



Reflections of Global Transformations and Ranking Systems on Higher Education

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Outline

- Introduction.
- Overview of Ranking Systems.
- Global Transformations and Their Reflection on Institutions of Higher Education.
- Transformation in the Higher Education System of Türkiye.
- Ranking Systems and METU (*Middle East Technical University*).
- Conclusions.





Introduction

“Improving the quality and productivity in higher education has been an important goal on the agenda of many countries for many years”.

- The performance and productivity of higher education institutions have become the subject of debates more frequently than ever before.
- While higher education institutions strive to meet the expectations, they have also faced increasing pressure from international ranking systems.
- Ranking systems have a significant impact on the reputation and self-evaluation of universities, although they have various aspects to criticize.
- The methodologies of ranking systems need to be structured in a way to encourage higher education institutions to be more productive in line with the global needs.



University Ranking Systems

- University ranking systems have become progressively widespread in the last **20** years, and the interest in these systems have also been increasing day by day.
- Ranking of universities at the international level first started with the initiative known today as ARWU.
- As of today, there are more than 10 world-renowned ranking systems that rank higher education institutions at the international level.





Controversies Regarding Ranking Systems

-Although the interest in ranking systems increases day by day, there are several issues regarding the methodologies of ranking systems that are criticized.

- Higher education institutions with different characteristics are compared.
- Young universities and universities with hundreds of years of history are compared.
- Surveys are taken into account at high percentages while calculating the scores.
- In some cases, significant amount of the publications belong to a certain researcher in the institution or the institution obtains publication score as researchers outside the institution address the institution as their ***second affiliation***.
- Evaluations must based on research budget.
- Discussions on the objectivity of citation-related indicators.
- The relevance and quality of the assets shared on the internet may not be evaluated.





Controversies Regarding Ranking Systems

“In addition to the methodologies, it is worth mentioning a few important dimensions regarding the general situation”

- Transparency and verifiability of some of the data,
- Accuracy of the data provided by institutions,
- Too few or too many indicators,
- An institution ranked high in a certain ranking system may be ranked very low by another ranking system.

To what extent do the rankings measure the social contributions of higher education institutions?





Evaluations on Ranking Systems

- *Although ranking systems have various aspects that could be criticized, they do have a major impact on the self-evaluation and reputation of universities.*

In order for institutions to be placed accurately in the rankings,

- Collecting data thoroughly
- Preparing data correctly

Staff expertise and effective tools are required for data collection, reporting, and analysis

In order for institutions to increase their rankings,

- Improving performance

Performance Management



Global Risks

Global Risk Report-2021 – Next 10 Years

1. Extreme climate conditions
2. Climate action failures
3. Human environmental damage
4. Infectious diseases
5. Biodiversity loss
6. Digital power concentration
7. Digital inequality
8. Interstate relations fracture
9. Cybersecurity failure
10. Livelihood crises / involuntary migration

- Problems are more complex, dynamic, and variable now than in the past.
- The solutions are more complex, too. Therefore, holistic approaches covering all disciplines are needed.

Sustainability



- Sustainability has become a significant concept for the universities.
- The quick and objective-oriented approaches that were conducted during the COVID-19 pandemic need to be implemented for SDGs, as well.

The expectation that the science system would quickly find solutions to rising global risks and problems has increased.

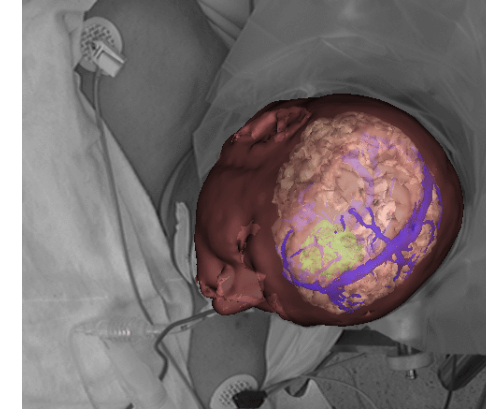


Industry 4.0: New Concepts in Education and Research

A new era of artificial intelligence



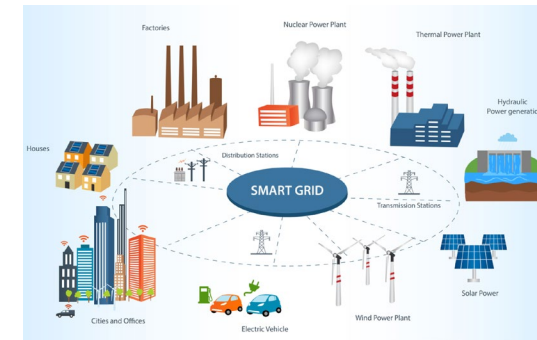
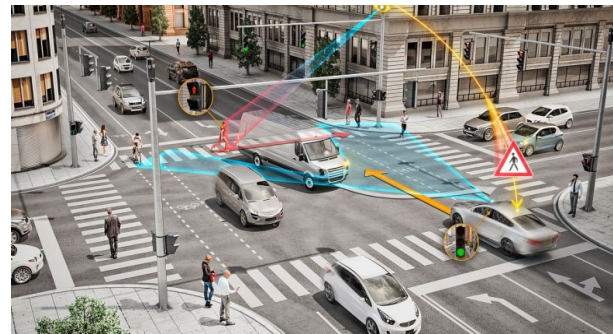
Informatics is the new Latin



distributed intelligence



Everybody and everything is networked



Communication technology
Bandwidth and computational power

Embedded systems
miniaturization

Semantic technologies
Information integration





Interdisciplinary Science and Education

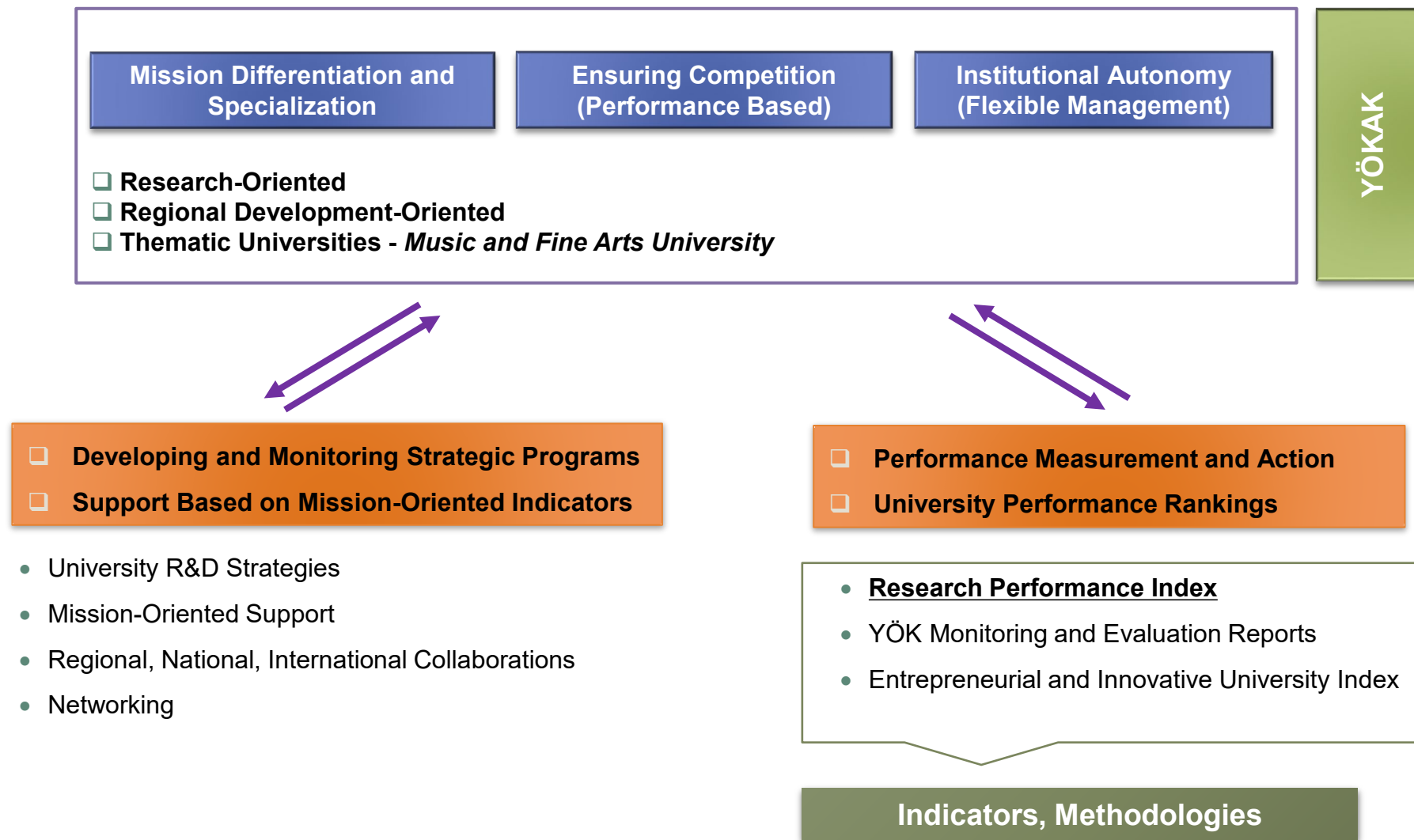
“The World Economic Forum (WEF) predicts that more than 1 billion people will need to be requalified by 2030”

- Areas that higher education institutions are expected to assume active responsibility for:
 - Prioritizing the research efforts that will produce the necessary technologies for Industry 4.0,
 - Training researchers and professionals who will be needed,
 - Raising awareness so that society can benefit from novel technologies as much as possible.

- Necessary technologies must be developed rapidly in order not to be late in the Industry 4.0 transformation
- Education processes must be revised to raise professionals compatible with Industry 4.0.



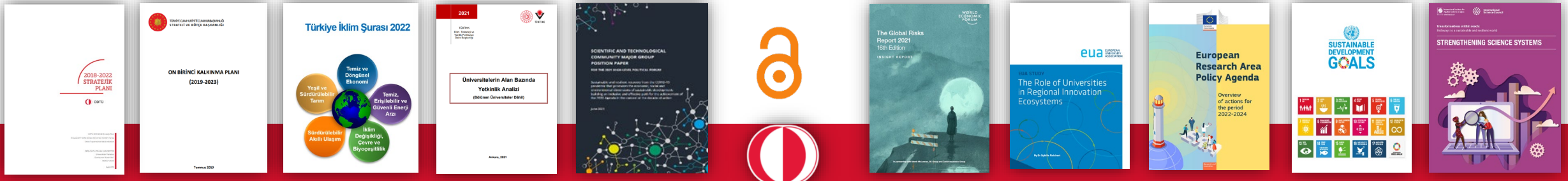
The New Turkish Higher Education System Approach



METU Management Principles

- **METU HAS ADOPTED A METHOD OF MANAGEMENT THAT ENSURES THE FOLLOWING PRINCIPLES:**
- Following global changes and developments closely,
- Prioritizing the country's needs, as well as its science and technology policies,
- Recording institutional assets and activities,
- Measuring, evaluating, and reflecting the outcomes of these measurements to institutional policies and practices,
- Implementing effective performance management,
- Adopting data-based strategic management as part of the institutional culture,
- Being accountable, transparent, and participatory in terms of management.

- National Science and Technology Policies
- Development Plans
- Sustainable Development
- Industry 4.0
- Education 4.0
- Society 5.0
- Priority Sectors
- Priority Areas
- Entrepreneurship
- Open Science
- Internationalization





Examples of Institutional Practices at METU

- **Research Management**

- Policy Paper and organizational structure
- Data-driven strategic management of research
- Support and incentive mechanisms
- Internationalization..

- **New Approaches in Education Processes**

- Active learning approach that focuses on learning to learn
- System approach suitable for the requirements of Industry 4.0
- Education in line with the newly emerging professions and skills..

- **Annual Performance Evaluation**

- Structured and declared methodology
- Performance-based institutional practices..

- **Sustainability Activities**

- Research center on sustainability
- Institutional sustainability report
- Policy papers
- Sustainability-related activities..

- **Open Science Activities**

- Open Science policy paper
- Open Science commission, working groups,
- Open archive infrastructure in international standards..

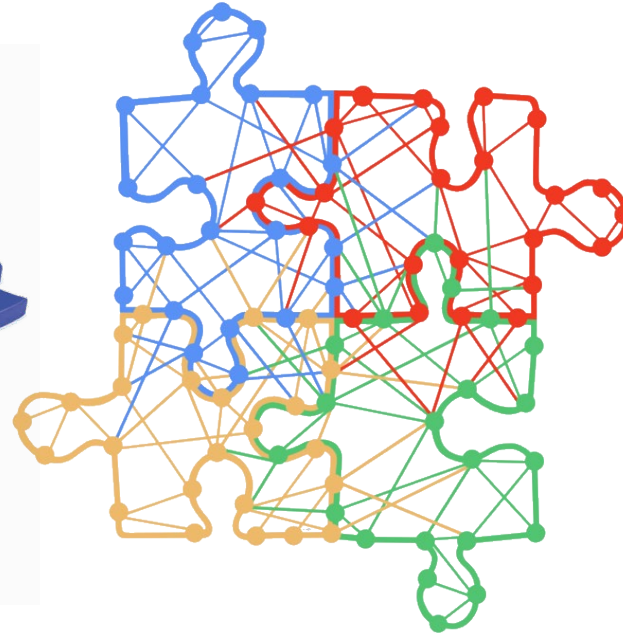
- **Participatory Management and Awareness Activities**

- Administrators taking responsibility for processes.
- Activities on institutional awareness and information..

It is crucial to effectively manage institutional data and develop data-based strategies.



Data-Based Strategic Management at METU



Teaching Management

Research Management

Performance Management

Strategic Plan

Policies

Asset Management

...

We must measure, evaluate, and reflect the outcomes of these measurements to institutional practices.
Therefore, Office of Institutional Data Management was established.





METU in Rankings

QS 2023 Ranking by Subject

- **Worldwide Ranking**
 - **Top 10** in 1 area
 - **Top 200** in 9 areas
 - **Top 500** in 17 areas
- **Petroleum Engineering: 10th** in the world

QS 2023 World Ranking: 501-510

- **Academic Reputation**
 - **318th** in the world
 - **1st** in Türkiye
- **Employer Reputation**
 - **157th** in the world
 - **1st** in Türkiye

QS 2023 Sustainability Ranking: 201-220

THE 2023 Ranking by Subject

- **Top 500** in 8 of the 9 subjects evaluated

THE 2023 World Ranking: 501-600

- **Field of Teaching:**
 - **289th** in the world
- **Field of Research:**
 - **206th** in the world

US News Best Global Universities 2021-2022

- **484th** place
- **99th** in Research Reputation

CWUR 2023 Ranking

- **595th** in the world
- **1st** in Türkiye

Webometrics Ranking

- **497th** in the world, **1st** in Türkiye in 2021
- **542nd** in the world, **1st** in Türkiye in 2022

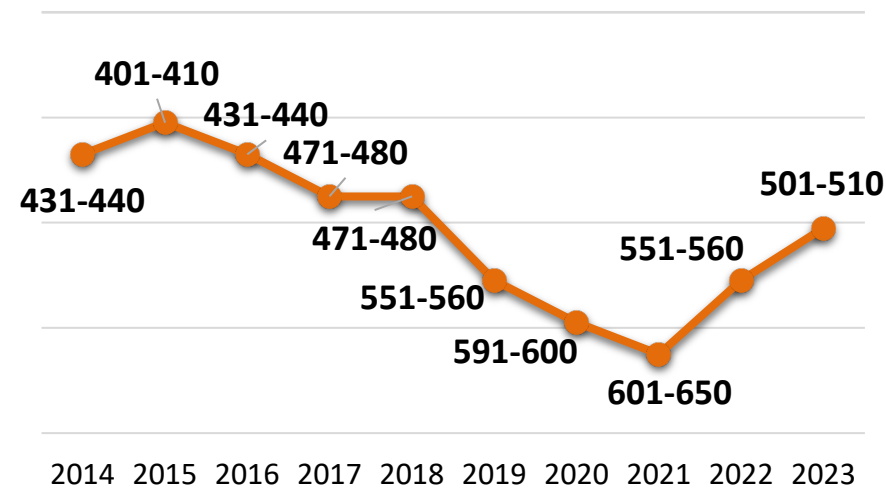
RUR 2022 World Ranking

- **336th** place
- **58th** in Teaching Reputation
- **91st** in Research Reputation
- **1st** in Türkiye in 2022

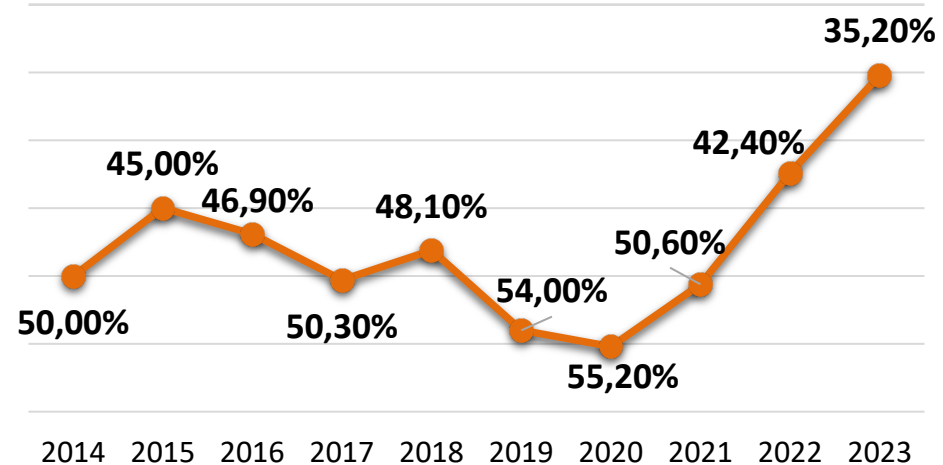




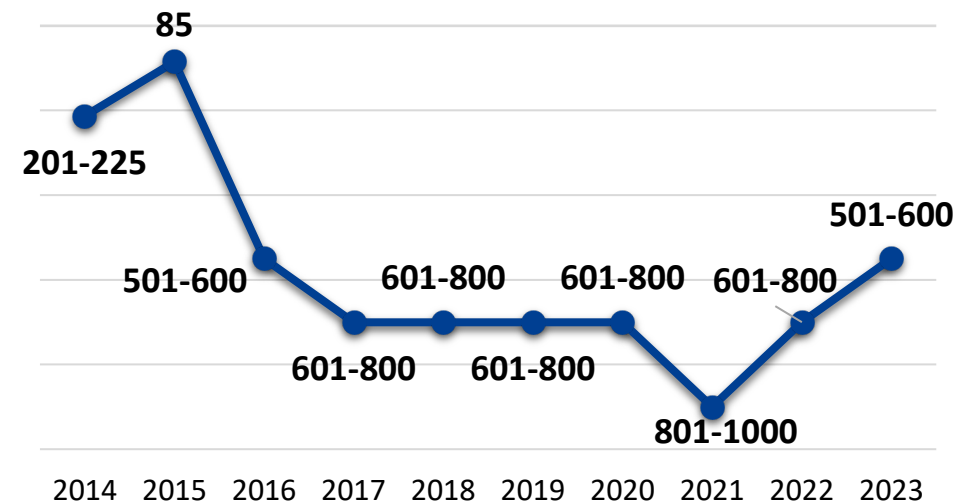
METU QS World Rankings



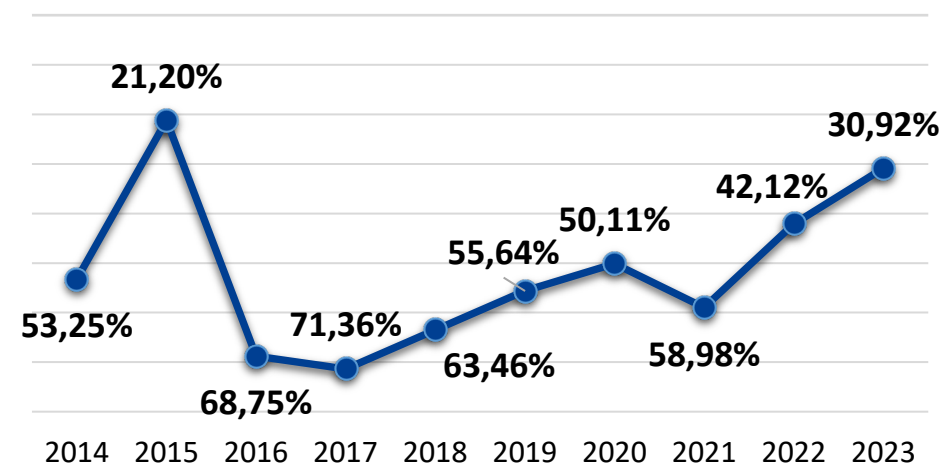
METU QS Percentage Success Level



METU THE World Rankings



METU THE Percentage Success Level





Conclusion and Discussion

- Higher education institutions should re-evaluate themselves in terms of adaptation to global transformations.
- The strategic management approach should become the institutional culture and effective performance management should be implemented.
- Ranking systems should not be an obsession for the institutions but rather be perceived as a tool for institutions to evaluate their current situation.
- Ranking systems should revise their methodologies in ways that are widely agreed.
- *Therefore, I believe that IREG, in line with the mission it has taken on, makes significant contributions to the advancement of university ranking related issues through their operations and activities.*
- *So, I would like to take this opportunity to thank the members of IREG.*

Thank you... **IREG**



METU (1956)



Thank you...
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