

— FULL FORWARD TO
INNOVATION ECONOMY
UKRAINIAN SCIENCE
AS THE DRIVER OF
CHANGE

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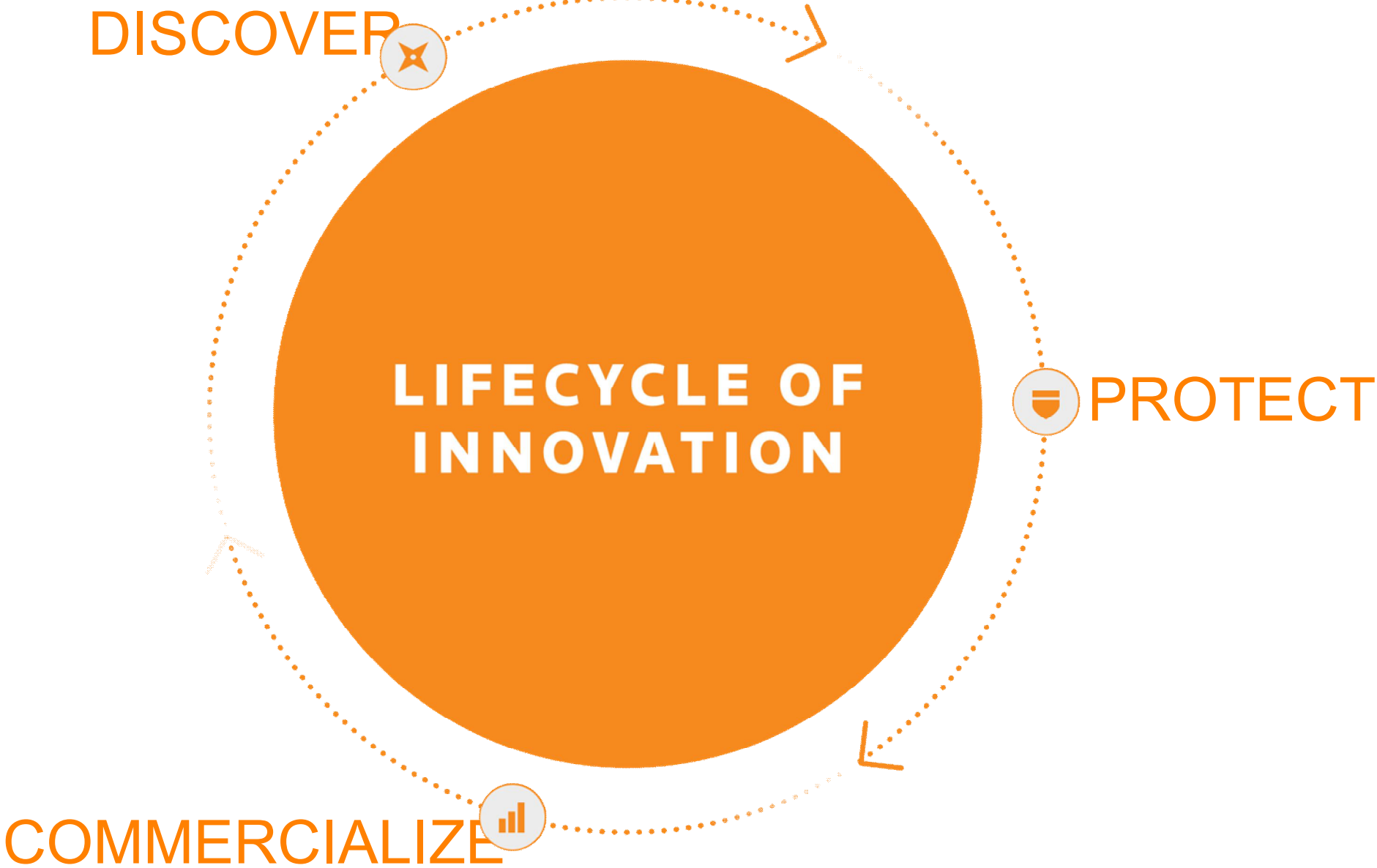
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Changes happen quickly or never. We strongly believe that in five years' time, in 2020, we will live in New **Ukraine**

Petro Poroshenko, "Ukraine – 2020"



INNOVATION IS THE DRIVER OF CHANGE



Science is the driver for the knowledge economy. Science – you! – generates new technologies that transform our lives. New technologies are the key differentiator of Ukrainian economy in the new global market – this should be in the nearest future. Science is the driver on this journey to new Ukraine as directed by Mr. President.

GLOBAL MEGATRENDS

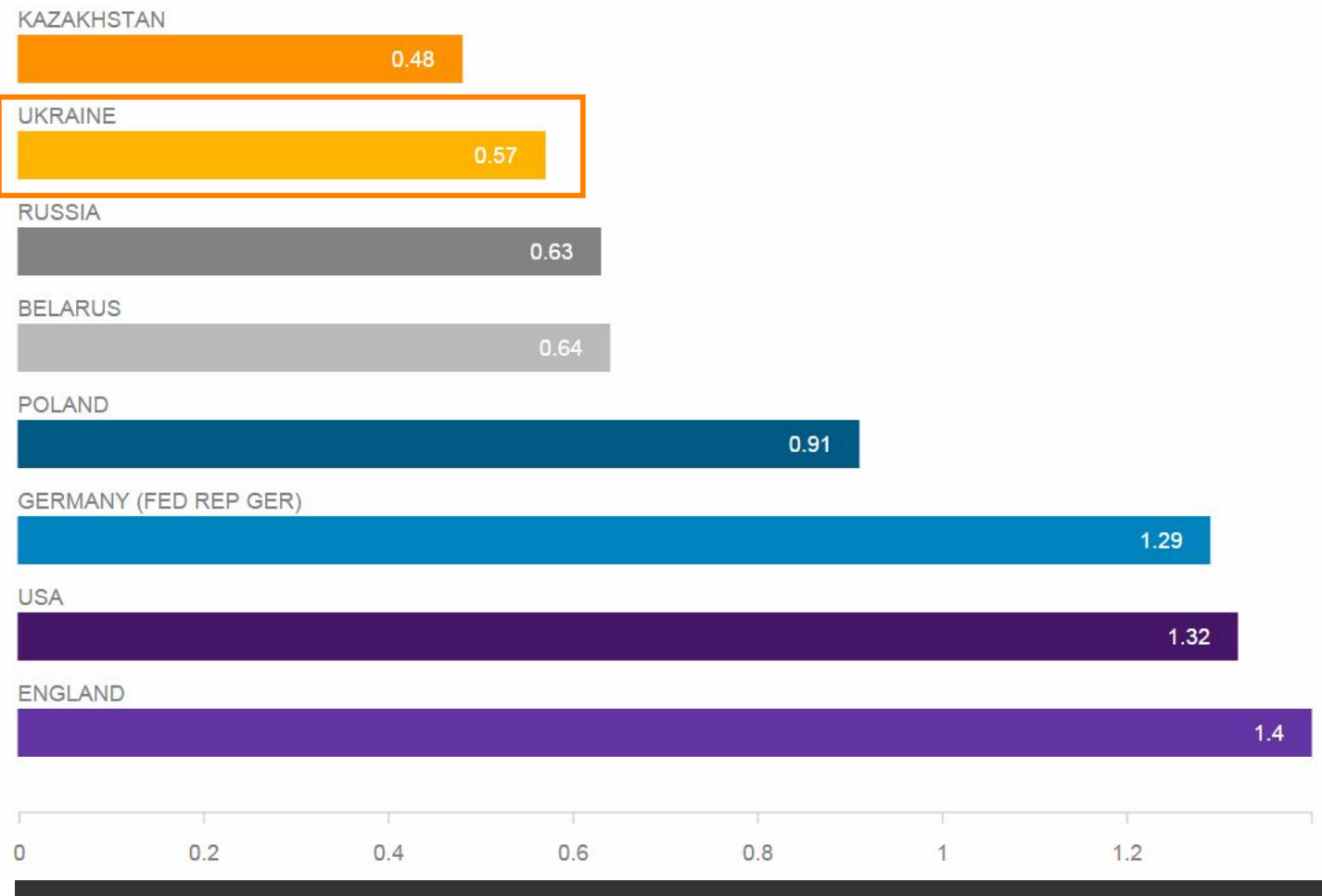
- Exploding world population
- Energy & environmental responsibility imperative
- Computing, communication & storage everywhere
- Internet of Things
- Artificial intelligence and Big Data
- Digital trust and interconnectedness
- 'Omics and the era of precision medicine

- **Exploding world population:** 1990 – 5,3 bln. people; 2015 – 7.3 bln; 2050 forecast - 9,7 bln
- **Energy & environmental responsibility imperative:** last 10 years it is one of the top Agenda points for all G7 and G20 meetings
- **Computing, communication & storage everywhere:** Every two days now, humanity creates as much information as we did from the dawn of civilization up until 2003
- **Internet of Things:** billions of home appliances, medical equipment and other non-computer type of apparatuses are connected and operated via internet
- **Artificial intelligence and Big Data**
- **Digital trust and interconnectedness:** people trust their money and signatures to internet and more and more of them with gadgets and social networks stay non-stop a part of a global digital net
- **‘Omics and the era of precision medicine:** huge data bases of billions of individual genomes allow pharmacists to develop drugs targeting specific diseases of specific individuals or little groups of people

UKRAINIAN SCIENCE TODAY

Ukrainian science still working as effectively as that of post-soviet countries

Better integration into international innovation process is the right choice



This is the comparison of how well the national research results are cited in our database Web of Science compared to the global average, representing the efficiency of the national research systems. Although Ukraine is still demonstrating the similar efficiency as the majority of post-soviet countries, we have the full confidence, expertise and necessary tools to support you in this journey to boost the visibility and quality of the national research output.

Economic growth and global competitiveness are increasingly driven by knowledge and universities play a key role in that context

The World ~~Bank~~ report

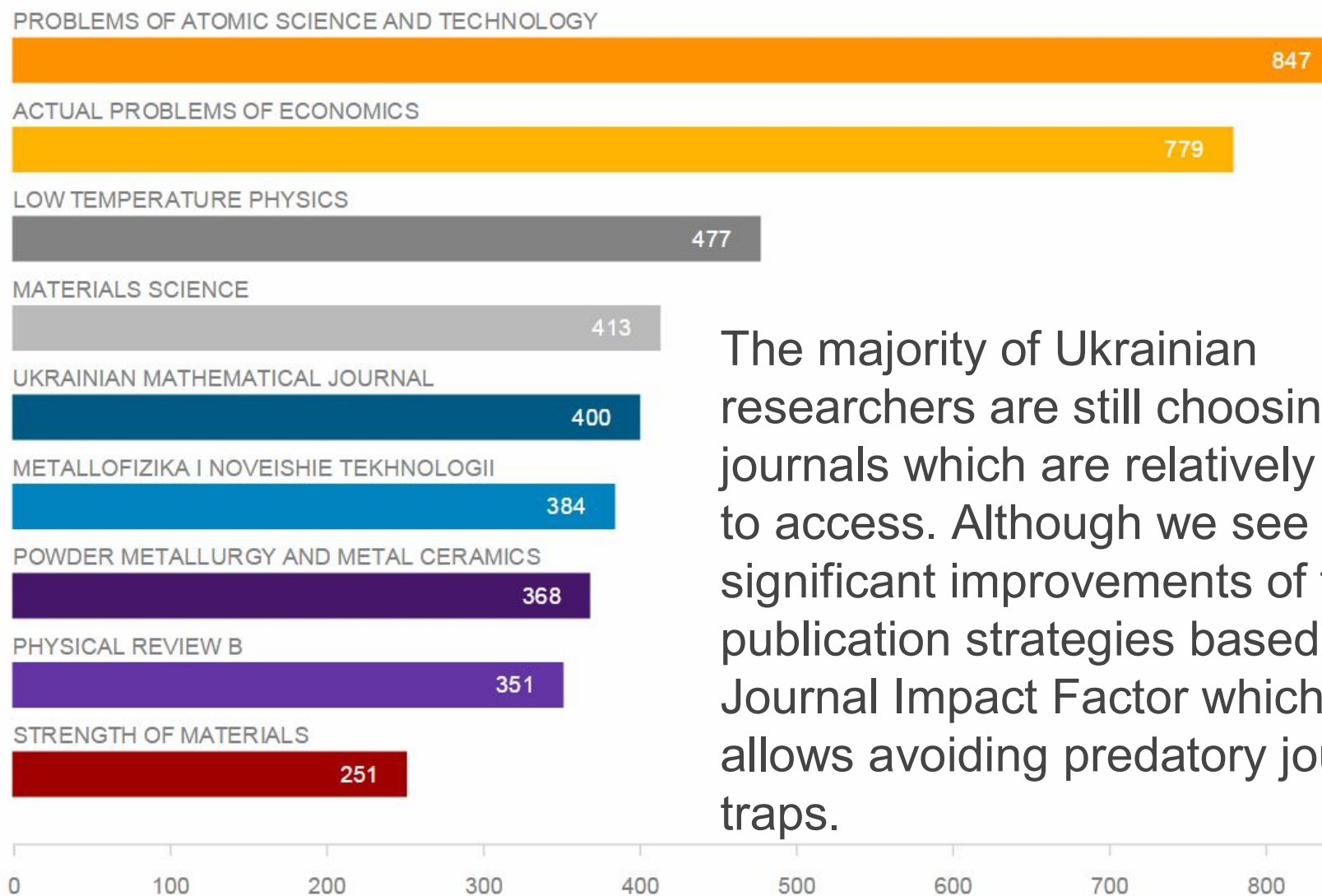
Now, how to become the knowledge economy? It's all about science and universities. The Universities and specialized research institutes are the drivers of the transformation.

IT'S ALL ABOUT SPREADING THE WORD



The key element is the dissemination of information generated in Ukraine. It's all about our brand – in science. Every research organization has to build its brand. Every researcher has to think about building their personal brand. It's not in vain – it's the foundation of the success. In science there are three main ways of spreading the information about achievements: conferences, publications and open sources – that's impossible these days without it. Use it as much as you can. You will see how applying these principles will change your personal standings. And you all make the success of the country.

MORE JOURNALS, BETTER JOURNALS

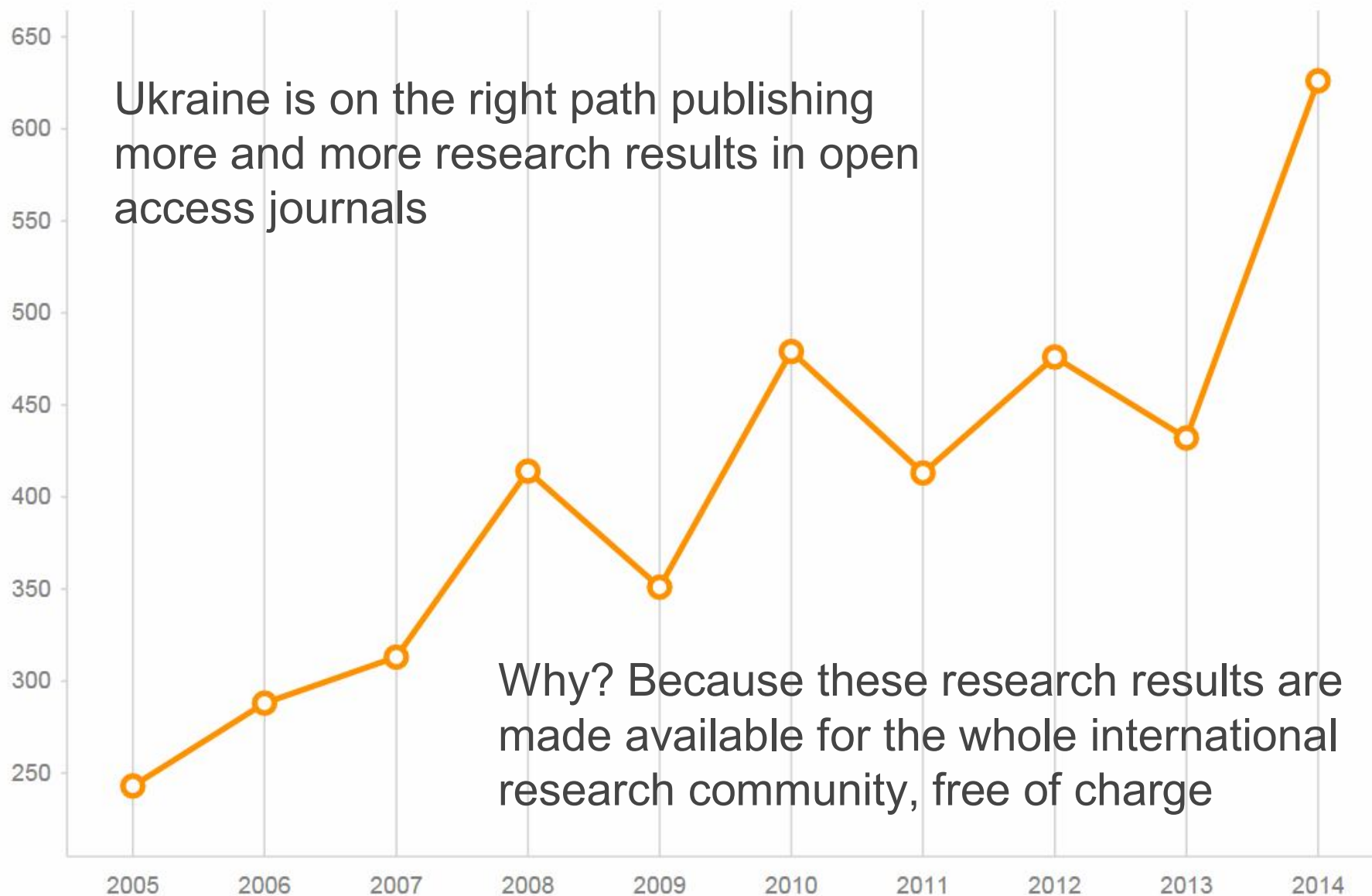


The majority of Ukrainian researchers are still choosing journals which are relatively easy to access. Although we see significant improvements of the publication strategies based on Journal Impact Factor which allows avoiding predatory journals' traps.

Source: Thomson Reuters InCites, 2011-2015

It's important to choose wisely where to publish. Journals are not the same. And we see that Ukraine starts paying more and more attention to Impact Factor to choose journals to publish. We also know that predatory open access journals are a threat for Ukraine. Web of Science is the best way to avoid such problems. Talking about journals, Ukraine is still publishing mostly in low-impact journals, which are relatively easy to get a paper published in. We need to change that. Look around and choose journals from outside the region. It's important to approach world-leading journals to extend your audience.

INCREASE FOCUS ON OPEN ACCESS JOURNALS



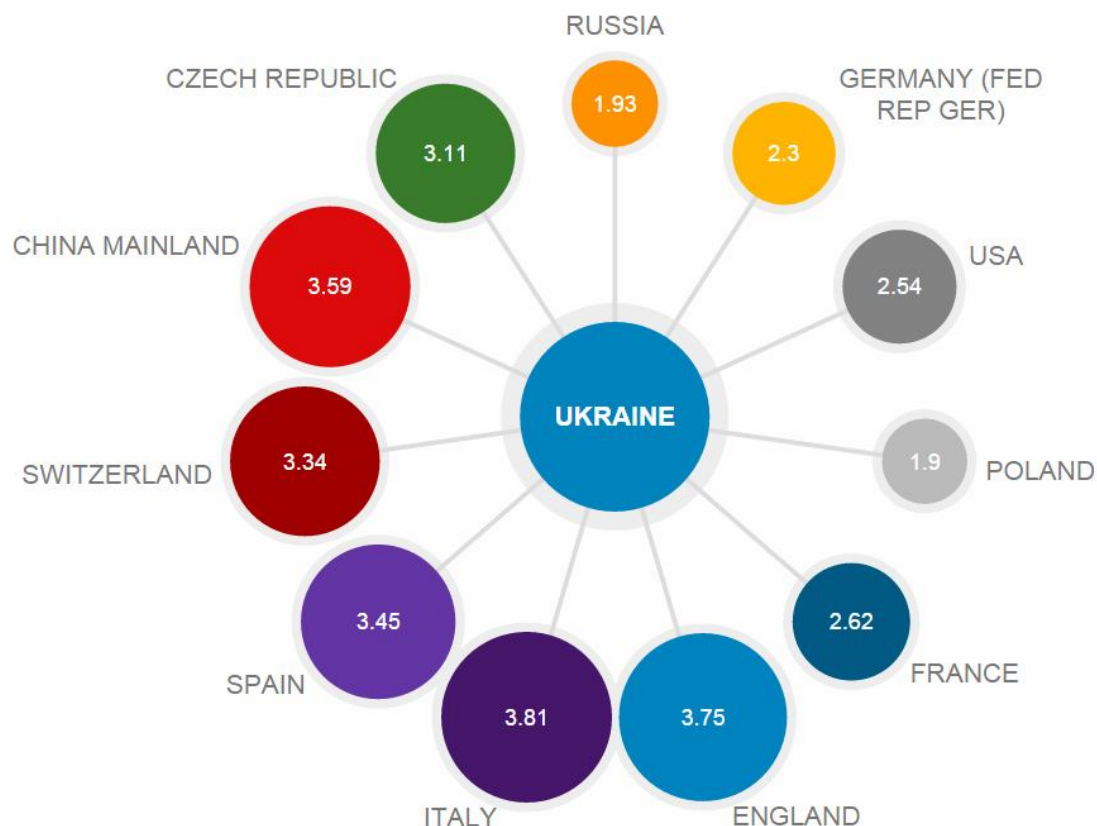
Source: Thomson Reuters InCites

The open access movement keeps growing. A lot of funding agencies in the world would fund a research project to be published in an open access journal – and even reserve money to cover article processing charges for those journals.

PRACTICE NETWORKING AND COLLABORATION

International collaborations are cited much better than collaborations inside the country, city, or a specific research organization.

It is important to choose the right partners for joint projects.



Source: Thomson Reuters InCites, 2011-2015

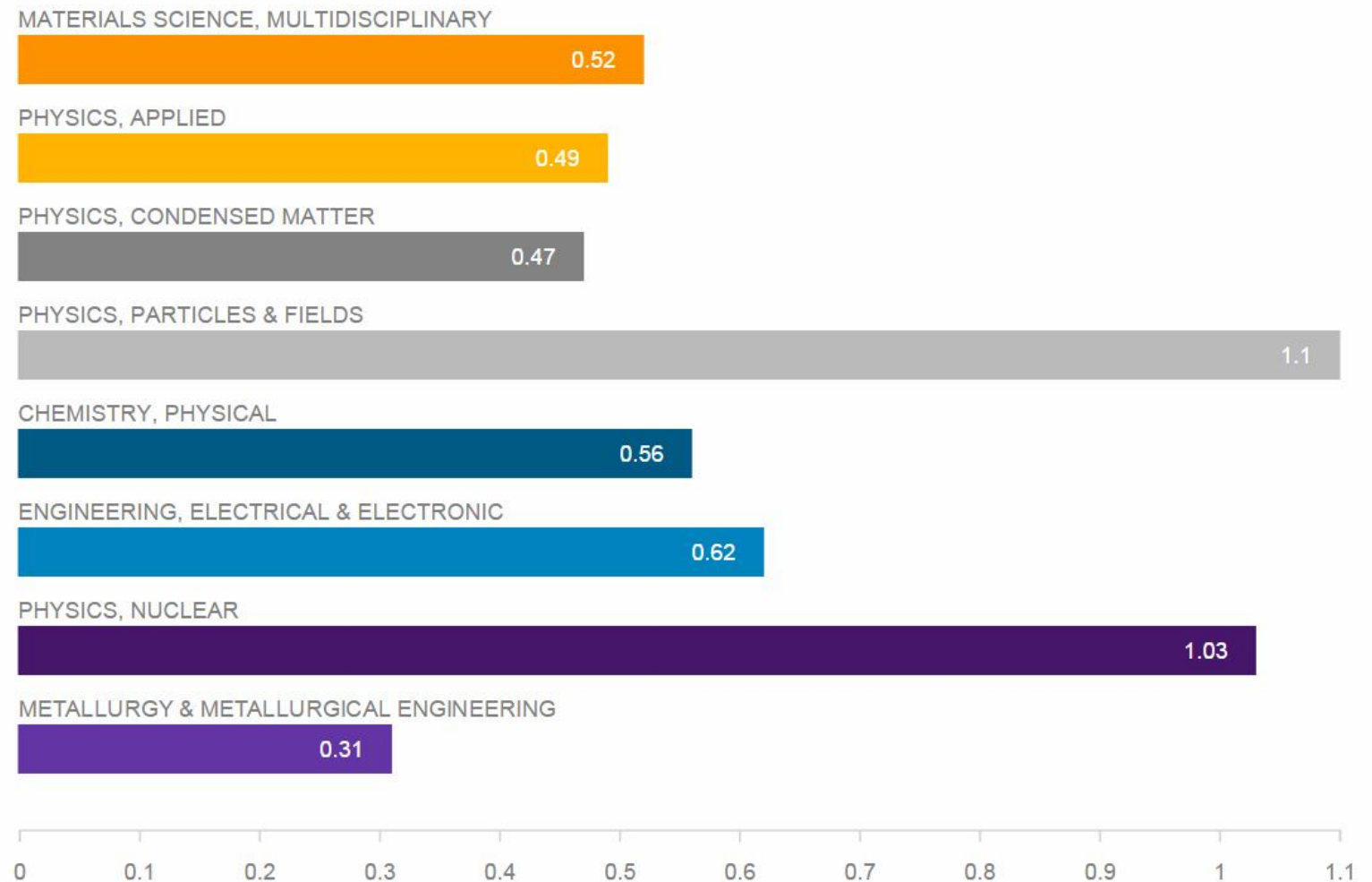
Category Normalized Citation Impact is shown. The volume of joint publications is sorted in descending order clock-wise, starting from Russia.

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DIVERSIFY SUBJECT PORTFOLIO

Efficiency of Ukrainian research in focus subject areas

The success of Ukrainian research heavily depends on participation in Large Hadron Collider experiments. There's more to be converted into strengths.



Source: Thomson Reuters InCites, 2011-2015
1 = world average

All previous was relevant for both levels – researcher and organization. Now let's come back to Ukrainian brand a bit. To add to the previous points, Ukraine needs to diversify its research subjects. You can see that the drivers of Ukrainian are mostly Physics, Chemistry, Materials Science and Engineering, with the most successful areas depending heavily on Ukrainian participation in Large Hadron Collider experiments. The only difference between them is the effectiveness of the publications. Physics is the strength of KZ – many publications and many citations. Chemistry is the threat – many publications and very little citations. There are others interesting highlights from this diagram. The key conclusion from this is that you need to have more subjects to convert into strengths. **Which is hard. But you are not alone...**

IT'S HARD... WE ARE TO SUPPORT YOU IN THIS JOURNEY

What we already do:

Russian language web-portal

wokinfo.com/russian

with presentations, materials, and recorded videos

Regular webinars on best practices of using Web of Science and other resources for research and publication

100+ webinars a year
12000+ attendees

300+ organizations
40 cities

What else we are going to do:

On-site lectures and trainings:

How to publish in journals with impact factors (and related topics)

Expert meetings to support the local “think tanks” and increase the local expertise of using bibliometrics

Constant contact with local expert community

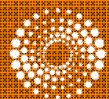
At **Thomson Reuters** we understand what
publication means to you





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