



Mining & Minerals Industry Institute

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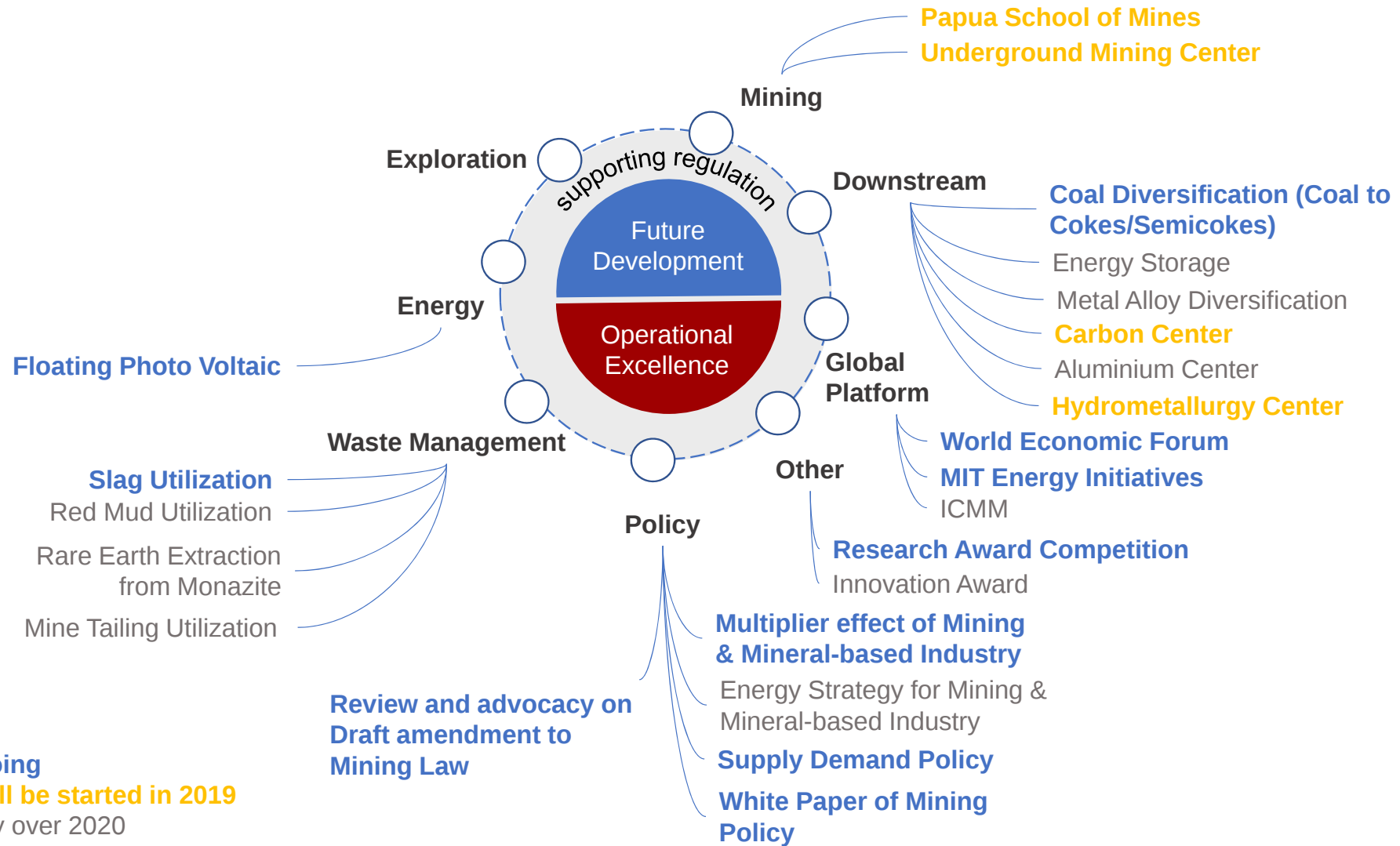
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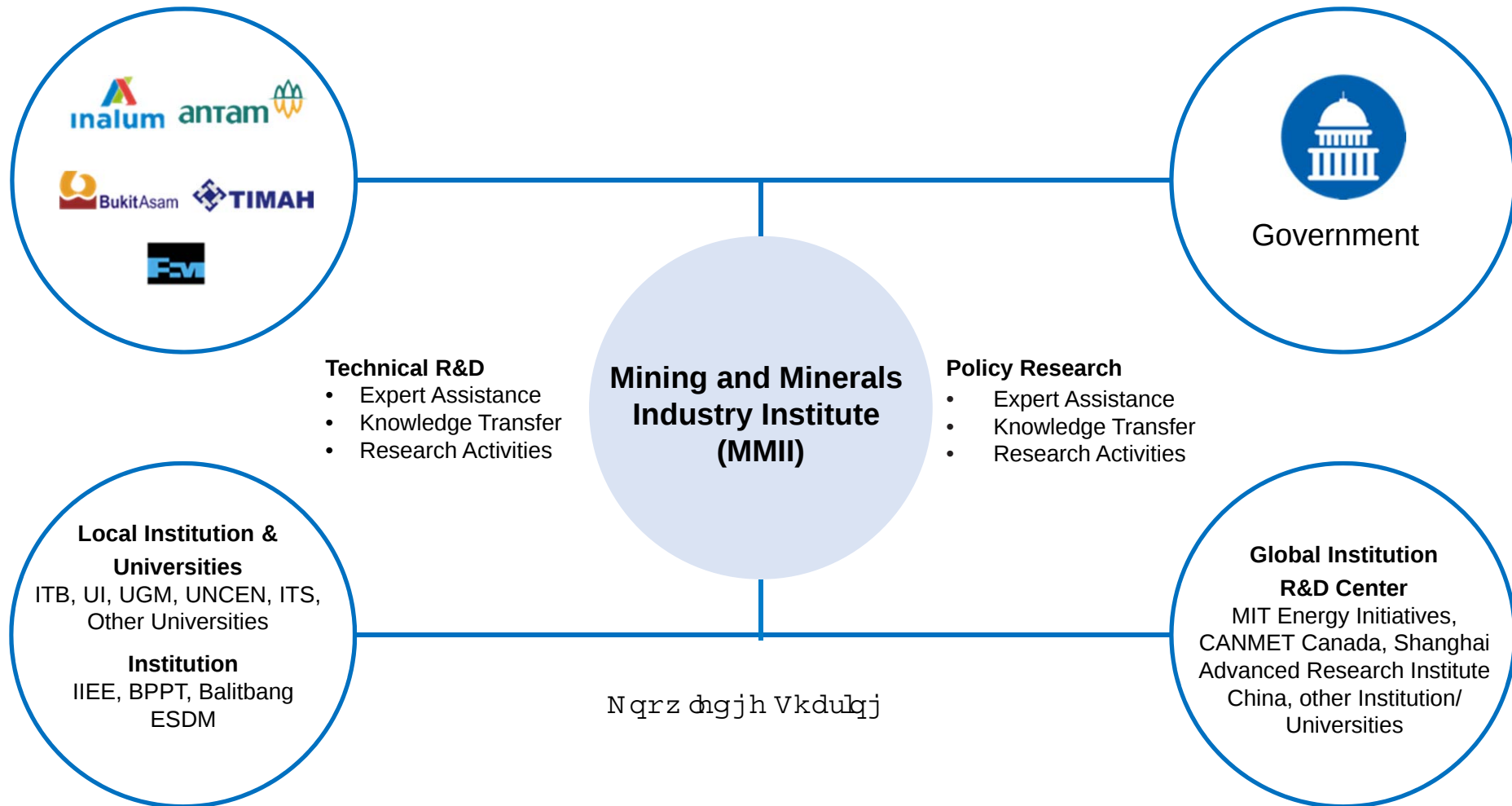
A.1 Mining and Minerals Industry Institute



A.2 MMII Initiatives Summary



A.3 MMII Partners



B.1 MMII Technical R&D & Policy Research Initiatives

Project	Stage	Start date	End date	Duration	Budget	PIC
Technical R&D						
1. MWp Floating Photo Voltaic Pilot Project (FS & BED)	 Implementation	25.07.2019	26.10.2019	3 months	Rp. 875.228.000	BPPT
2. Ferroalloy Extraction on FeNi Slag	 Implementation	14.07.2019	14.12.2019	6 months	Rp. 395.700.000,-	ITB
3. Coal for Cokes/Semi-cokes	 Implementation	01.07.2019	01.12.2019	5 months	Rp. 265.140.000,-	TEKMIRA ESDM
4. Coal Tar Pitch Anode Carbon Anode of Aluminium Smelting	 Preparation	19.08.2019	19.04.2019	8 months	Rp	TEKMIRA ESDM
Policy Research						
1. White Paper of Mining Sector	 Evaluation	14.06.2019	27.07.2019	3 weeks	Rp. 133.800.000,-	NRC
2. Mineral Supply Demand Policy	 Implementation	22.07.2019	22.10.2019	3 months	Rp 393.000.000,-	Metallurgy UI
3. Multiplier Effect of Mining Sector	 Implementation	03.07.2019	03.10.2019	3 months	Rp. 797.728.440,-	LPEM UI & Mandiri Insititute
4. Fostering and Monitoring Effectiveness Index Level	 Evaluation	01.05.2019	01.07.2019	2 months	Rp. 117.000.000,-	Indekstat
5. Mineral Added Value Index	 Evaluation	08.04.2019	08.07.2019	3 months	Rp. 139.700.000,-	Indonesia Mining Institute

B.2 MMII Research Award Competition (1/3)

An Appreciation Program from the Mining and Minerals Industry Institute for the best Research Proposal in the Field of Exploration, Mining, and the Downstream of Minerals and Coal.



A. Registration
July-Aug 2019



B. Total Fund
IDR 3 Billion



C. 3 Chosen Proposals

Background

- To have pool of talents and research database related with mining and mineral-based industry
- To align the needs of the mining industry and the downstream of minerals and coal with R&D activities
- To support research and innovation in the field of exploration, mining, and the downstream of minerals and coal

Participants

- Individuals or research teams that originate from Universities or Research and Development institutes within Indonesia

Information can be obtained via:

- www.mmii-award.id
- social media
- press release
- roadshow in 4 big cities (Jakarta, Bandung, Jogja, Surabaya)

B.2 MMII Research Award Competition (2/3)



Total Participants, As of 1st September 2019 (00.00 WIB)

252

Total Registered Participants

166

already filled in Participant's Data

86

didn't complete the Participant's data

35

Institution

124

Uploaded Pre Proposal Documents

42

Pre Proposal Documents aren't submitted

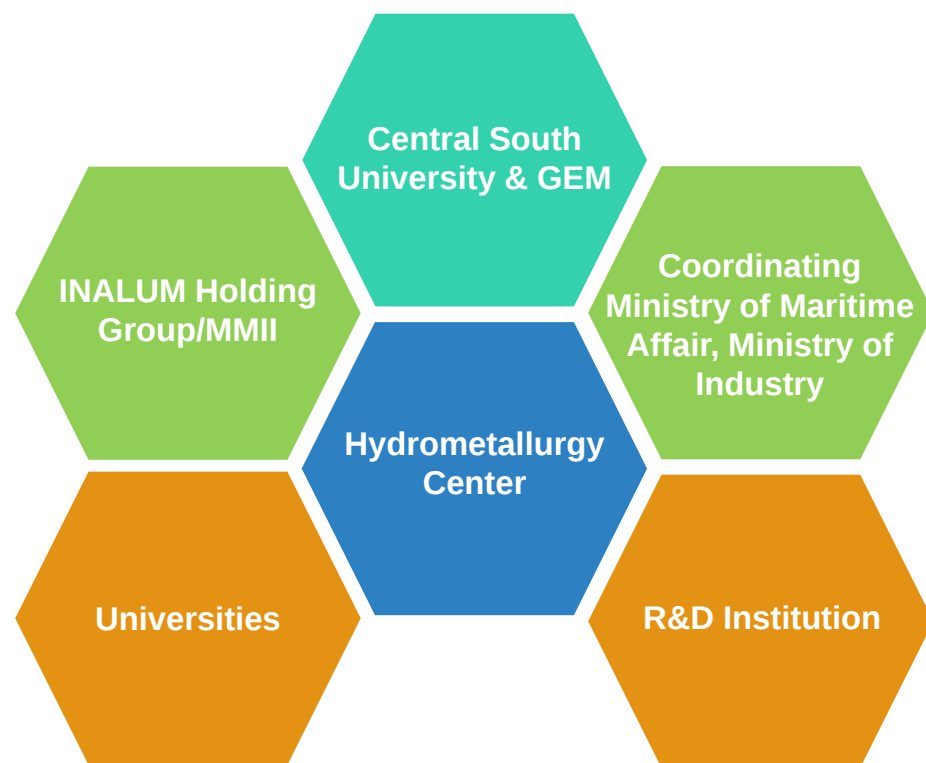
B.2 MMII Research Award Competition (3/3)



No	Name	Institute
Chairman		
1	Ir. Agus Tjahajana Wirakusumah, SE, M.Sc.	PT INALUM (Persero)
Jury Members		
1	Prof Dr. Ir. Irwandy Arif	Indonesian Mining Institute
2	Dr. Himawan Tri Bayu M.P, M.Eng, D.Eng.	Universitas Gadjah Mada
3	Prof. Dr. Ir. Bambang Sunendar	Institut Teknologi Bandung
4	Prof. Dr. Ir. Bambang Suharno	Universitas Indonesia
5	Dr. Ir. R. Sukhyar	PERHAPI
6	Ir. Adi Maryono, M.Sc.	IAGI
7	Ir. Wahyu Sunyoto, M.Sc.	PT INALUM (Persero)



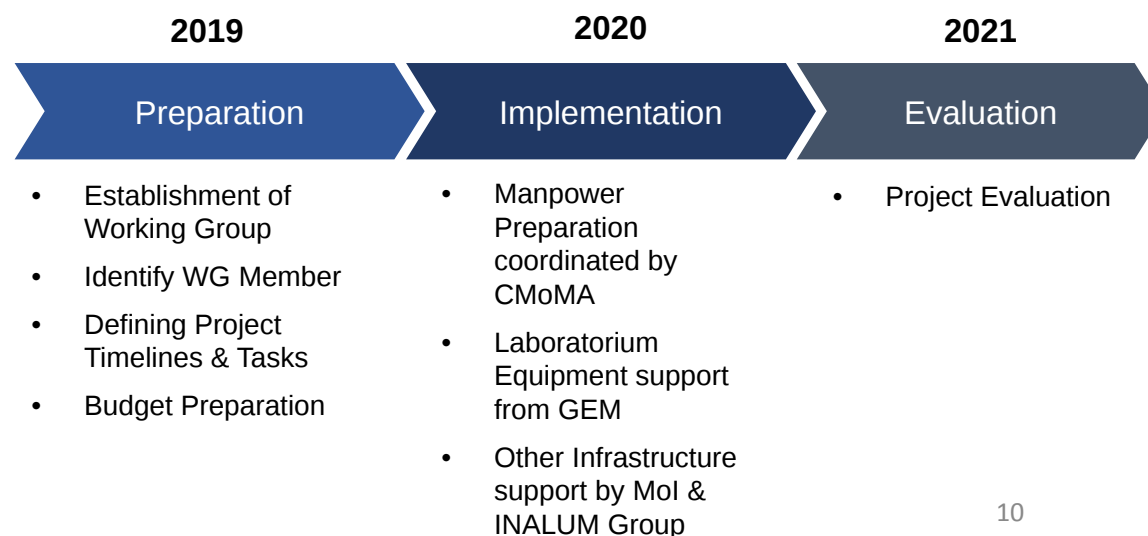
B.3 R&D Platform Initiation – Hydrometallurgy Center



- Transfer Knowledge, R&D Programme
Lab/Pilot Plant Support, Fund
- R&D Programme & Fund
- Dedicated Manpower



- Ministry of Maritime Affairs and GEM have invited MMII to establish Hydrometallurgy Center located in Morowali, Central Sulawesi.
- The Center will be jointly supported by GEM and Central South University
- MMII suggests that the Hydrometallurgy Center should be attached to Politeknik Logam Morowali initiated by Ministry of Industry.

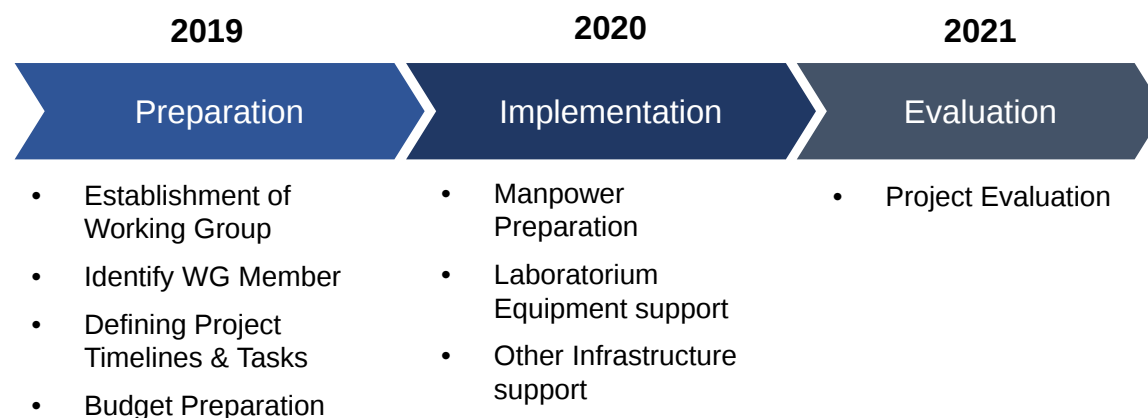


B.3 R&D Platform Initiation – Carbon Center

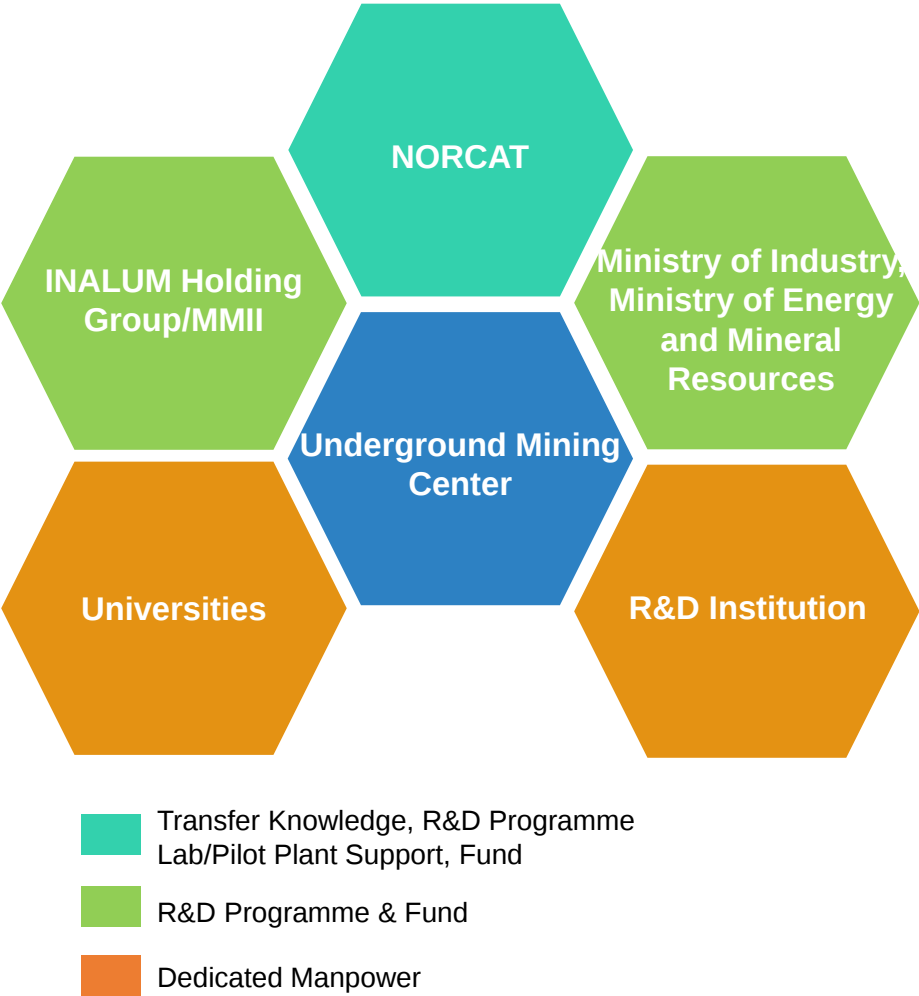


- Transfer Knowledge, R&D Programme
Lab/Pilot Plant Support, Fund
- R&D Programme & Fund
- Dedicated Manpower

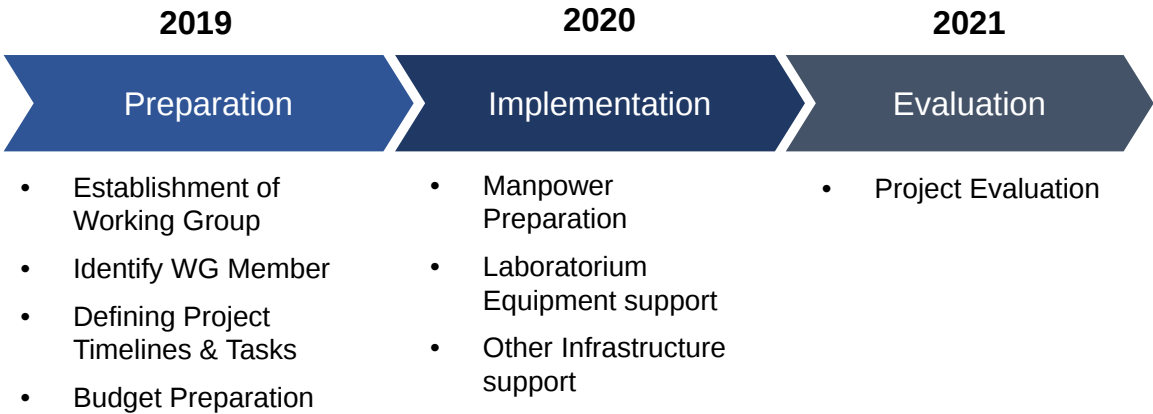
- On 14th March 2019, MMII & Bukit Asam team visited the Low Carbon Research Center, facilities owned by Shanghai Advanced research Center (SARI), located in Shanghai, China.
- SARI, Bukit Asam, and MMII have agreed to have Joint Projects and establish Carbon Center, focusing on Low-Rank Coal (Lignite) Utilization for Coal Gasification and Coal Liquefaction Research Program.



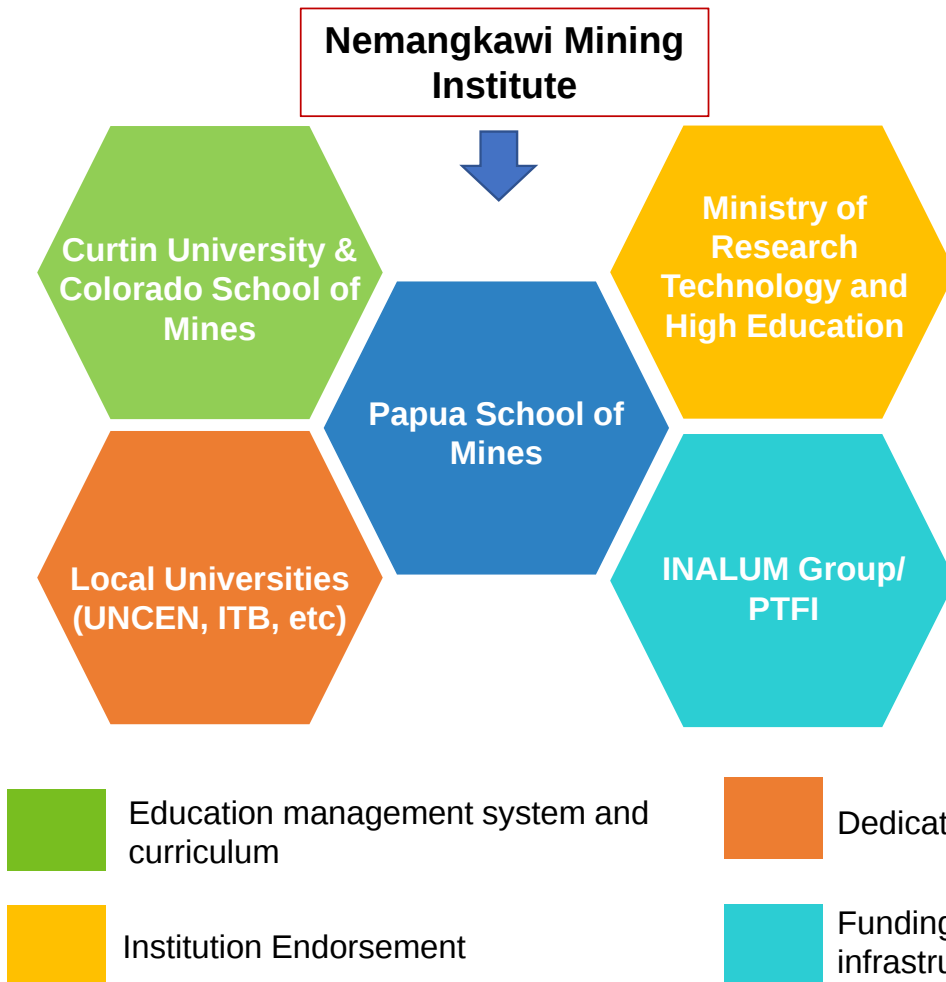
B.3 R&D Platform Initiation – Underground Mining Center



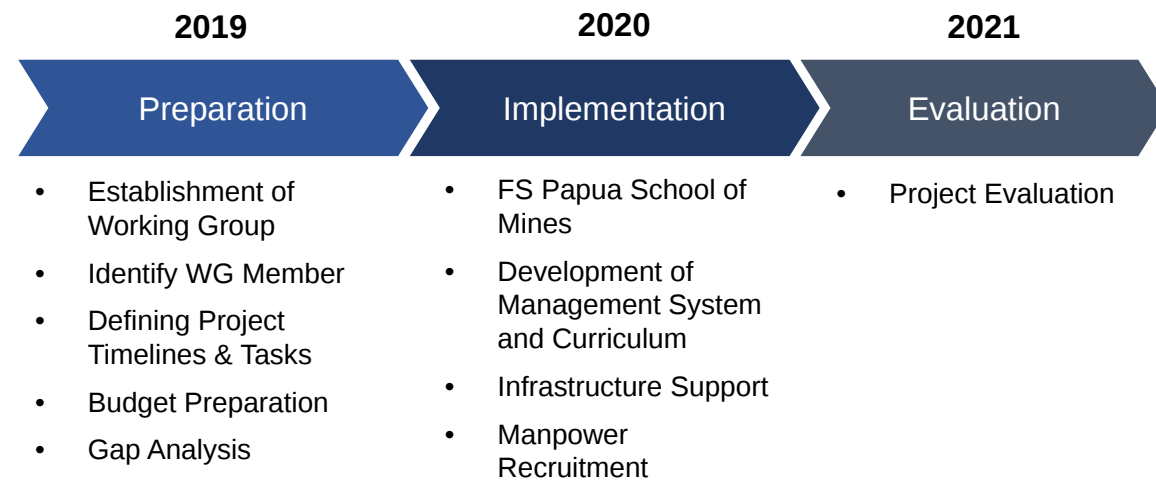
- Grasberg Mine is one of the most complex underground mining in the world, therefore, MMII to established Underground Mining Center
- One of the potential partner has been identified, NORCAT is R&D Center based in Canada focusing on the Underground Mining and Technical Training for Underground Mining Worker

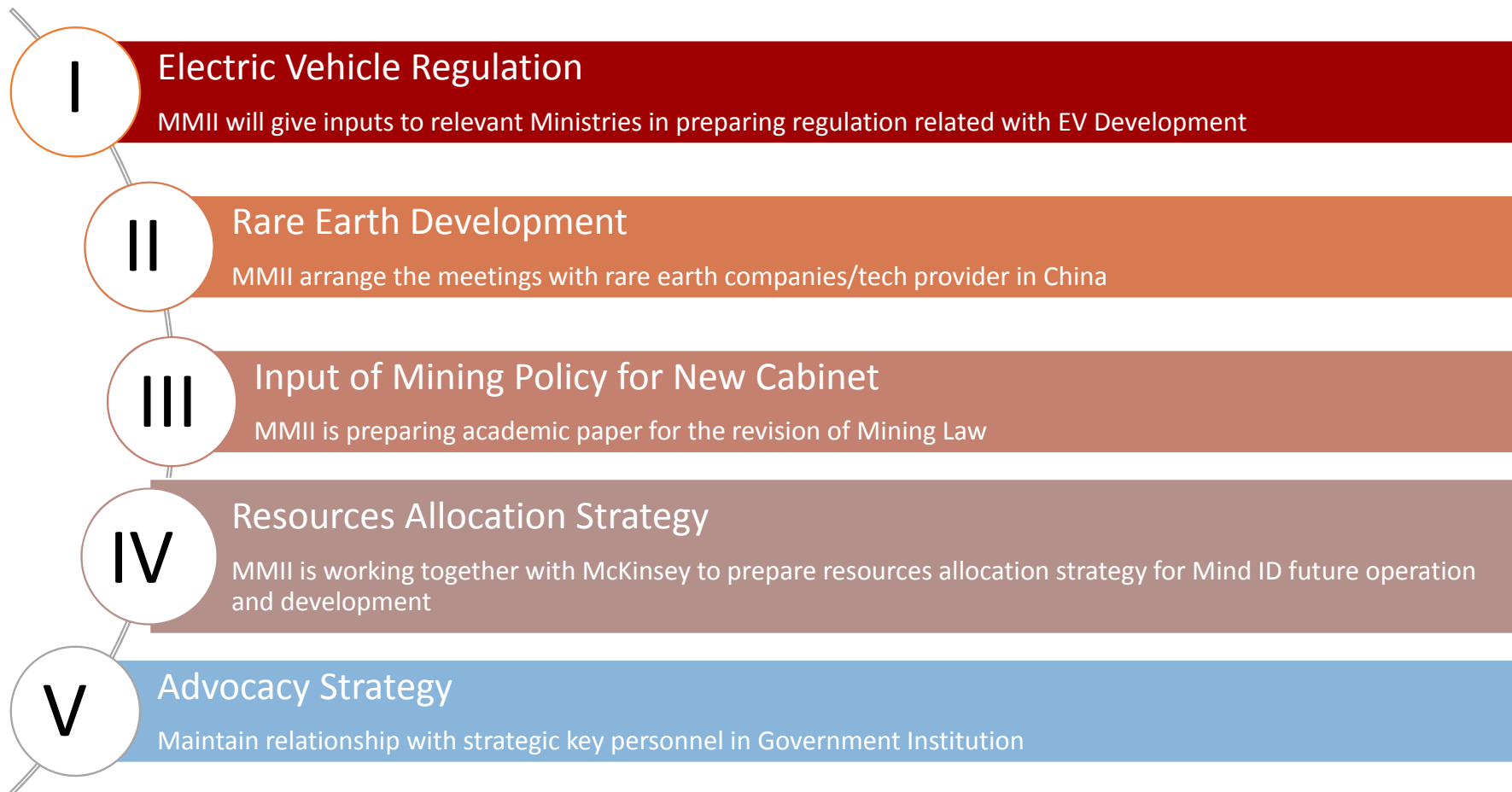


B.4 Papua School of Mines



- In August 2019, Curtin University will conduct gap analysis for the development of Papua School of Mines
- Working Group led by Prof Irwandy will be established in 2019
- The Collaboration project will also involve Local Universities (ITB, UNCEN) and Colorado School of Mines,





B.6 Engagement Program With Local Universities

Universities		Fields		Topics			
 UNIVERSITAS INDONESIA  INSTITUT TEKNOLOGI BANDUNG  UNIVERSITAS GADJAH MADA  INSTITUT TEKNOLOGI SEPULUH NOPEMBER  UNIVERSITAS PADJADJARAN Upcoming  UNIVERSITAS PEMBANGUNAN JAYA  UNIVERSITAS TANJUNGPURA  UNIVERSITAS SEBELAS MARET  POLITEKNIK INDUSTRI LOGAM BORO WALUYO  POLITEKNIK NEGERI JAKARTA		Exploration	Mining	Floating Photo Voltaic	Red Mud Utilization	White Paper of Mining Policy	Papua School of Mines (UNCEN)
		Downstream	Waste and Tailing	Slag Utilization (ITB)	Mine Tailing Utilization	Multiplier Effect in Mining Sector (UI)	Hydrometallurgy Center
		Energy	Policy	Coal Diversification	Rare Earth Metal	Energy Strategy for Mining & downstream Industry (UGM, UI)	Underground Mining Center (ITB)
		Other		Energy Storage (ITB, ITS)	Metal Alloy Diversification	Mineral & Coal Supply Demand Policy (UI)	Carbon Center (ITB)
						Research Award Competition (All Universities)	Aluminium Center

Note:

Blue: Ongoing

Yellow : Will be started in 2019

Grey : Carry over 2020

B.6 Engagement Program With Local Partners

   KEMENTERIAN KOORDINATOR BIDANG KEMARITIMAN Upcoming  Kementerian Perindustrian REPUBLIK INDONESIA	F dwhj ru		Iq lwlyhv			
	Exploration	Mining	Floating Photo Voltaic (BPPT)	Red Mud Utilization	White Paper of Mining Policy	Papua School of Mines
	Downstream	Waste and Tailing	Slag Utilization	Mine Tailing Utilization	Multiplier Effect in Mining Sector	Hydrometallurgy Center (Kemenko Maritim)
	Energy	Policy	Coal Diversification (TEKMIRA)	Rare Earth Metal	Energy Strategy for Mining & downstream Industry	Underground Mining Center
	Other		Energy Storage (BPPT, Kemenperin)	Metal Alloy Diversification	Mineral & Coal Supply Demand Policy	Carbon Center
					Research Award Competition (All Insitution)	Aluminium Center

Note:

Blue: Ongoing

Yellow : Will be started in 2019

Grey : Carry over 2020

C. What We Will Do In 2020

1

Continuation of 2019 Program

Technical R&D

- R&D Bottom up Process
- Joint Research Activities
- MMII Research Award
- Establishment of Joint R&D Platform

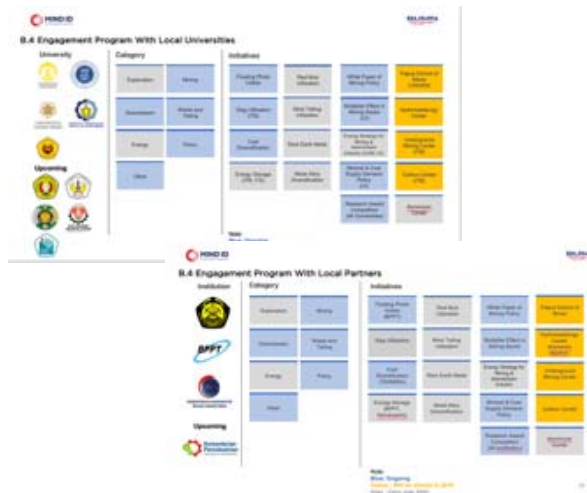
Policy Research

- Monitor and review existing Law and Regulation in Mining related sector
- Provide inputs to Stakeholders on Mining related Policy

2

Improve workflow and more structured program

- MMII Website
- Research Database
- MMII Media Publication
- Stakeholder Mapping



3

Actively Involve in Global Platform and Engage with Reputable Institutions



MIND ID Strategic Projects

**Mine Mouth Power Plant
(PLTU Sumsel 8 - PTBA)**



📍 Tanjung Enim 🏭 2 x 620 MW
🎯 COD 2022

**Smelter Grade Alumina Refinery
(Inalum - ANTAM)**



📍 Mempawah 🏭 1.000.000 tpa
🎯 COD 2022

**Coal to UDP
(PTBA – Pertamina – PI – Chandra Asri)**



📍 Tanjung Enim 🏭 570.000 tpa Urea
🎯 COD Q1 2023 450.000 tpa PP
400.000 tpa DME

**Ferronickel Halmahera Timur
(ANTAM)**



📍 Tanjung Buli 🏭 13.500 ton.Ni
🎯 COD 2019

**Coal to DME
(PTBA – Pertamina – Air Product)**



📍 Peranap 🏭 1.400 KTA DME
🎯 COD END 2022

**Copper Smelter & PMR
(PT Freeport Indonesia)**



📍 Gresik 🏭 2.000 Ktpa
🎯 COD COMPLETED IN 2023

Thank you