

ENGINEERING THE FUTURE HYPERCAR: A HOLISTIC DUAL V-CYCLE APPROACH TO VEHICLE DYNAMICS



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CONTENT

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- HOW THE TWO PROCESSES INTERACT
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FROM TWO HISTORIES TO ONE VISION

RIMAC

BUGATTI
+ RIMAC

BUGATTI



2009

Electric hypercar pioneer
**Relentless innovation
and rebellious vision**



2021

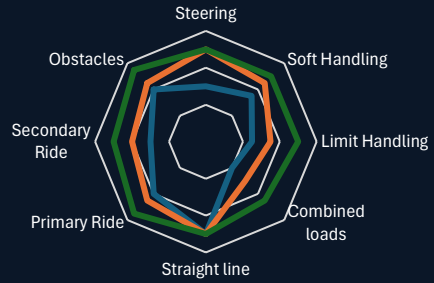
The ultimate hypercar powerhouse
Pushing boundaries of automotive technology



1909

117 years of incomparable heritage
**Pinnacle of elegance and
performance**

THE DUAL V-CYCLE

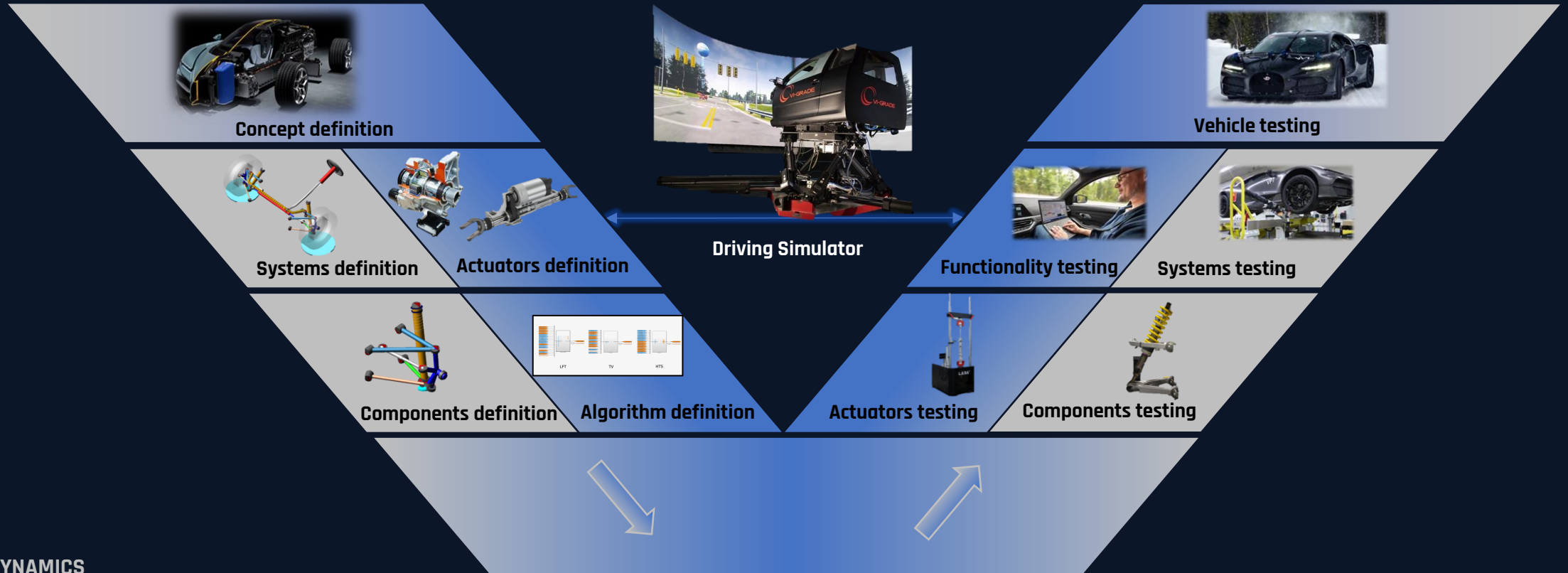


— Ref Vehicle — Target (HW) — Target (HW+SW)

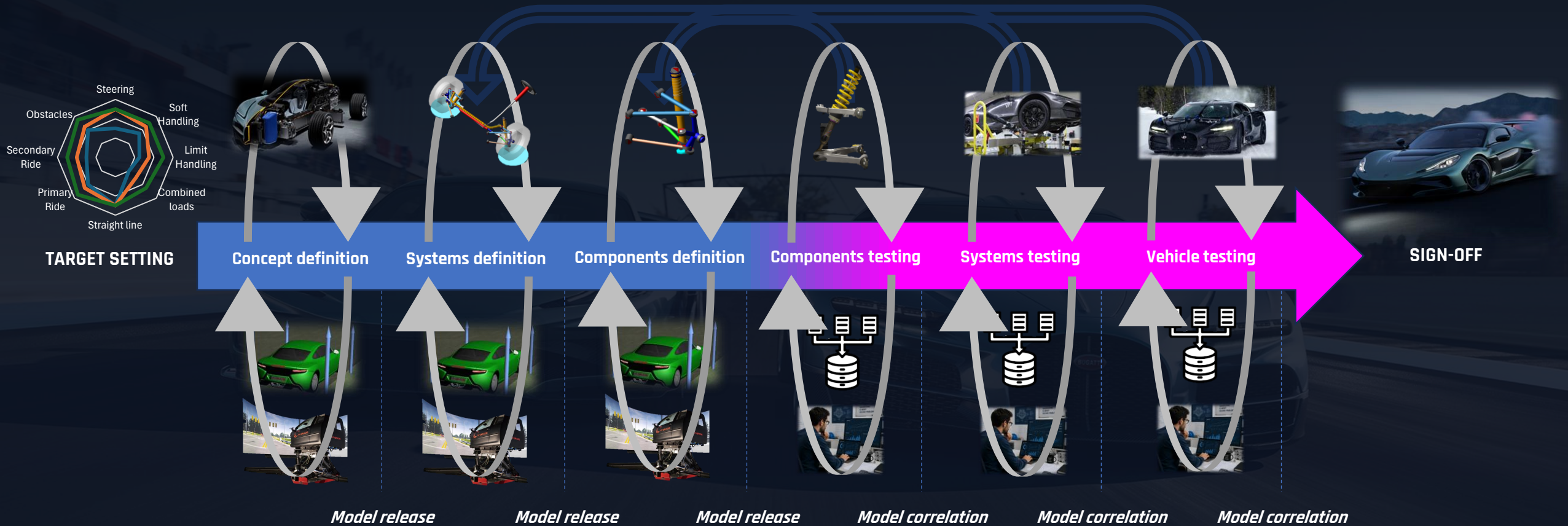
TARGET SETTING



SIGN-OFF

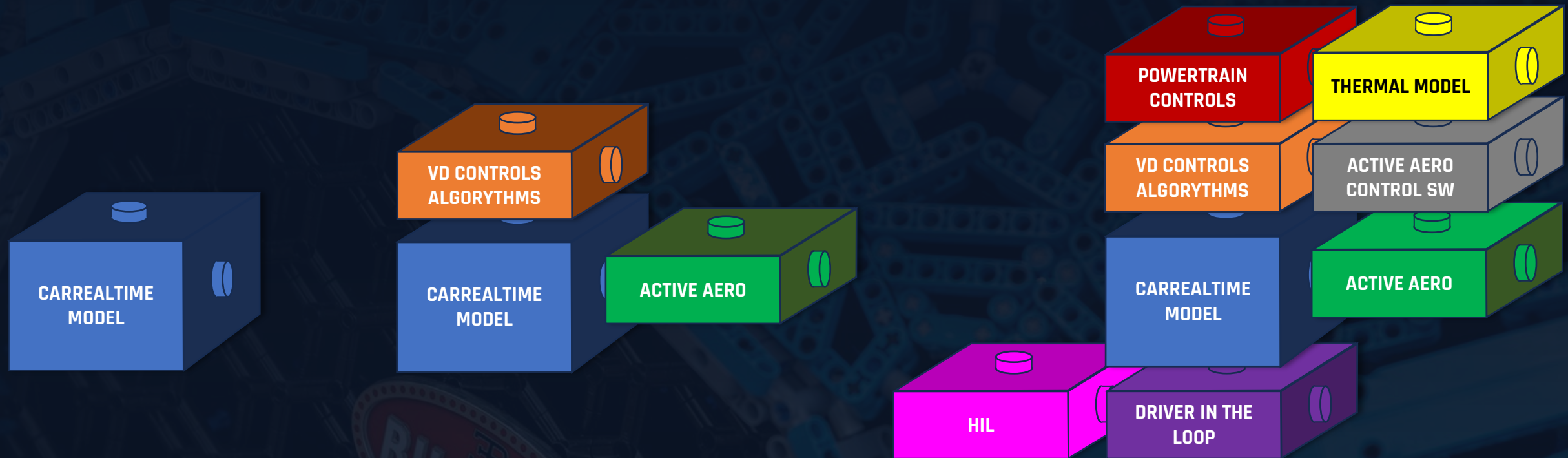


VEHICLE DYNAMICS DEVELOPMENT PROCESS



One integrated virtual and experimental process!

MODULARITY ACROSS THE DEVELOPMENT LIFECYCLE



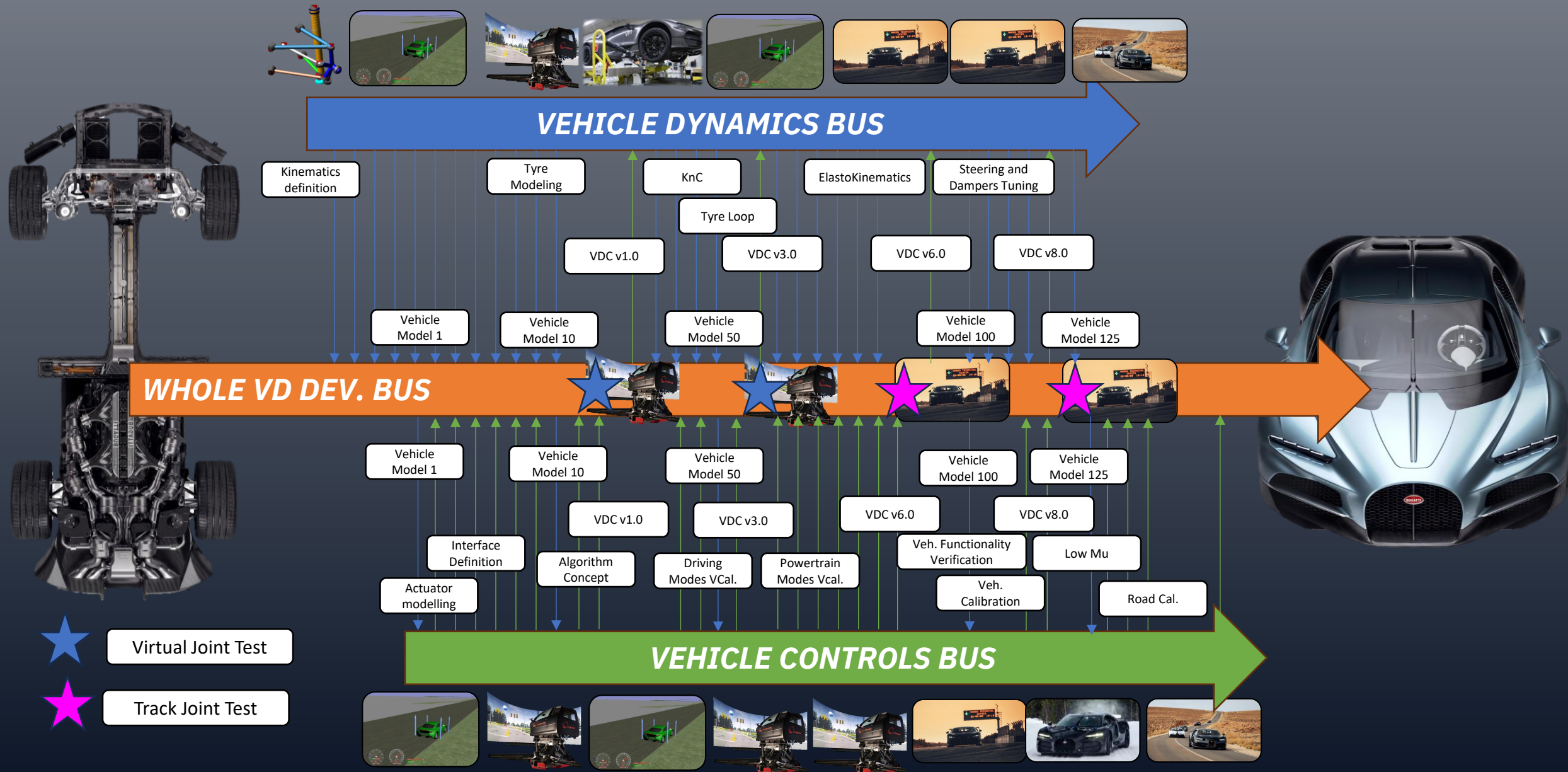
Concept definition
Systems/Components development

Function development (MiL)

System and Software Validation (XiL)

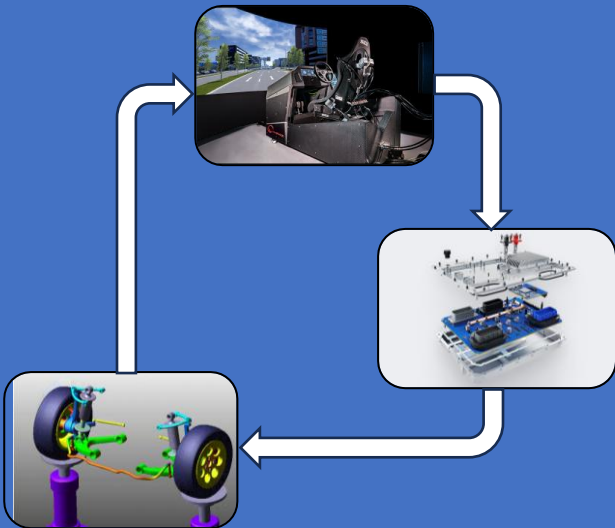
One modular framework, multiple configurations.

HOW THE TWO PROCESSES INTERACT



EFFECTS OF THE INTERACTION

COMPRESSION

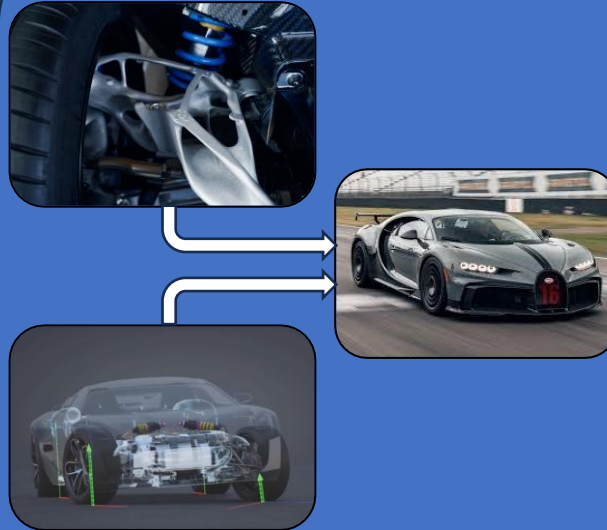


"Loops, not waterfalls"

Net Effect:

Structural reduction in development time and prototype count by design.

CONVERGENCE

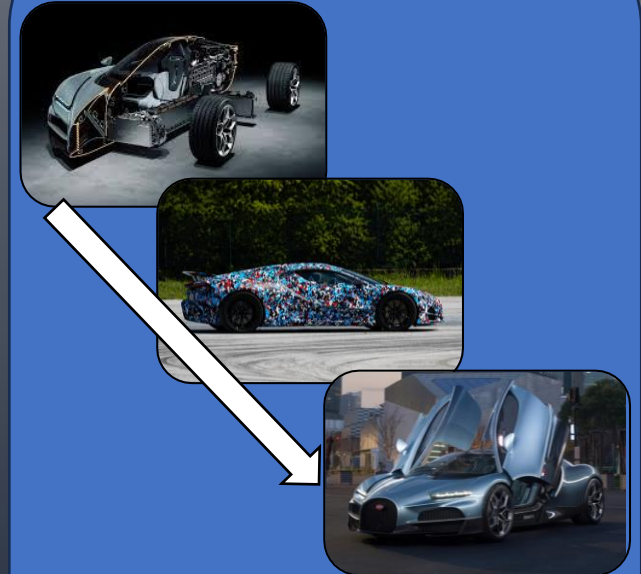


"Virtual equals Physical"

Net Effect:

High-fidelity digital twin; track testing serves as certification, not development.

IDENTITY



"Active Reinforce Passive"

Net Effect:

VD identity is engineered from concept, not "patched in" at sign-off.

BUGATTI + RIMAC

THANK YOU FOR YOUR ATTENTION

For any additional information you might need, feel free to contact us



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