Transportation Research Position in Indonesia Nowadays

Director General Research and Development Agency

International Conference of Research and Innovation

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Outline

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• During 2015-2018, more than 750 research activities have been carried out in R&D through 4 Centers and 1 Secretariat

• The largest portion is at the center of the road and railroad, followed by the sea and the air

### Profile of Transportation R&D Agency

<table>
<thead>
<tr>
<th>WORKING UNIT</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretariat of the Agency</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>R&amp;D Center for Intermodal Transportation</td>
<td>46</td>
<td>20</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>R&amp;D Center for Road and Railway</td>
<td>119</td>
<td>60</td>
<td>60</td>
<td>44</td>
</tr>
<tr>
<td>R&amp;D Center for Air Transportation</td>
<td>68</td>
<td>48</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>R&amp;D Center for Sea, River, Lake and Crossing Transportation</td>
<td>51</td>
<td>49</td>
<td>45</td>
<td>40</td>
</tr>
</tbody>
</table>

![Profile of Transportation R&D Agency](image)
The largest portion of research are at road, sea, air and railway transportation respectively.

Research on passenger transportation is more than on freight transportation.

Research profiles in the form of studies of various aspects occupy the largest portion.
Indications of Research Topics

Integration
How transportation infrastructure and services are integrated to achieve maximum utilization

Competition
How to ensure that transportation infrastructure is able to be a driver of competitiveness

Smart Technology
The use of technology to ensure the best transportation services

Inclusivity
It is highly important in the Indonesian context where inequalities still need attention

Sustainability
Relating to the balance between economic development, community justice and environmental preservation

Safety and Security
The mandate of transportation safety and security as one of the goals of transportation management
During 2015-2019 the research topics in R&D were mostly focused on **seamless** branch, with a percentage of 80%, 54% for research related to integrated transport and 21% for competitive

- 12% for **safe** branch
- Only 8% for **inclusive** branch
## Integration of Research Actors in Transportation Field

<table>
<thead>
<tr>
<th>Research Technology Focus</th>
<th>Main Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ministry/Institution</td>
</tr>
<tr>
<td><strong>Food-Agriculture</strong></td>
<td>Ministry of Agriculture, Ministry of Research, Technology and Higher Education, Ministry of Marine Affair, KKP, Ministry of Environment and Forestry, Agraria/BPN</td>
</tr>
<tr>
<td><strong>New energy and renewable energy</strong></td>
<td>ESDM, Kemenperin, PUPR, LHK, DPDT2, KKP, Kemenhub, Kemenristekdikti</td>
</tr>
<tr>
<td><strong>Health-medicine</strong></td>
<td>Kemenkes, LHK, Kemeperin</td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
<td>Kemenhub, Kominfo</td>
</tr>
<tr>
<td><strong>Information Technology dan Communication</strong></td>
<td>Kominfo, PUPR, Kemenhan</td>
</tr>
</tbody>
</table>
Cross-Sectoral Collaboration in Transportation Research

**BPPT**
- Formulation and implementation of policies on technology and innovation

**LClPI**
- Energy and transportation
- Technology, information and communication
- Technology innovation and utilization of science and technology

**Industry**
- Innovation of applied technology
- Business Development

**Public Universities**
- Innovation & technology
- Response to community needs
- Specific flagship research (transport infrastructure)

**Ministry/Institution**
- Basic policy
- National Strategic Issues
- Policy Implementation

- The government through Law No. 11 of 2019 encourages collaboration/partnerships with local/foreign stakeholders to conduct research in a "technology transfer" forum
- The higher and more varied community mobility have resulted in the emergence of various transportation problems which have to be solved by various cross-sectoral approaches
Direction of the Implementation of Transportation Development

**Mission of transportation development: national connectivity, reliable, competitive, added value**

1. Improve connectivity
2. Enhance services performance
3. Improve transport safety and security
4. Reform in the regulatory and legal sector
5. Environmentally friendly transportation technology

**The results of the transportation development must be able to adapt to the current development, regional progress, and other external influences.**

**EXISTING TRANSPORT CONDITIONS**

- Improve connectivity
- Enhance services performance
- Improve transport safety and security
- Reform in the regulatory and legal sector
- Environmentally friendly transportation technology

**NATIONAL TRANSPORTATION SYSTEM**

1. Enhancing national transportation services
2. Developing transport safety and security
3. Fostering transportation business
4. Improving the quality of human resource and science and technology
5. Maintaining and improving the quality of the environment and saving the utilization of energy
6. Enhancing the provision of fund for transport development
7. Improving the quality of public administration in the transport sector

The results of the transportation development must be able to adapt to the current development, regional progress, and other external influences.
International Ranking for the Publication of Indonesian Transportation Journal in the World

- Tahun 2018, in ASIA Regional The Indonesian International Transportation Journal ranks 11th
Utilization Social Media and Online Data for Analyzing and Monitoring Transportation Issues

From Big Data to Insight

Instant Analysis

Sensors, Recognition & Crawling

Store

Mining & Analysis

Dashboard

Insight Report

Notification/Alert

Browsing
Social Media
Document
Chatting
LBS & CDR
CCTV
Voice
Location
Bike Sharing 5.0+ Creating Integrated Digital Transportation Ecosystem In Jakarta

i-TDS
Digital technology, engine applications, which are engaged in CCTV video analysis and big data analysis to provide solutions for transportation system management.

Virtual Reality

Integrated application give services to users in the THIRD HAND OF SHIPPING As well as INSURANCE CORPORATION DOCUMENT PROCESSING
Thank You
Ministry of Transportation
Republic of Indonesia