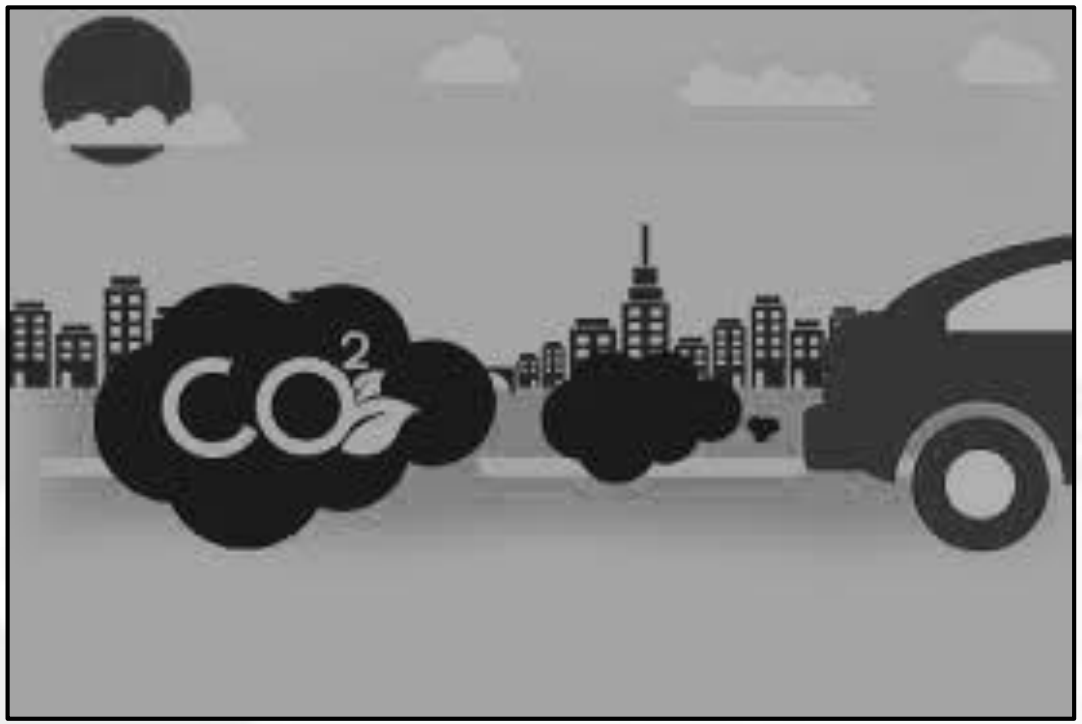
Emission Control Manufacturers Association

ECT 2016



" Emission Control Technology for Sustainable Growth"

P. Panda

Executive Vice President – Engineering Division

MARUTI SUZUKI
Way of Life!

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Way of Life!

Changing Timelines

Considerations for the Future

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Emission Control Manufacturers Association

Considerations for the Future

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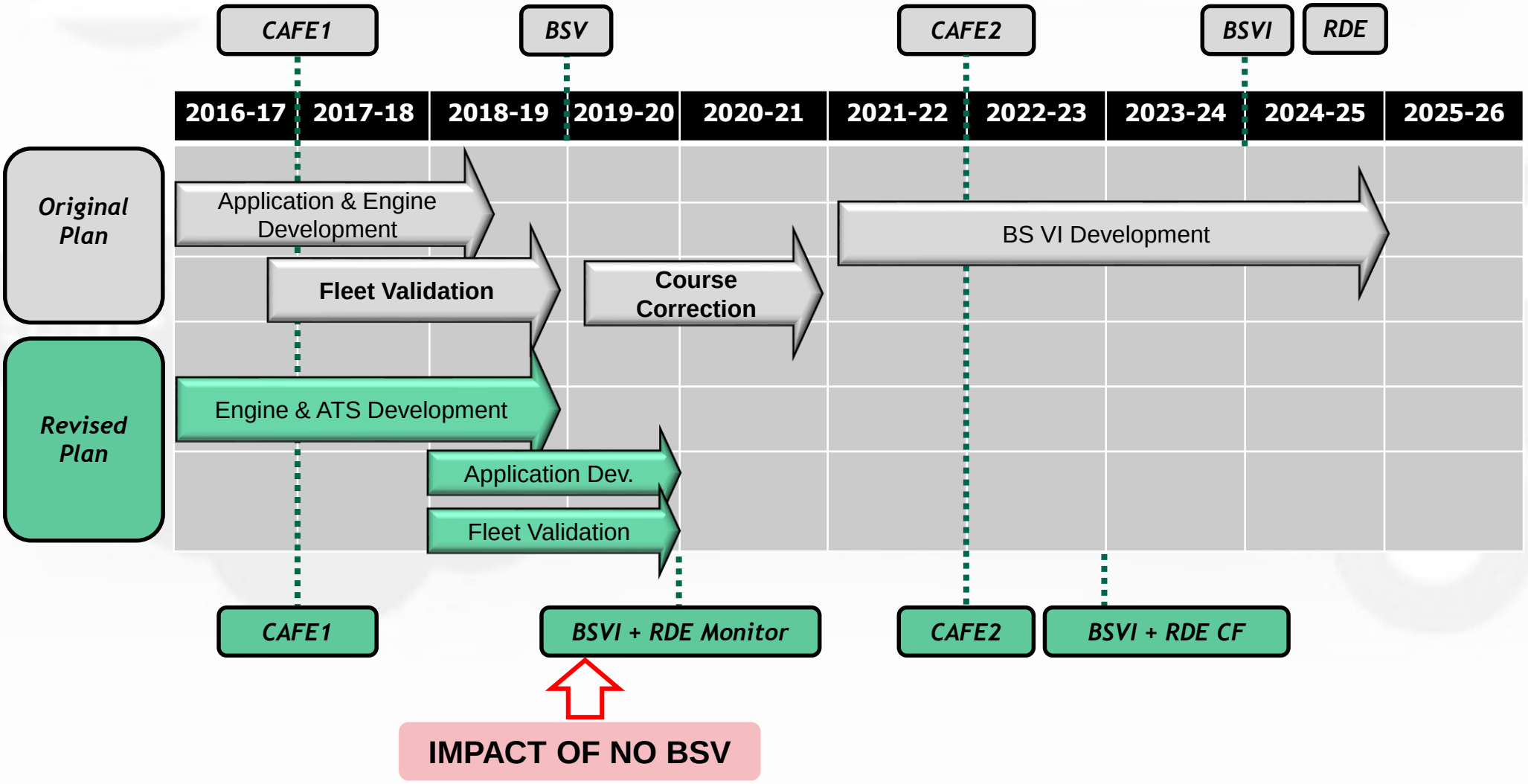
Changing Timelines :



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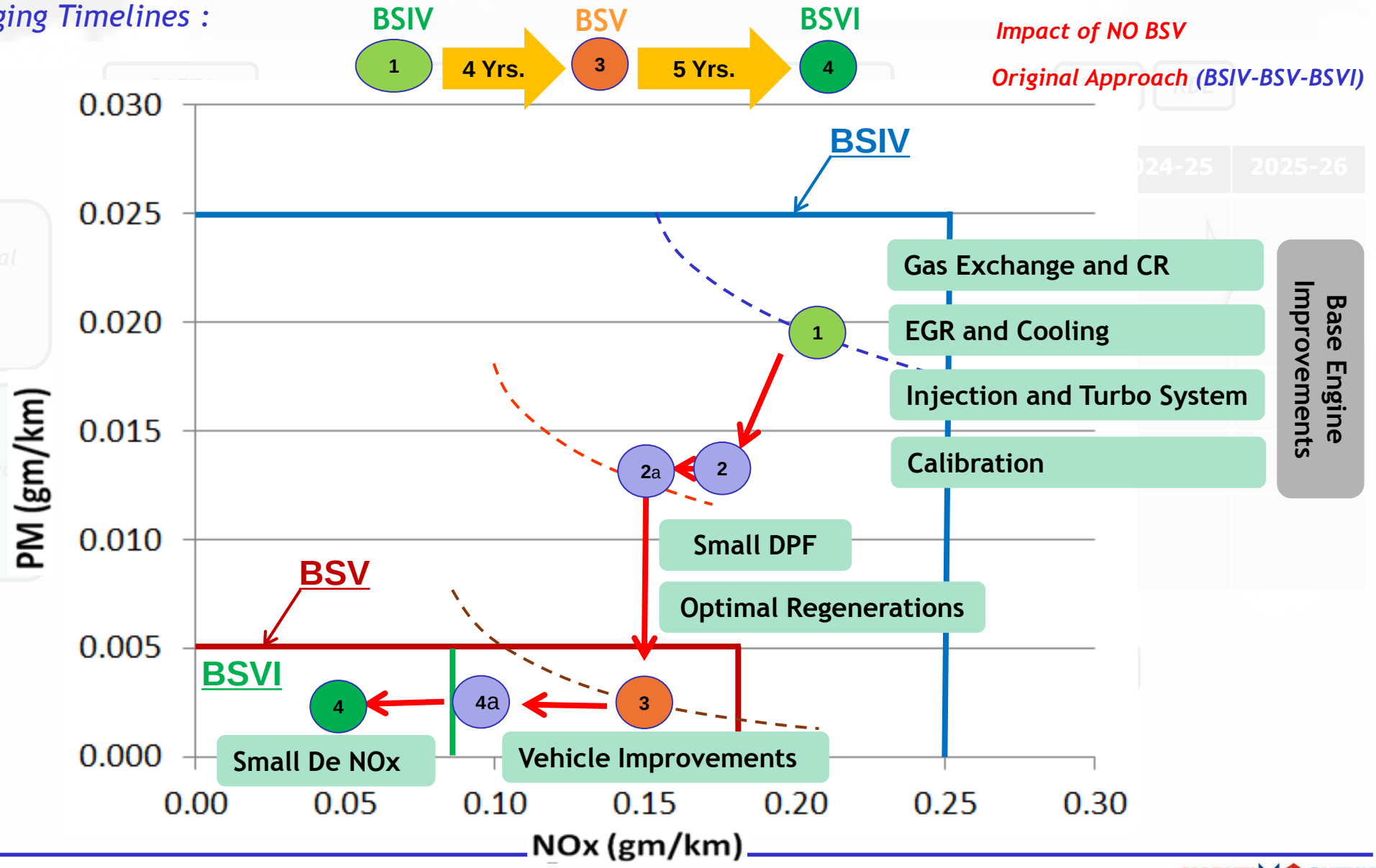
Changing Timelines :



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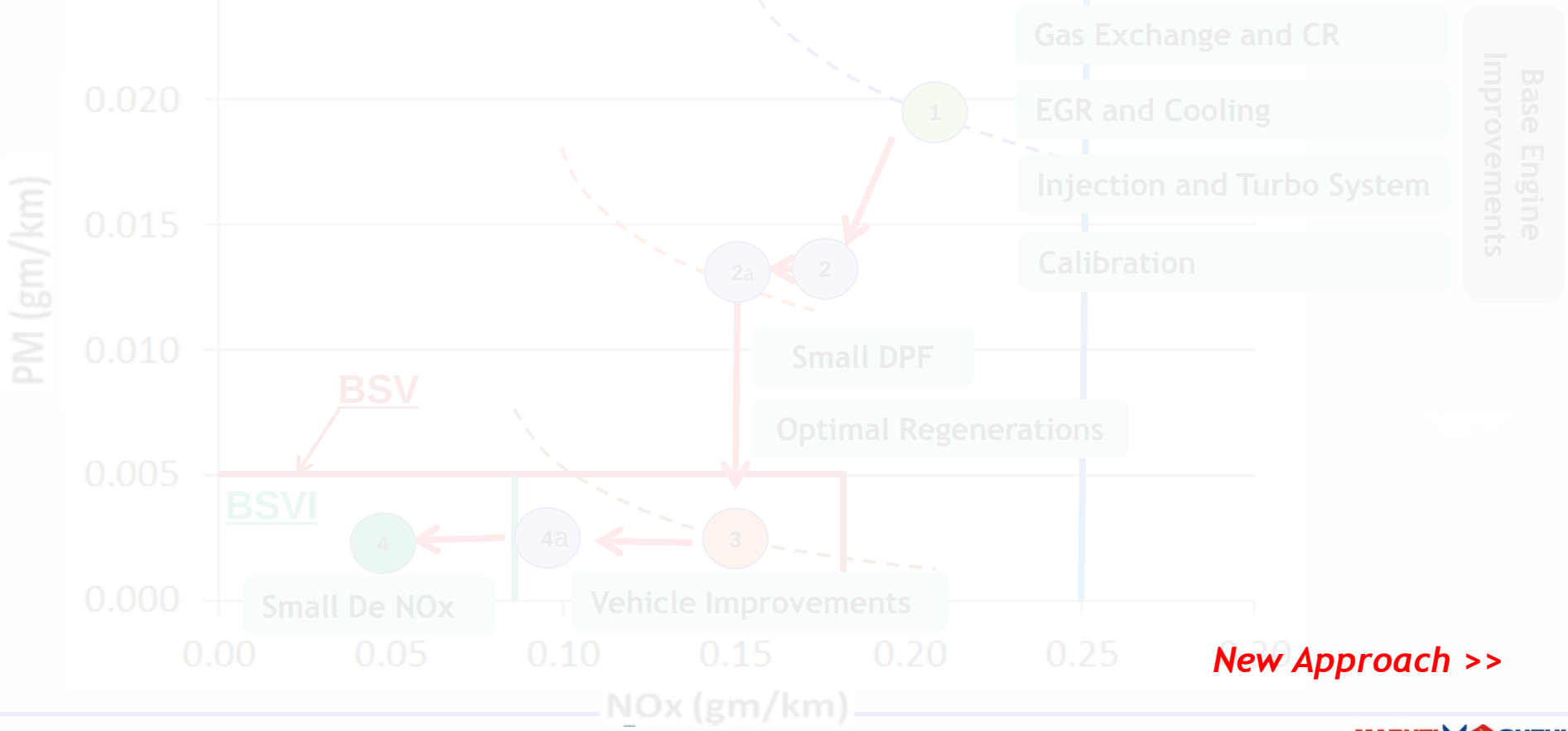
Merits in Original Approach : (BSIV-BSV-BSVI)

Sufficient Time** for Vehicle Level improvements **(BSV to BSVI ~ 5Yrs.)

***Cost Effective/ Quality Effective approach** due to availability of Technologies from Europe.*



New Approach >>

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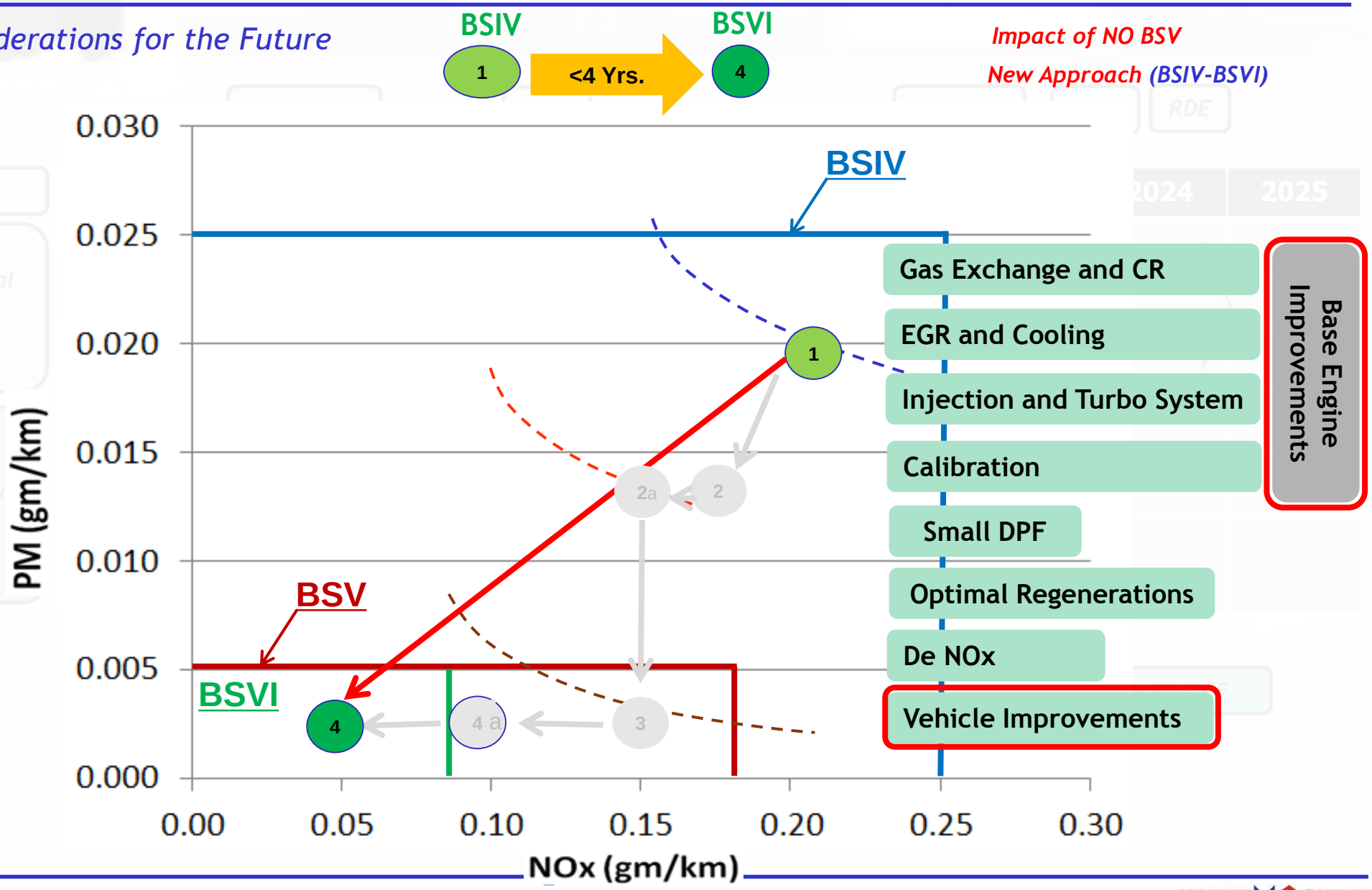
Considerations for the Future



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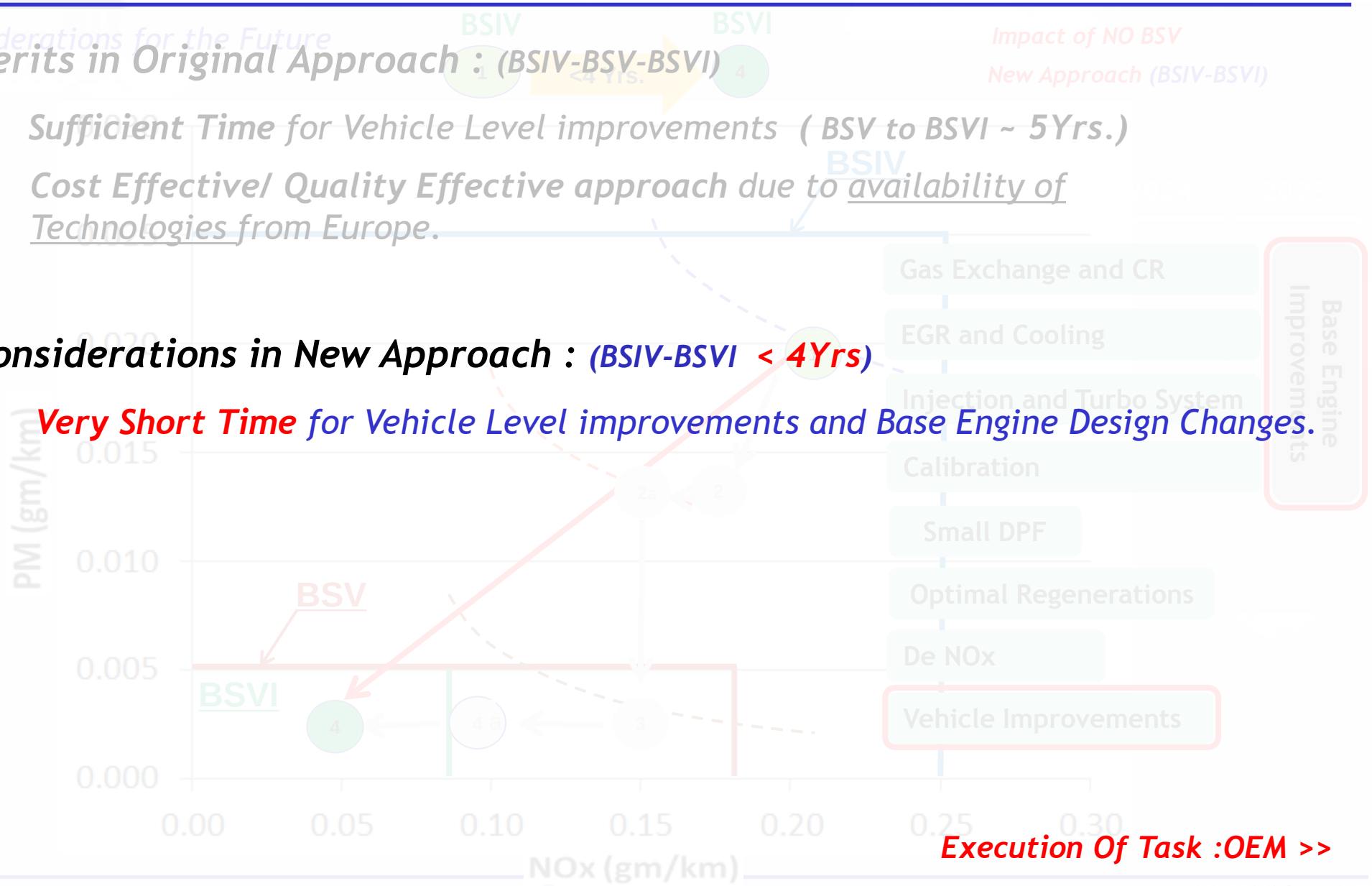
Considerations for the Future

Merits in Original Approach : (BSIV-BSV-BSVI)

- *Sufficient Time for Vehicle Level improvements (BSV to BSVI ~ 5Yrs.)*
- *Cost Effective/ Quality Effective approach due to availability of Technologies from Europe.*

Considerations in New Approach : (BSIV-BSVI < 4Yrs)

- *Very Short Time for Vehicle Level improvements and Base Engine Design Changes.*



Execution Of Task :OEM >>

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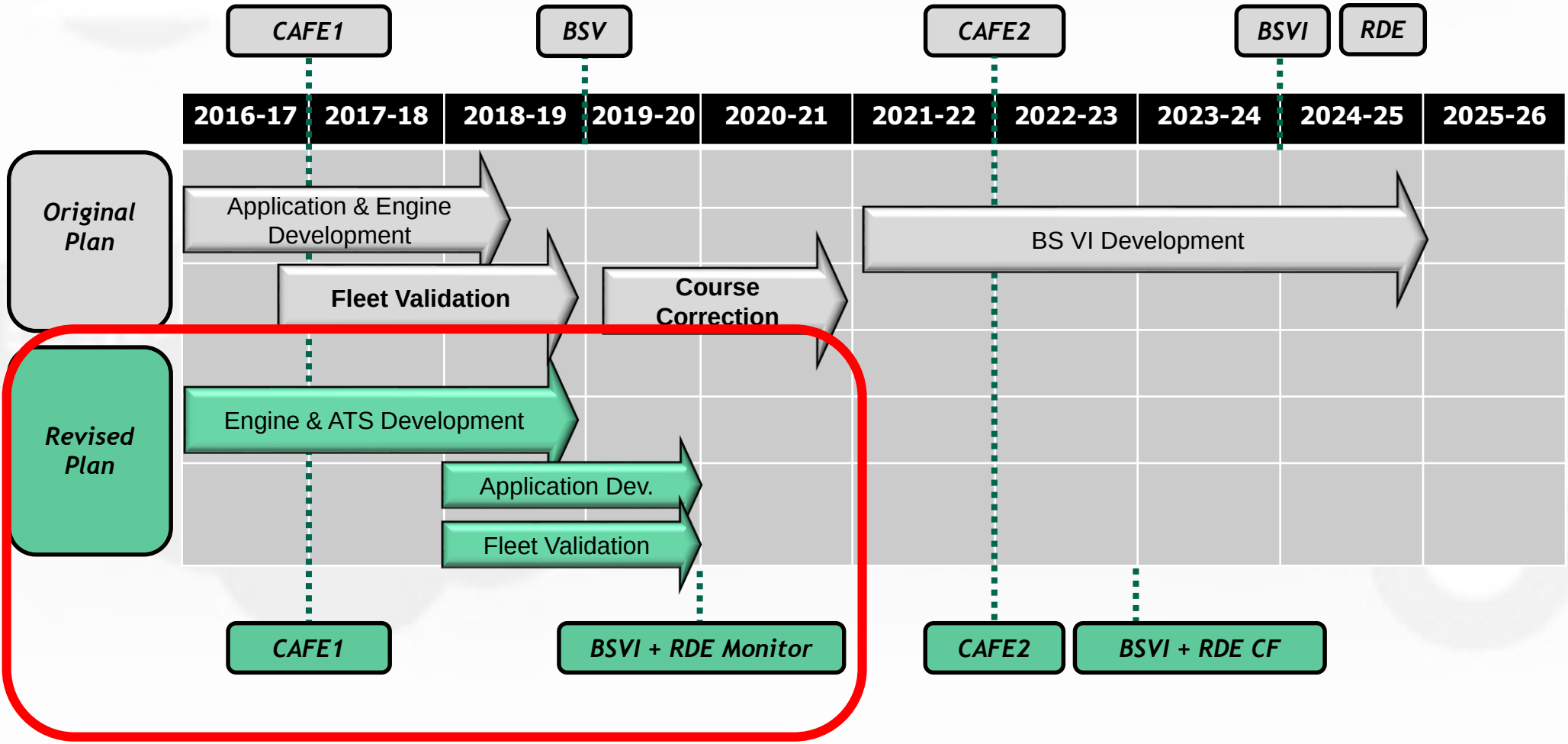
Changing Timelines :



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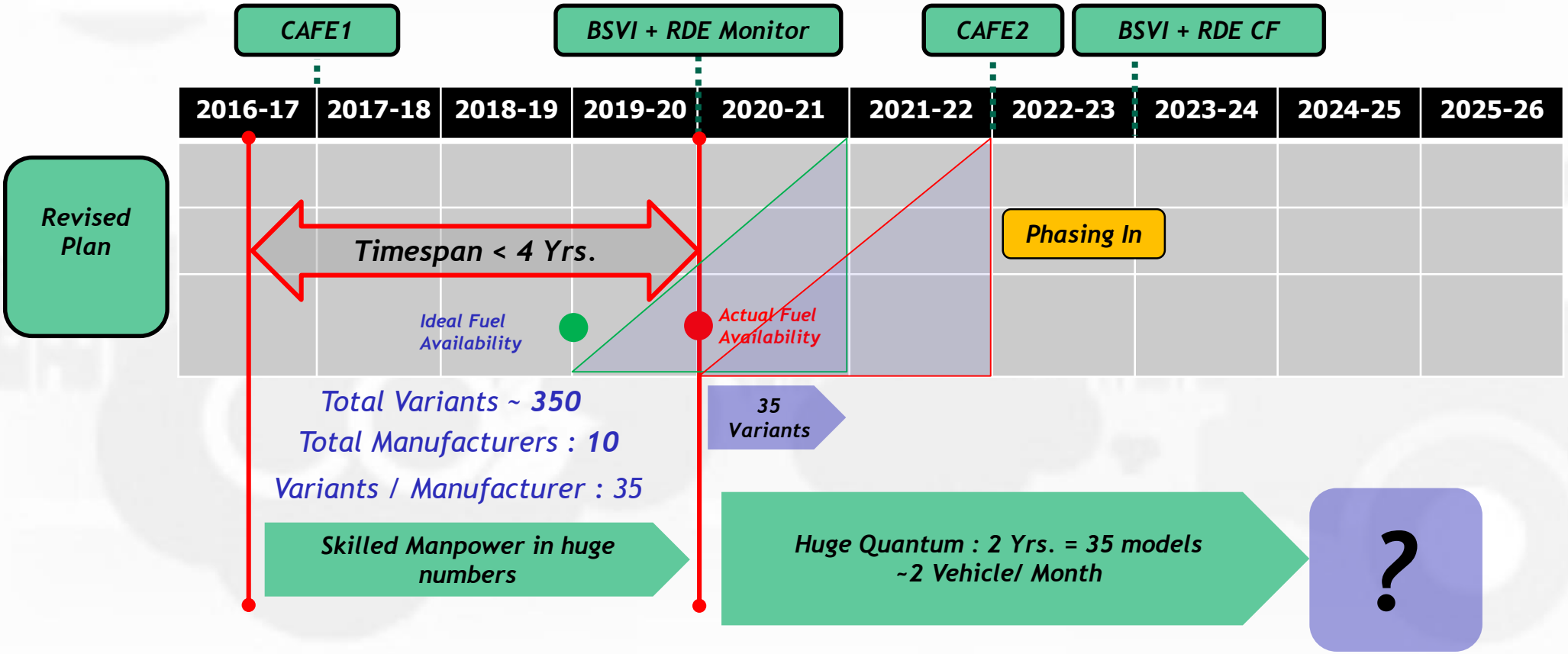
Considerations for the Future

Execution Of Task :OEM >>



***Skilled Manpower in Huge Nos.* Required**

***Phasing In* gives adequate time to plan and implement**

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Considerations for the Future

Merits in Original Approach : (BSIV-BSV-BSVI)

Sufficient Time for Vehicle Level improvements (BSV to BSVI ~ 5Yrs.)

Cost Effective approach due to availability of Technologies from Europe.

Considerations in New Approach : (BSIV-BSVI < 4Yrs)

Very Short Time for Vehicle Level improvements and Base Engine Design Changes.

Skilled Manpower in huge nos. and ***Phasing In*** to meet the target.

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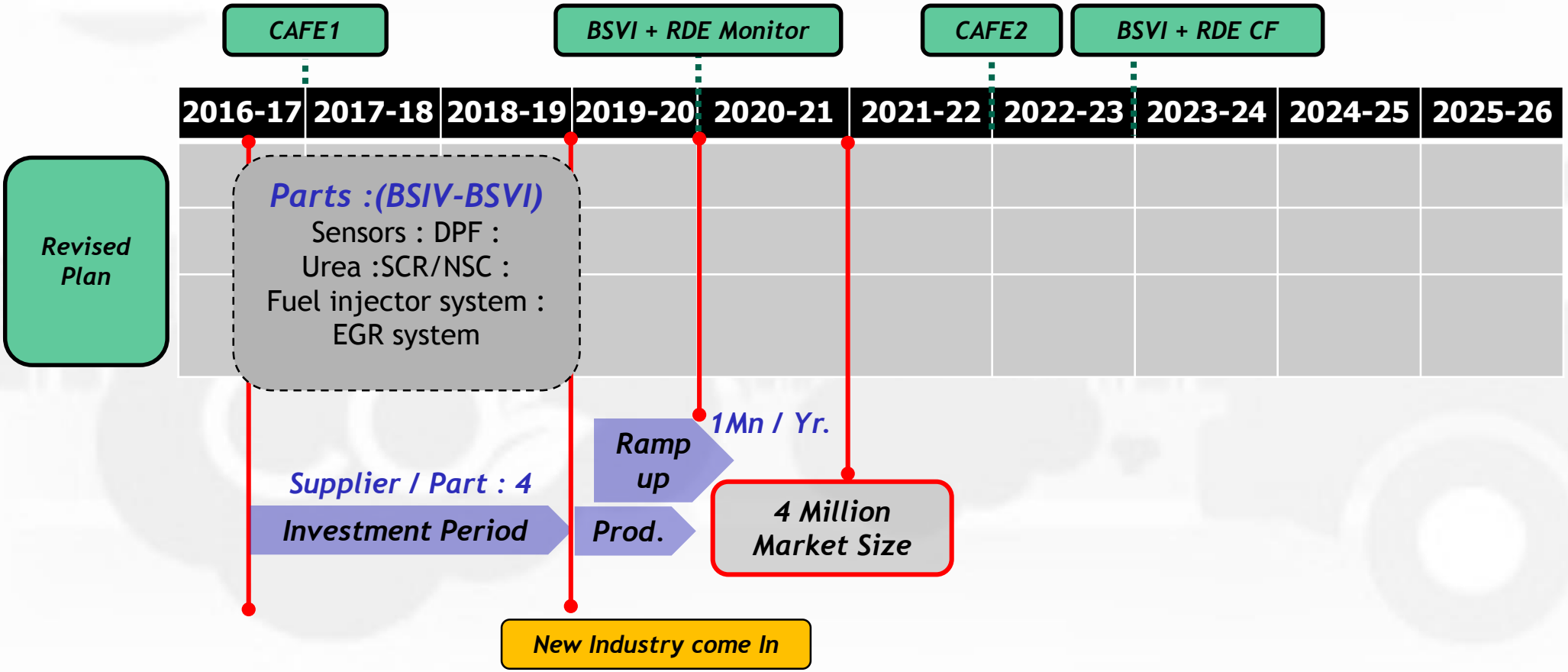
Considerations for the Future

Execution Of Task :Supplier >>



Skilled Manpower in huge nos. *required*

Cost (For Consumer) and Technology *to be developed hand in hand* ***indigenously.***

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Merits in Original Approach : *(BSIV-BSV-BSVI)*

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Considerations in New Approach : *(BSIV-BSVI < 4Yrs)*

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Suppliers Skill Upgradation In huge nos. required in a very short timeframe.

Cost (For Consumer) and Technology** to be developed hand in hand **indigenously.

Engine/ Platform Design Constraints

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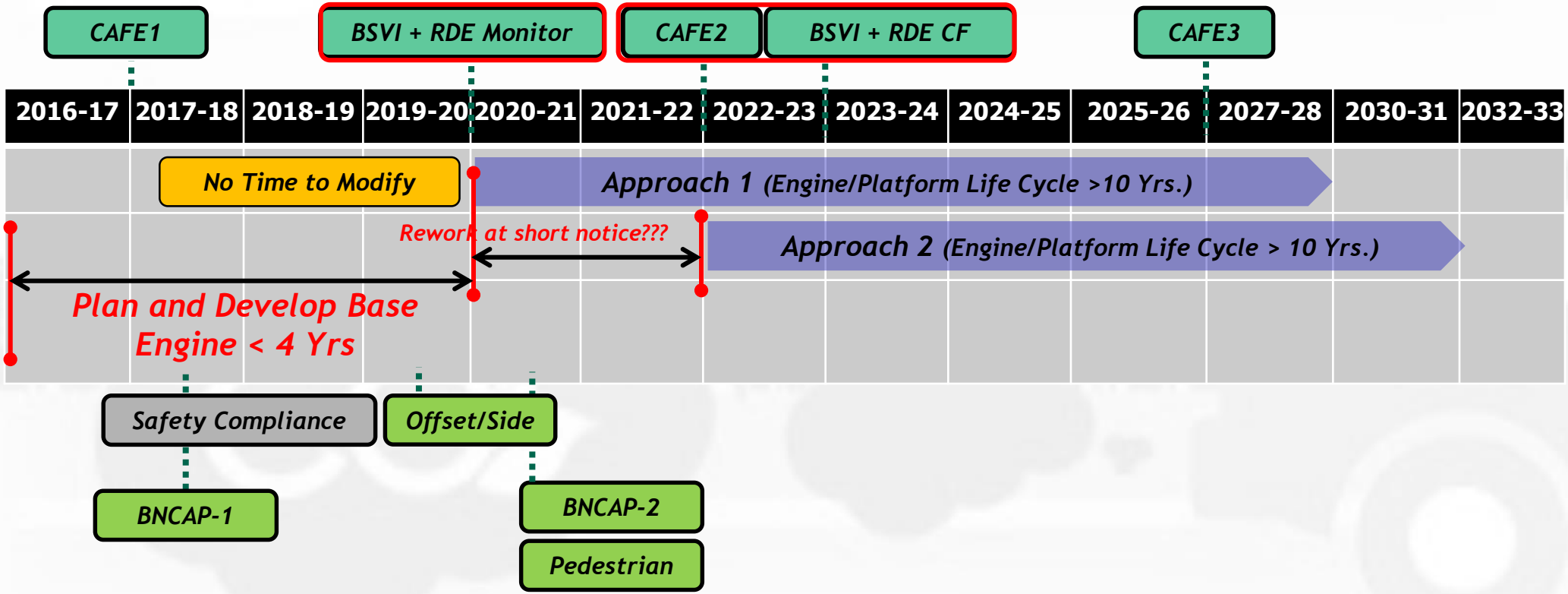
Considerations for the Future

Engine/Platform Design Constraints



Base E/G Design

Big challenge to channelize available resources for meeting RDE,CAFÉ and Safety, concurrently.

Skill and Timelines

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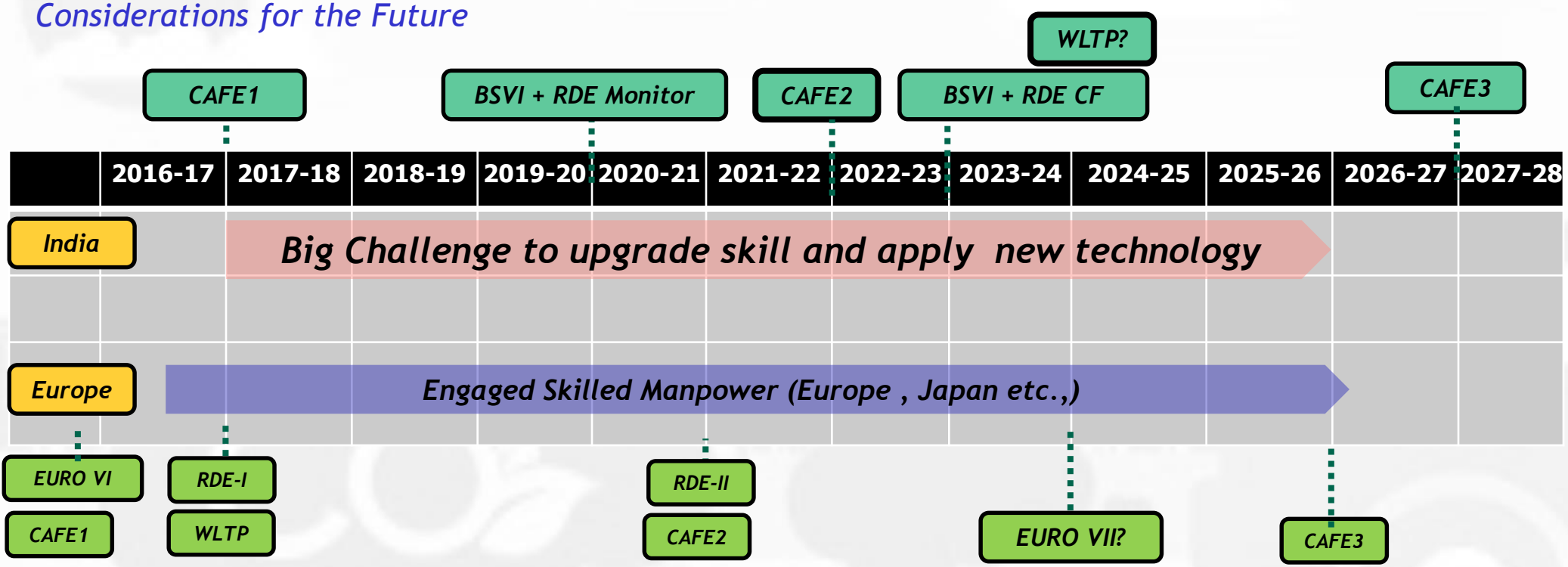
Considerations for the Future



Technology — Challenge to do application technology indigenously.

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Merits in Original Approach : *(BSIV-BSV-BSVI)*

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Skilled Manpower in huge nos. and Phasing In to meet targets.

Suppliers Skill Upgradation In huge nos. required in a very short timeframe.

Base Engine Design (Life Cycle >10 Yrs.) : ***RDE (2023) + CAFE 2 (2022) + Safety***

Big challenge *to upgrade skills and develop new technology,* ***indigenously.***

Trends and Investments

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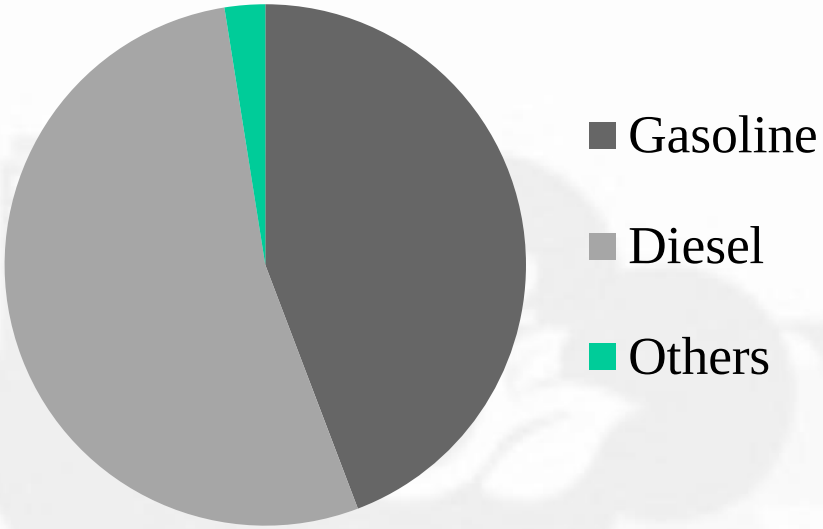
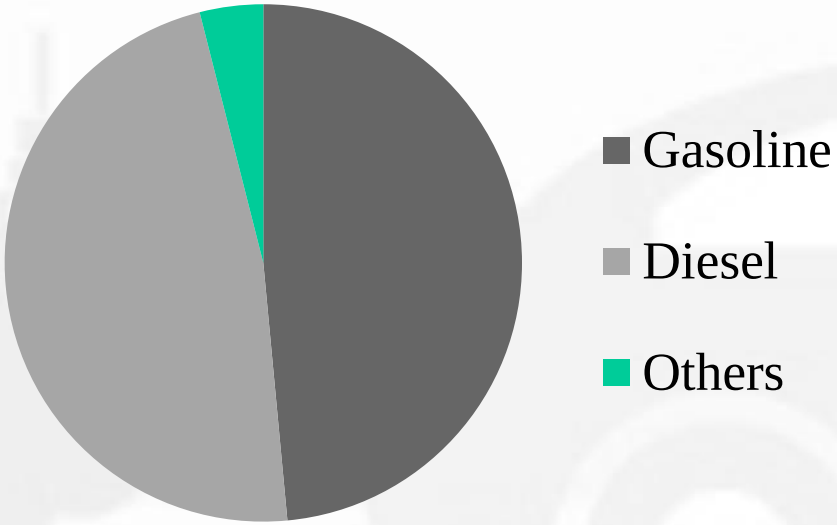
Considerations for the Future | *Trend in Europe* | *Trends and Investments*

2015 : Market Size 13 Million



2020 : Market Size 15 Million



By 2020, despite the decreasing market, Diesel still hold a big share in Europe.

Market trend in India ? ***Planned Investments by Suppliers***

Others : CNG/ Ethanol/ Electric

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***Planned Investments by Supplier** to meet the emission norms for Diesel market.*

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Opportunities

Challenges

Plan BSIV to BSVI implementation in <4Yrs	Plan In India
Upgrade Skill Level of Manpower to make in India	Skill In India
Make the Design cost effective to sell in India	Sell In India

Thank you