



# Future Technology: a solution to solve traffic jump

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## TRAFFIC JUMPS AND THE CAPITAL CITY

Traffic jump is a public portrait in various parts of the capital city in the world, especially where the transportation system is still not good.

There are many causes of traffic jumps, such as: 1). the imbalance between the availability of infrastructure and the number of vehicles passing on the road; 2). the absence of a capable system for managing the use of private vehicles; and 3). the number of services and facilities that spoil its users.

But the fact that traffic jumps cause a huge material and non-material losses for a nation. For this reason, future technological breakthroughs that are able to reduce and overcome the problem of traffic jumps are highly needed.



## THE ROLE OF RESEARCHERS IN SCIENCE AND TECHNOLOGY

Scientists who conduct R&D in the field of science and technology, need to work hard to produce breakthroughs that can help traffic problems in the future.

It may sound that the breakthrough idea (or breakthrough prototype technology) is still considered a dream or even a crazy idea at this time, but it is possible that in the future the solution is the one that really has been waiting for.

Scientists should not stop doing research just because they are called “crazy ideas”.





## THE ROLE OF RESEARCHERS IN SCIENCE AND TECHNOLOGY

Research carried out by scientists from the Moscow University (MISIS University) regarding future taxis is an interesting lesson as a breakthrough. They develop a drone as a vehicle to produce transportation prototypes that can connect the origin and destination points for the transportation of goods and services.

Those drone taxi prototypes is in the process of negotiating with industry to study the economic feasibility of the intended prototype.



## THE ROLE OF RESEARCHERS IN SCIENCE AND TECHNOLOGY

Not only in Russia, but in Korea it has even been test a prototype of an “low-air cars” by an automotive industry.

This is really an interesting breakthrough idea for the future. It still seems to be a dream for Indonesia, but it must be anticipated, so that we are not always left behind.

LOW-AIR CARS MOVIE -1



## THE ROLE OF RESEARCHERS IN SCIENCE AND TECHNOLOGY

Not only in Russia and Korea, even by some engineering scientists, it has been simulated more interesting “low-air cars” in the following movie.

This is more promising and more of a breakthrough idea that all of us need to examine well. A dream, but it's very close.

LOW-AIR CARS MOVIE -2





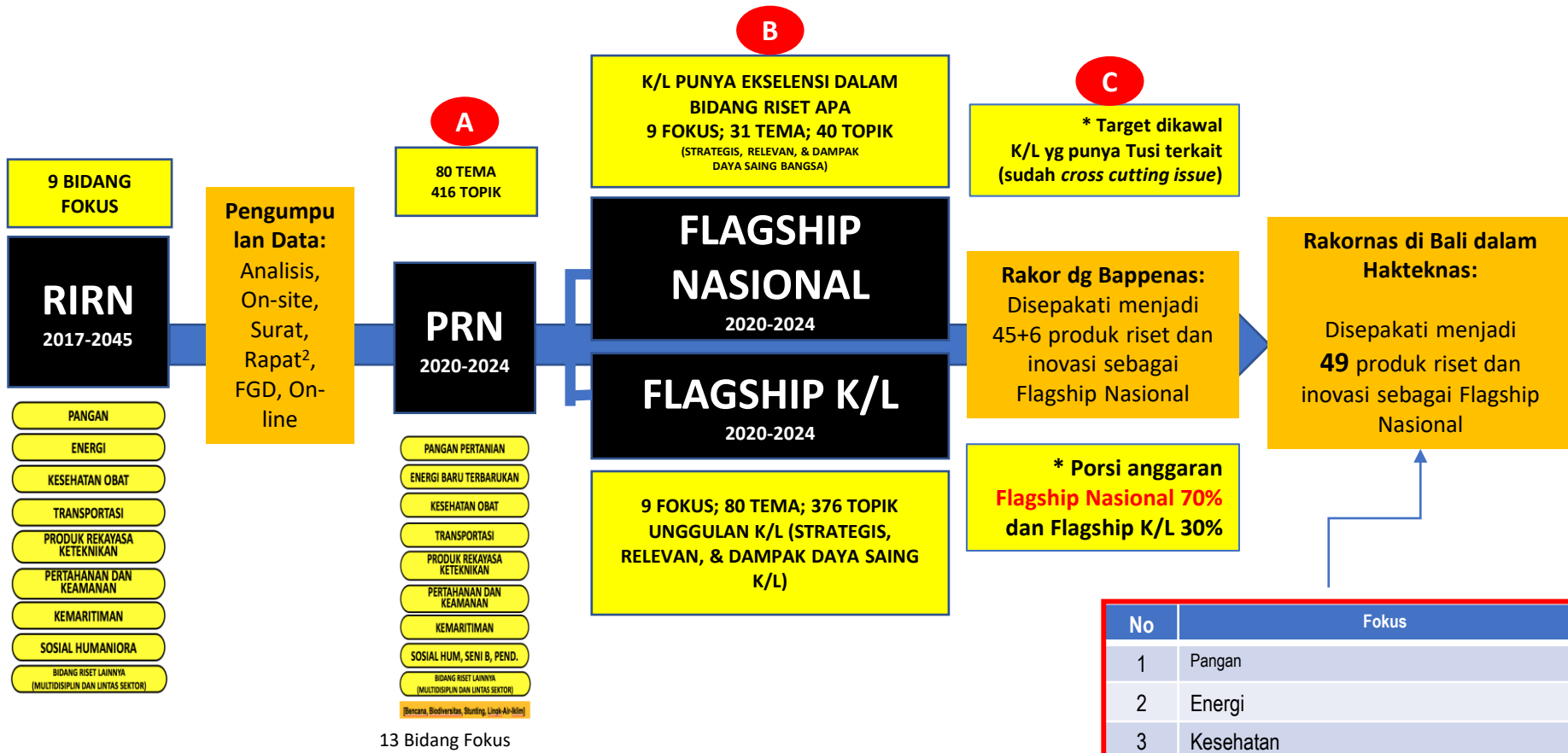
## R&D ON TRANSPORTATION IN NATIONAL R&D MASTER PLAN 2017-2045

Yes...., we have National R&D Master Plan of 2017-2045 (called RIRN), which is covered in Presidential Decree 38/2018. The basic principle of RIRN, which has been elaborated by focus program for every five years (such as by National Research Priority 2020-2024) is “how to focus and efficiently doing R&D to produce innovative products that benefit the community (delivered) and contribute to national economic growth by using the limited resources we have”.

Focus areas of RIRN R&D are: 1). Food & Agricultural; 2). Energy and Renewable Energy; 3). Health & Medicines; 4). Transportation; 5). Engineering Products (Nano-technology and ICT); 6). Defense and security; 7) Maritime; 8). Humanities, Arts-Culture and Education; and 9). Other Research Fields.



# R&D ON TRANSPORTATION IN NATIONAL PRIORITY OF RESEARCH 2020-204



Source: Bali National Meeting 2019.

No	Fokus	Tema	Topik	Produk	
1	Pangan	3	4	8	10
2	Energi	3	4	4	4
3	Kesehatan	3	3	9	9
4	Transportasi	1	3	3	3
5	Rekayasa Keteknikan	6	6	3	6
6	Hankam	3	3	4	3
7	Maritim	2	2	6	4-6
8	Soshum Senibud Pendidikan	5	5	4	3-5
9	Multidisiplin & Lintas Sektor (Kebencanaan, Biodiversitas, Stunting, Lingkungan, SD Air, Iklim)	4	5	4	5
<b>Jumlah</b>		<b>30</b>	<b>35</b>	<b>45</b>	<b>49</b>



# R&D ON TRANSPORTATION IN NATIONAL PRIORITY OF RESEARCH 2020-204

Tema Riset	Topik Riset Sesuai Kelompok Makro Riset	Institusi Pelaksana	Target Capaian 2020-2024		Rencana Alokasi Anggaran 2020-2024 (Rp M)
			Produk Riset Nasional	Produk Inovasi Nasional	
2	3	4	5	6	7
4.1. Infrastruktur Dan Sarana Transportasi Darat, Laut, Dan Udara Untuk Peningkatan Kemampuan, Keselamatan, Keandalan, Dan Daya Saing.	4.1.1 Teknologi Perkeretaapian (RTM)	Koordinator : BPPT  Anggota : <b>Balitbang Kemenhub</b> , Balitbang PUPR, Balitbang Kemenperin, Balitbang KLHK, LIPI, BSN, Balitbang Kemkominfo, Kementerian BUMN, Kemenristekdikti, Perguruan Tinggi, Badan Usaha	Komponen Kereta Api Produk Dalam Negeri yang Tangguh dan Menjadi Substitusi Produk Luar Negeri serta Sarana Prasarana Perkeretaapian	Teknologi Perkeretaapian	1,862
	4.1.2 Teknologi Pesawat N-219 Ampibi (RMM)	Koordinator : LAPAN  Anggota : <b>Balitbang Kemenhub</b> , Balitbang PUPR, Kemenko Kemaritiman, Balitbang Kemenperin, BPPT, LIPI, Perguruan Tinggi, Badan Usaha	Prototipe Laik Industri N-219 Ampibi dan Kebijakan Pendukungnya	N219 Amphibi	331
	4.1.3 Teknologi Kendaraan Listrik (RMM)	Koordinator : LIPI, Perguruan Tinggi  Anggota : <b>Balitbang Kemenhub</b> , BPPT, Balitbang Kemenperin, BSN, Badan Usaha	Prototipe Laik Industri Kendaraan Listrik; serta Kebijakan Pendukungnya	Kendaraan Listrik	933

## CLOSING NOTE

Indeed we already have a long-term research road map or RIRN 2017-2045, and it has been elaborated in every 5 (five) years program with the National Research Priority (PRN), but in the future the above descriptions need to be taken into consideration in preparing the next 10 years PRN ...



**Thank You**

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