To cater for the large numbers of universities, WUR 3.0 sees some significant changes

**Citations**
- Moving to 3 bibliometrics designed to be more representative of quality output

**Reputation**
- Survey brought in-house resulting in three times as many votes

**International outlook**
- Adapted to have a better reflection of students, country size and diversity

**Patents**
- A new metric based on patents
## Putting it all together

<table>
<thead>
<tr>
<th>Current pillar name</th>
<th>Proposed pillar name</th>
<th>Metric code</th>
<th>Proposed metric name</th>
<th>Subject weighted</th>
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FWCI is the ratio of the number of citations a publication receives to the expected number of citation of the same:
- Type
- Subject
- Year

Currently, Citation Impact of an institution is the mean FWCI of all of its eligible publications.
• FWCI at the 75th percentile for all publications for a university

• Replaces taking the mean average across all publications

• Avoids extreme papers having detrimental effect

• Removes the need for some fixes we had previously
  • Kilo author papers
  • Country normalisation
Citation: Research Excellence

- Number of papers in the top 10% worldwide
  - Based on FWCI
  - Normalised by year, subject, and staff numbers

- Recognises the institutions contribution to the best research in each subject, and overall

- NOT the top 10% of universities papers, but the number of papers they contribute to the top 10% of research by subject according to FWCI
Citation: Research Influence

- Similar to PageRank
- Importance of paper is based on if it is cited by important papers
  - This requires iteration to get to a conclusion
  - Subject based
  - Unique measure
- Rewards ‘good’ self-citations whilst ignoring ‘bad’ self-citations
- Challenge for younger institutions
Reputation: Survey format

**Key participation criteria**
- Strictly invitation-only (universities cannot make nominations or supply contact lists, and individuals cannot nominate themselves for participation)
- Academics must have at least one cited research paper and have published in the last 5 years.

**Survey**
- Scholars are questioned at the level of their specific subject discipline and are asked to name up to 15 universities that they believe are the best in research and teaching, both in general and in their direct experience
- The survey is translated into 12 languages

**Fair representation**
- Results are benchmarked using UNESCO data to ensure the ranking is representative of the global distribution of scholars, both by country and subject

Survey open now until 31 Jan 2023
The teaching and research reputation metrics are unchanged in WUR 3.0. However, we are now conducting this survey ourselves (it was previously conducted by Elsevier).

The new in-house survey attracts 3 times as many votes as the previous out-sourced survey, giving us far more representation, plus deeper insight as we know more about the respondents.

<table>
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<tr>
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<th>2021 (Elsevier)</th>
<th>2022 (In house)</th>
<th>Change</th>
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<td>Respondents</td>
<td>10,963</td>
<td>29,606</td>
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<td>Ranking votes</td>
<td>149,536</td>
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<td>Experiential votes</td>
<td>107,169</td>
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<td>Countries participating</td>
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<tr>
<td>Response rate</td>
<td>1.6%</td>
<td>1.8%</td>
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</table>

We are currently looking at restrictions on self-voting, and comparative voting alongside the current recall based voting.
International Outlook: Accounting for country size

- Large countries have been disadvantaged compared to small countries in our international metrics, in that it is “easier” for staff and students in small countries to work/study abroad.

- In WUR 3.0, the existing metrics will be normalised to account for the populations size:
  - Proportion of international students
  - Proportion of international staff
  - Proportion of publications with at least one co-author from an international institution

- Additionally, a new metric has been added to measure the level of outbound students
International Outlook: Studying abroad

- Additional metric - outbound exchange students
- Trialled data collection in WUR 2023
  - Most universities are able to supply data
- However, international student mobility was significantly affected by the COVID pandemic in 2020-2021
- The initial release of WUR 3.0 (WUR 2024) will introduce this field as mandatory but the metric will be given zero weight
• Directly measures research output, specifically how much an institution’s research is cited by patents. This is similar to one that we already use within the THE Impact Rankings (in SDG 9: Industry, Innovation and Infrastructure).

• This measure is subject weighted to avoid penalising universities producing research in fields low in patents.

• This is a count of patents, normalised by staff numbers.