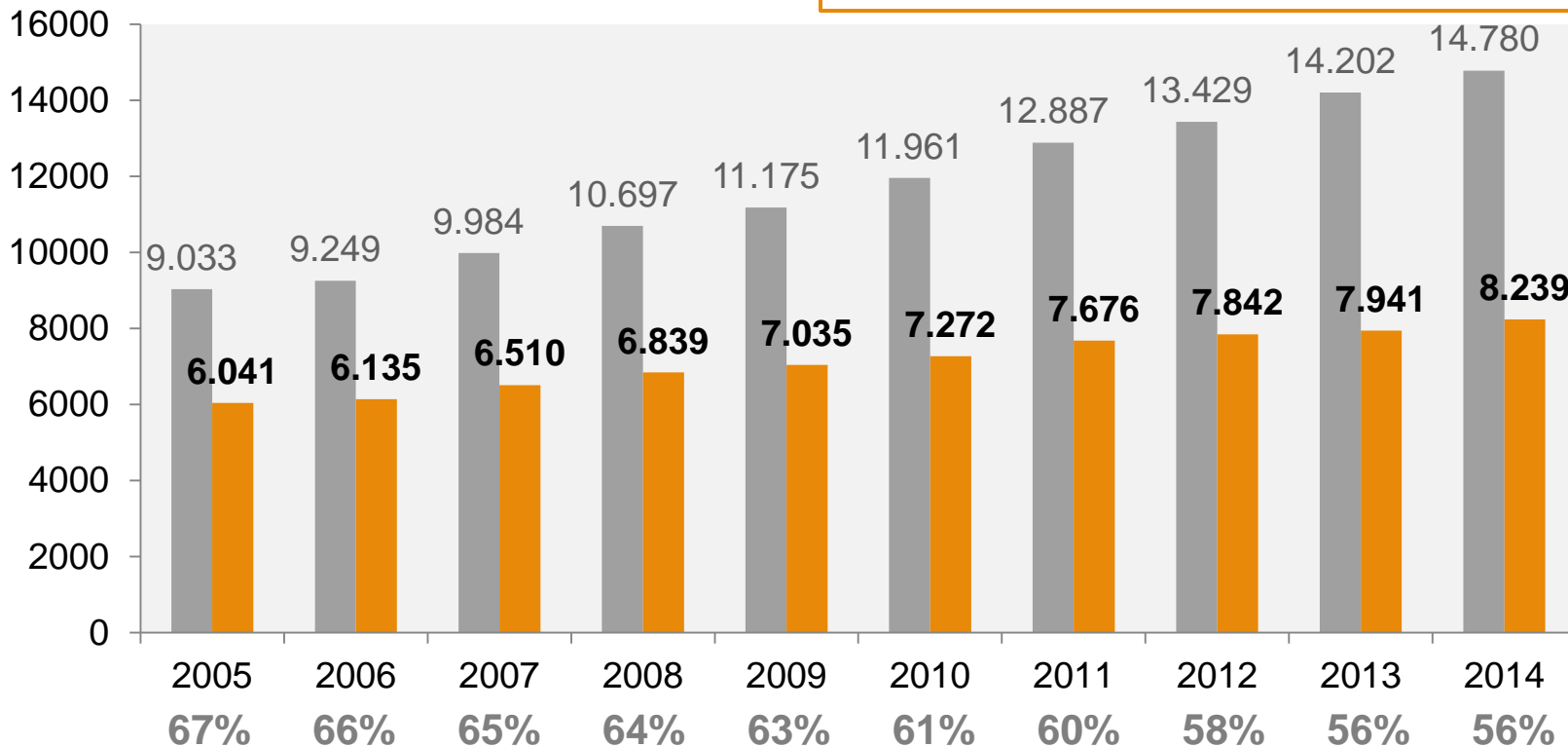
Share of publications with a corresponding author from the UK

Publication volumes and corresponding author shares Articles and reviews in Web of Science

OA Transformation, 2014 calculation span

8,239 papers x 1,300 € = ~ **10.7m €**
8,239 papers x 2,000 € = ~ **16.5m €**

Number of articles p.a.



■ total
■ corresponding

Share of publications with a corresponding author from Austria

Publication volumes and corresponding author shares Articles and reviews in Web of Science

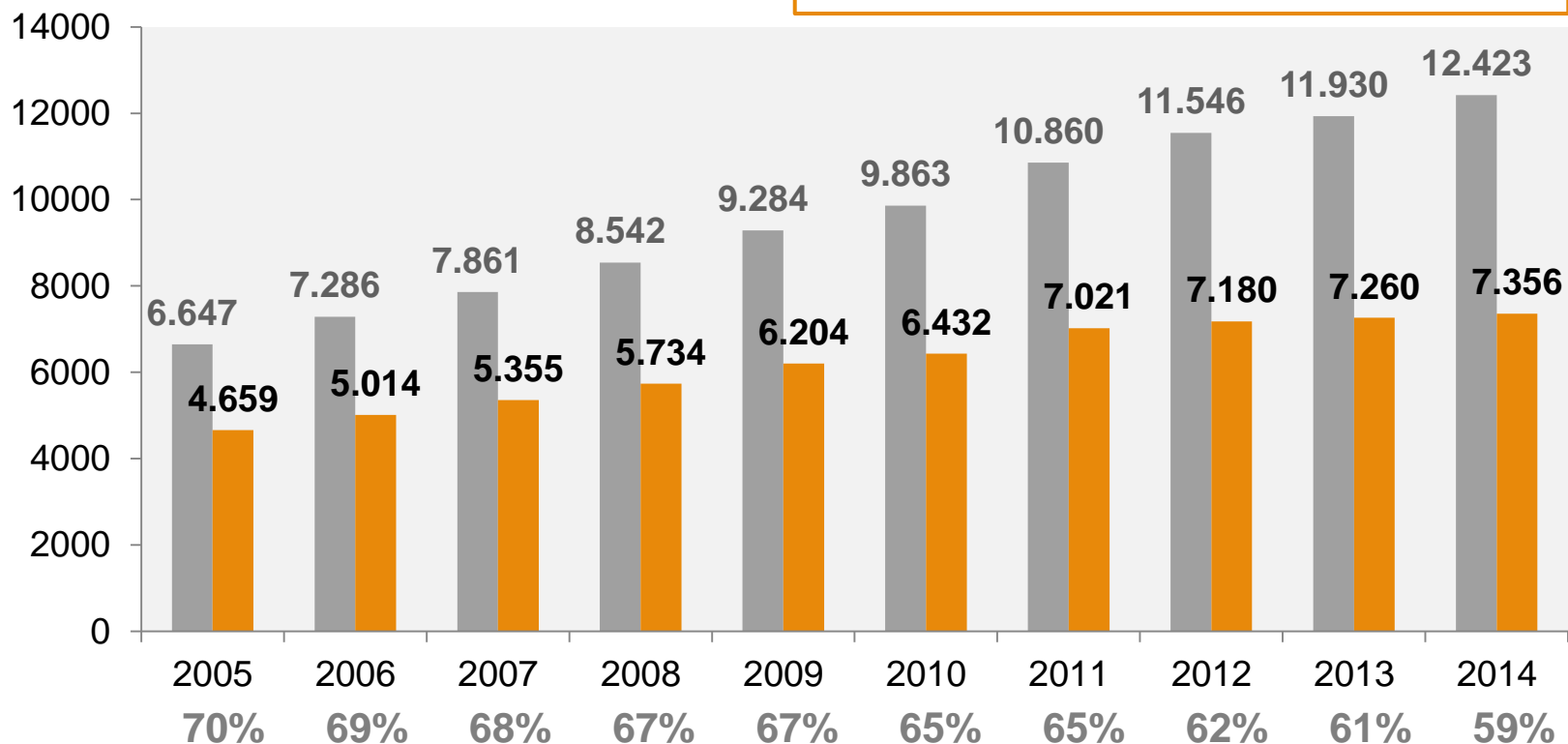


OA Transformation, 2014 calculation span

7,356 papers x 1,300 € = ~ **9.6m €**
7,356 papers x 2,000 € = ~ **14.7m €**

■ total
■ corresponding

Number of articles p.a.



Share of publications with a corresponding author from Norway

Publication volumes and corresponding author shares Articles and reviews in Web of Science

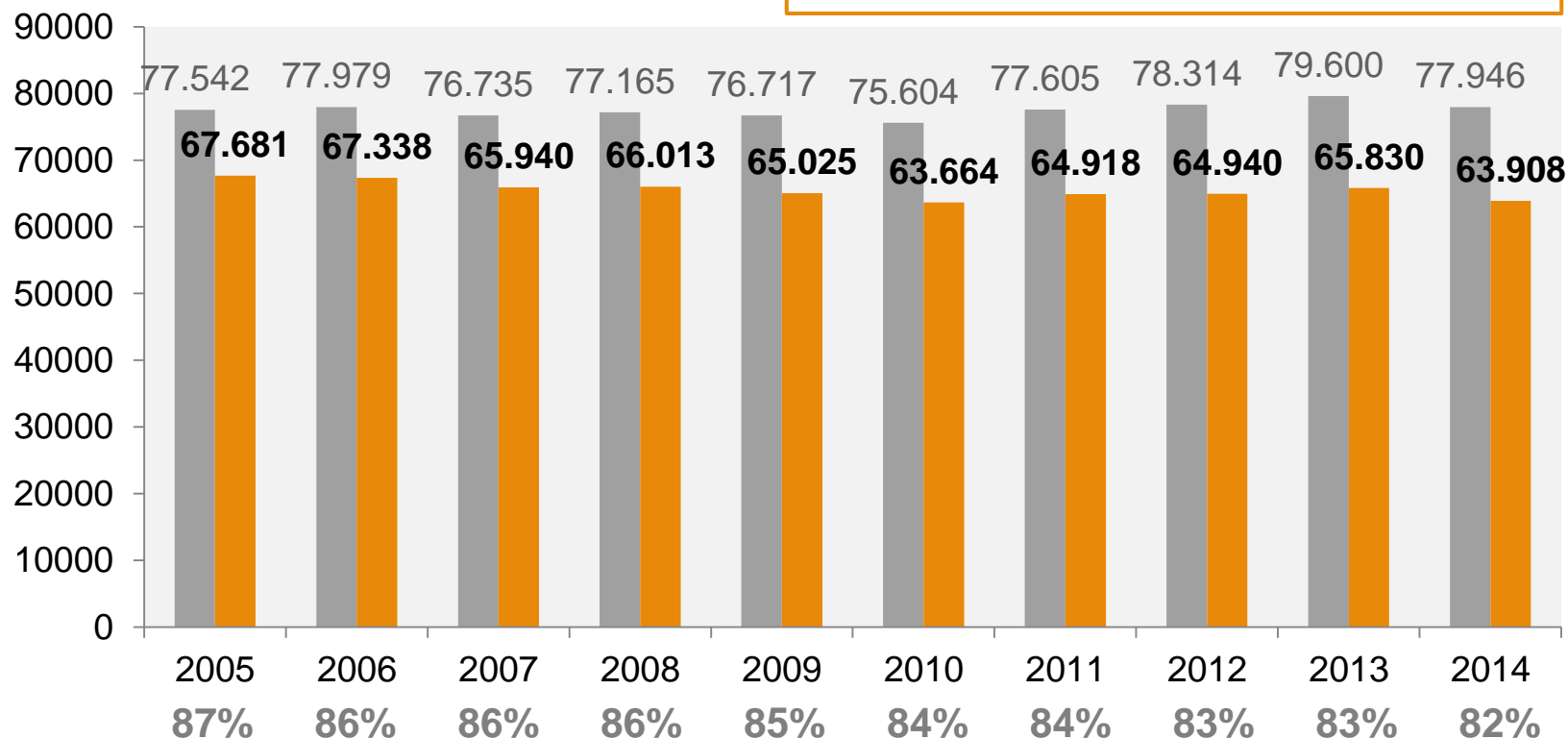


OA Transformation, 2014 calculation span

63,908 papers x 1,300 € = ~ **83.1m €**
63,908 papers x 2,000 € = ~ **127.8m €**

■ total
■ corresponding

Number of articles p.a.



Share of publications with a corresponding author from Japan

China

Publication volumes and corresponding author shares Articles and reviews in Web of Science

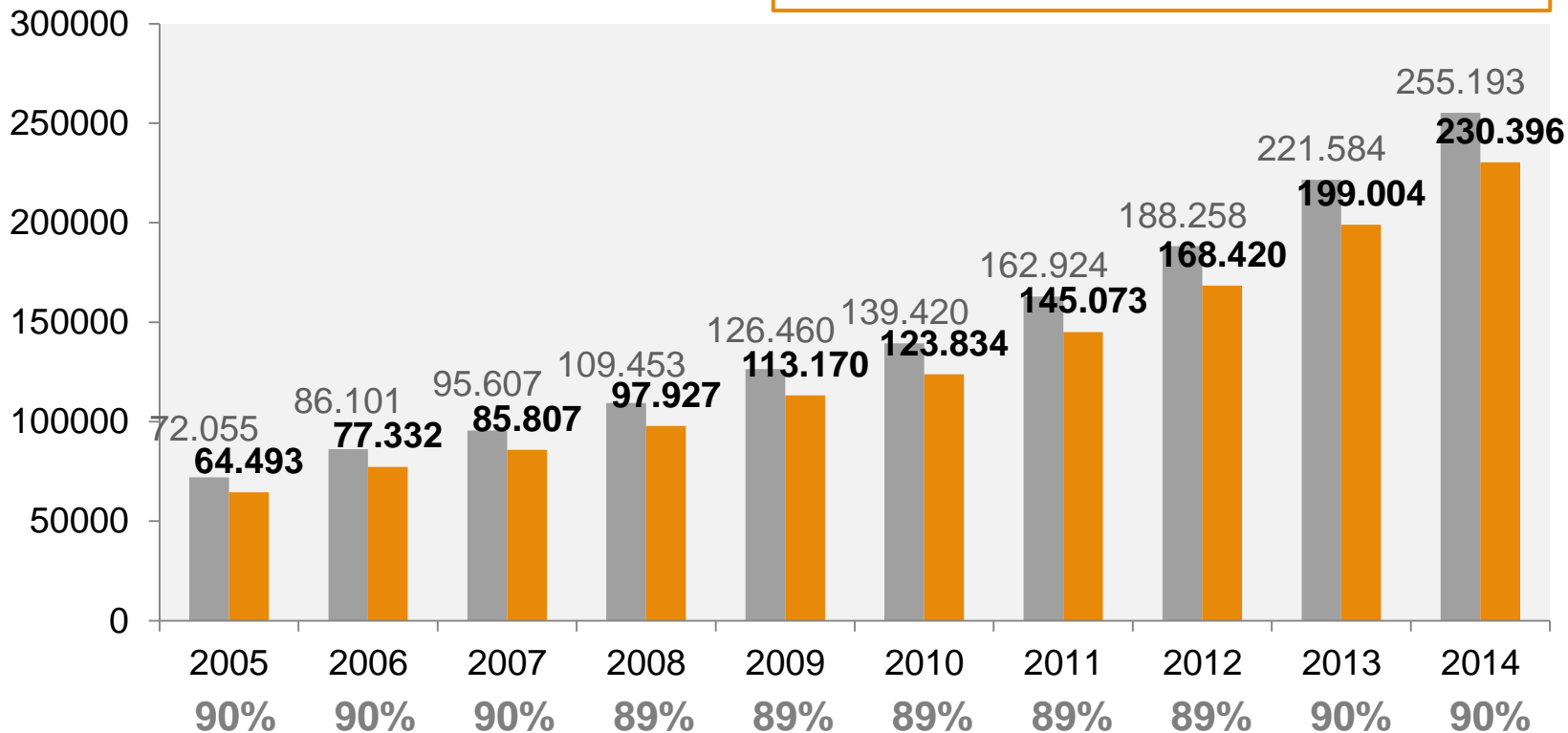


OA Transformation, 2014 calculation span

230,396 papers x 1,300 € = ~ **299.5m €**
230,396 papers x 2,000 € = ~ **460.8m €**

■ total
■ corresponding

Number of articles p.a.



Share of publications with a corresponding author from China

United States

Publication volumes and corresponding author shares Articles and reviews in Web of Science

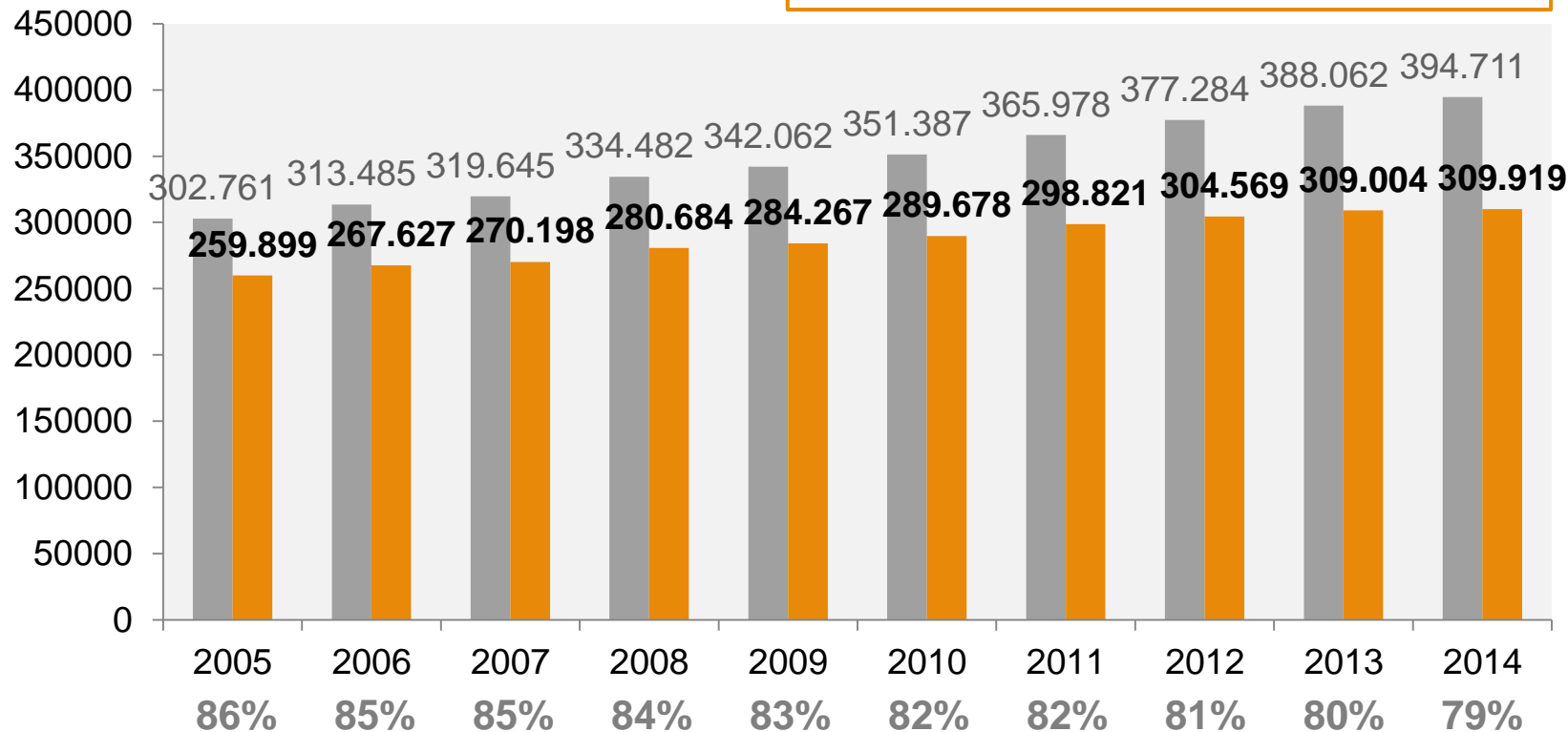


OA Transformation, 2014 calculation span

309,919 papers x 1,300 € = ~ **402.9m €**
309,919 papers x 2,000 € = ~ **619.8m €**

■ total
■ corresponding

Number of articles p.a.



Share of publications with a corresponding author from the USA

The financial formula of the Max Planck Society

Total paper output 10,000 research articles per year

According to Web of Science data, articles and reviews

APC relevant share Maximum of 6,000 (60%)

(between 40-60% corresponding author papers)

This pattern is persistent across the various OA publishers and stable over time

Average APC level monitored Current average APC of ~1,240 EUR

based on 992 APC invoices with a total spend (including taxes) of some €1.2m [as of December 2015]

Expected total expenditure 6,000 x average APC + safety margin \leq €12 million

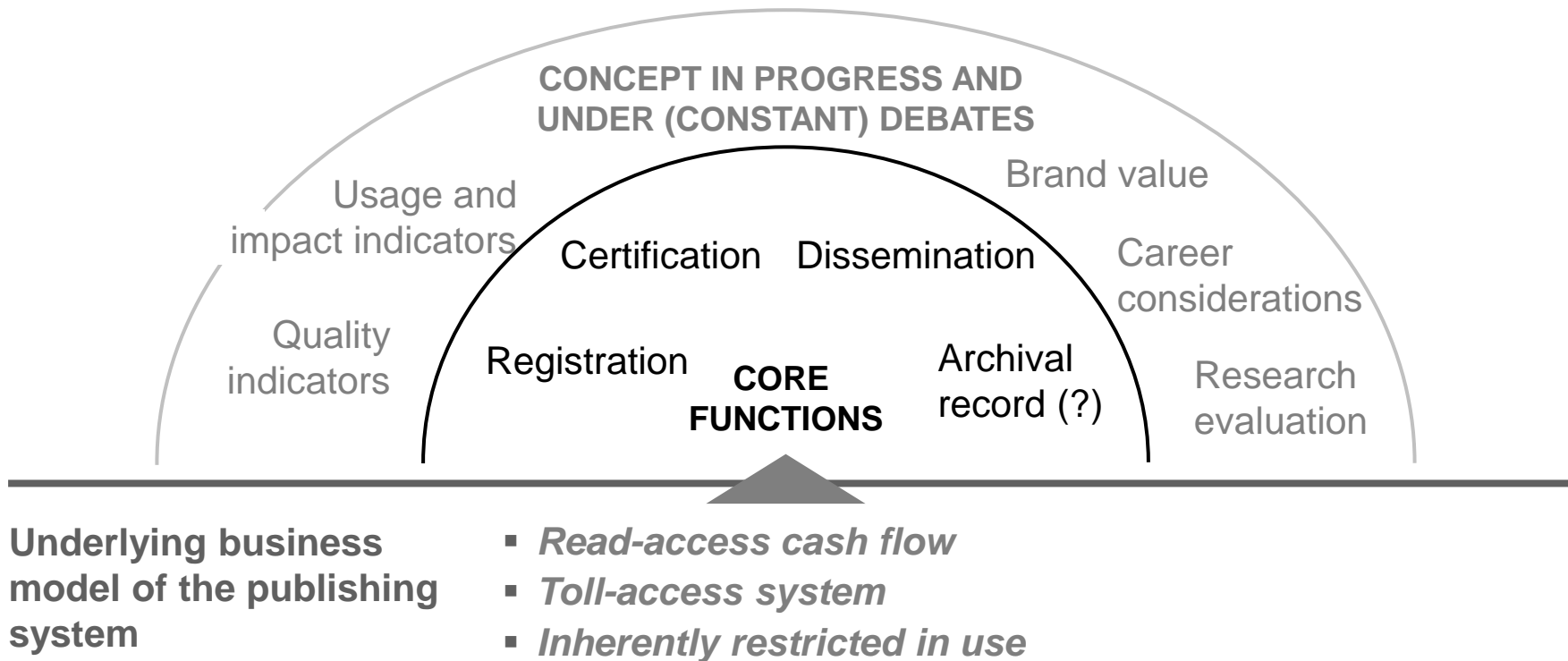
These anticipated costs are very comfortably within our current spending levels

The Max Planck Society as a heavily output-oriented research organization is able and committed to make the transformation

Detach and focus on the underlying business model of scientific journal publishing

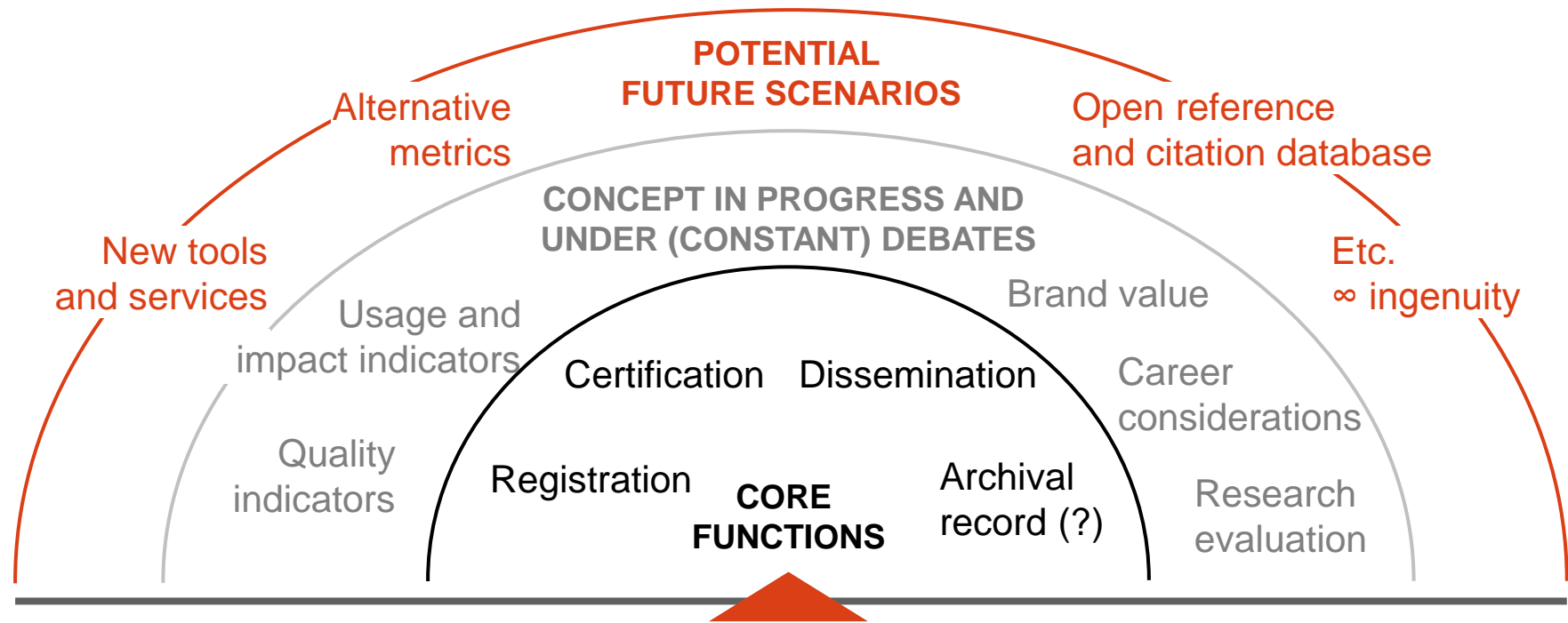


Functions and enabling elements of the publishing system



Detach and focus on the underlying business model of scientific journal publishing

Functions and enabling elements of the publishing system



Underlying business model of the publishing system

- **Publication service based cash flow**
- **Open access system**
- **Inherently open in use and re-use**

Cash flow to be changed without impacting the journals & their functions of publishing

Parts of the discussion



BERLIN 12

day 1:

principle & feasibility

BERLIN 12

day 2:

Expression of interest & roadmap