

ChronoLiner

NEOPLAN 2040 E COACH

**Fusion of heritage and Mysticism
Through Luxury Coach Portal**

WINTER 2024/2025 MATD THESIS

PFORZHEIM HOCHSULE, TRANSPORTATION DESIGN

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>INTRODUCTION

The goal is to design a Neoplan E coach for the year 2040 that integrates Neoplan's rich heritage with a futuristic and iconic design inspired by ancient portals. This new design should evoke a sense of mystery and wonder, enhancing the user experience with a unique and compelling exterior that celebrates the company's legacy while embracing the future of luxury travel. By combining timeless aesthetics with cutting-edge technology, the Neo- plan E coach will create a seamless journey that not only transports passengers but also captivates their imagination.

Neoplan Coach GmbH, established in 1935 by Gottlob Auwärter in Stuttgart, Germany, initially specialised in constructing coach bodies on truck chassis (MAN Nutzfahrzeuge Group, 2008). Over the decades, Neoplan has revolutionised the coach industry with its pioneering designs, such as the double-decker coach introduced in 1964 and the groundbreaking "Cityliner" in 1971, which featured a high-decker configuration (MAN Nutzfahrzeuge Group, 2008a). Known for luxury and engineering excellence, Neoplan has set industry standards with innovative features and superior craftsmanship. In 2001, the company became a subsidiary of Man Truck & Bus SE, which expanded its capabilities and market reach (MAN Nutzfahrzeuge Group, 2008c). Today, Neoplan remains a leader in the luxury coach manufacturing industry, adeptly blending its rich history with modern technological advancements.

Luxury travel transcends mere indulgence, offering a profound temporal experience where the perception of time itself transforms. Rooted in the idea of relativity, a luxury journey becomes a pocket dimension in which time seems to stretch and compress at will. This experience is crafted by eliminating the typical stresses of travel, offering a continuous seamless flow where every moment glides effortlessly. Just as in the immersive environments of private jets or overwater villas, where time slips away unnoticed, the Neoplan E Coach will be the basis to embody this sense of temporal fluidity. In this coach, every moment will be richly experienced, allowing passengers to lose themselves in the experience and forget the ticking of the clock.

02



> OBJECTIVE

The objective of designing the Neoplan E coach for 2040 is to create a seamless fusion of the brand’s distinguished heritage with a forward-thinking, iconic design inspired by ancient portals. The goal is to evoke a sense of mystery and wonder through a unique and compelling exterior that enhances the user experience, offering passengers an immersive journey. This design will symbolise the legacy of Neoplan’s innovation and a vision for the future of luxury travel. The portal concept is key, serving as a visual metaphor for the relativity of time within a luxurious journey, where the experience transcends traditional travel norms.

Luxury travel is rooted in the ability to transform time (Glion Institute of Higher Education 2024; Csikszentmihalyi, 1990). In our everyday setting, our perception of time constantly realigns with reality through routine and the pressures of schedules, whereby time often feels like a series of discrete blocks. However, in a luxury environment, this temporal structure dissolves as passengers experience a continuous flow of indulgence. Luxury travel curates this experience through personalised comfort, where moments pass effortlessly and gracefully. The portal design of the Neoplan E coach will embody this transformation, representing a passage through time that feels both timeless and immediate. Just as in other luxury settings

—like private jets or exclusive retreats—the experience of travel becomes a sensory journey where the passage of time is perceived not as a constraint but as an enrichment. This innovative design will allow the coach to become a vessel for an experience that feels timeless, where passengers are not only transported physically but also immersed in a profound shift in their perception of time



HERITAGE TIMELESS

Angled
Pillar

Horizontal
Light

Cityliner N116
(1971)



03

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NEOPLAN MYSTIC PORTAL



> NEOPLAN HERITAGE AND DESIGN DNA

Neoplan Coach GmbH, established in 1935 by Gottlob Auwärter in Stuttgart, Germany, initially specialised in constructing coach bodies on truck chassis. The company transformed the entire coach industry with pioneering designs, notably the double-decker coach introduced in 1964 and the revolutionary "Cityliner" in 1971, the first to feature a high-decker configuration. Renowned for their luxurious features and state-of-the-art engineering, Neoplan coaches have earned a distinguished reputation for their superior quality and innovative design. In 2001, Neoplan became a subsidiary of Man Truck & Bus SE, thus enhancing its capabilities and extending its market reach. Today, Neoplan remains at the forefront of the coach manufacturing industry, artfully blending its rich heritage with contemporary technological advancement.

The design DNA of Neoplan coaches embodies a unique blend of innovation, aesthetics, and functionality, with four key elements defining their distinctive visual identity: the angled pillars, the front-swept windshield, the cut wheel arch design and the horizontal light signature.

The angled pillars are one of the hallmarks of Neoplan's structural elegance. The pillars create a dynamic silhouette whilst enhancing aerodynamic efficiency, which gives it a modern and commanding presence. The angular design conveys a flux of kinetic energy even when the vehicle remains stationary, hence reinforcing the brand's commitment to cutting-edge engineering and style.

The front-swept windshield is another defining feature that combines practicality with futuristic aesthetics. The windshield has a streamlined appearance characterised by an expansive and forward-leaning glass panel that maximises the driver's field of vision. The design ensures the safety of passengers and improves sightline for navigation. The fluid integration of the windshield into the coach's overall shape highlights the commitment to seamless design and superior passenger experience.

The cut wheel arch design further emphasises Neoplan's focus on bold and functional aesthetics. The sharply defined arches provide a dramatic visual contrast to the smooth surfaces of the coach body, highlighting the wheels as one of the focal elements of the design. This feature also enhances accessibility for maintenance while maintaining the sleek profile characteristic of Neoplan coaches.

Lastly, the horizontal light signature provides a modern and instantly recognisable identity. The precisely aligned lighting elements, including headlights and taillights, are crafted to co-create a continuous horizontal visual line that conveys sophistication and technological advancement. The light signature enhances visibility during the dark and defines the vehicle's road presence, particularly during nighttime travel.

Together, these design elements form a cohesive, iconic and distinct visual language that makes Neoplan coaches effortless to discern from other coaches. They embody the brand's dedication to innovation, elegance, and performance, ensuring every journey is as visually inspiring and comfortable.

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NEOPLAN MYSTIC PORTAL



> ENVIRONMENT
IMPACT

VACATION
WITH
E COACH?

1. Carbon Emissions Per Vehicle

A typical 4-seater electric car with one passenger emits 60-80 grams of CO₂ per kilometre (Bieker, 2021).

A 20-seater electric coach with twenty passengers typically emits 400 – 800 grams of CO₂ per kilometre (Zou et al, 2016).

2. Carbon emission

At the first glance, The coach emits more CO₂ per vehicle than the electric car. However, the carbon emissions per passenger provide different interpretations. We have assumed that a 4 seater electric vehicle is likely to be driven by a single person, whereas a coach is more likely to travel at full capacity (European Environment Agency, 2019).



For 20 Electric cars

20 x 60 grams per Co2 per kilometre = 1200 grams per Co2 per kilometre

20 x 80 grams per Co2 per kilometre = 1600 grams per Co2 per kilometre

Total Carbon emissions 20 electric cars = 1200 – 1600 grams per Co2 per kilometre

For 1 Electric bus

1 x 400 grams per Co2 per kilometre = 400 grams per Co2 per kilometre

1 x 800 grams per Co2 per kilometre = 800 grams per Co2 per kilometre

Total Carbon Emissions for 1 Electric bus = 400 – 800 grams per Co2 per kilometre

ELECTRIC BUS, A CHOICE FOR ENVIRONMENTAL SUSTAINABILITY

As a result, per passenger, one electric coach produces approximately 66-75% lower carbon emissions compared to 20 electric vehicles that carry the same number of passengers.

It is also noted that a coach, with its ability to carry 20 passengers in one vehicle, reduces road congestion, leading to less fuel consumption (if fossil-fuel vehicles are present) and lower emissions from idling traffic. Even if electric, multiple cars still contribute to more vehicles on the road, increasing the likelihood of congestion and inefficient driving patterns, which can result in higher emissions overall.

As transportation continues to scale up electric vehicles, group transit efficiency, especially electric coaches, will be a critical factor in achieving broader sustainability goals. This balance of emissions, space, and resource use makes electric coaches a more sustainable choice for group travel, particularly in scenarios like vacations or long-distance travel.

04



>SUSTAINABLE MATERIALS

Recycled and natural materials utilised for sustainable car manufacturing.

EXTERIOR

Recycled Aluminum and Steel

Many automakers use recycled metals in car bodies. Aluminium is particularly energy-efficient for recycling, reducing emissions compared to mining new materials.

For example, Audi and Tesla have incorporated recycled aluminium into their models to enhance sustainability.

Bio-composites

Made from natural fibres like flax, hemp, or jute mixed with resins, bio-composites are lightweight and durable. They can replace traditional plastics or carbon fibre.

Example: BMW's i3 and i8 use bio-composites for parts of the exterior panels.

INTERIOR

Recycled Fabrics

Materials such as PET (recycled plastic bottles) are used for seat covers, carpeting, and headliners.

Example: Volvo and Audi use PET-based fabrics in their interiors.

Vegan Leather Alternatives

Options like pineapple leather (Piñatex), mushroom leather (Mylo), or apple leather are eco-friendly and eliminate animal products. Example: Tesla offers a vegan leather option for seats and trims.

Seat cushions and headrests made from plant-based polyurethane foams derived from soy, castor oil, or algae.

Example: Ford uses soy-based foam in its car seats.

05

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NEOPAN MYSTIC PORTAL



AUTONOMOMOUS COACH WITH LIDAR

Lidar and autonomous technology are key drivers in transforming public transport, particularly in the design of future coaches. Lidar (Light Detection and Ranging) technology uses laser sensors to map the environment in 3D, thus enabling buses to “see” their surroundings in real-time with high precision (Williams, Olsen, Roe & Glennie, 2013). As a result, the capability of the LIDAR is crucial for self-driving vehicles to detect and circumvent any potential obstacles, pedestrians, and other vehicles in complex urban and rural environments, thus improving the vehicle’s safety.

For buses, lidar’s integration with autonomous systems can revolutionise how passengers experience public transport. For example, platforms like ADASTEC’s flowride.ai use lidar alongside cameras to enable fully autonomous driving (Level 4 autono- my),

ensuring safe, smooth, and efficient passenger travel (Ouster Inc, 2021). By using lidar to create a detailed 3D map of the environment, autonomous buses can make informed decisions in real-time, optimising routes and minimising delays.

Autonomous buses equipped with lidar can reduce energy consumption and improve fuel efficiency by enabling smoother driving patterns (Leong & Ahmad, 2024), thus minimising human errors and significantly reducing accidents. For example, autonomous vehicles have shown the potential to significantly decrease crash rates caused by human mistakes. This technology also offers the potential for improved efficiency in developing bus routes and schedules, as it can respond dynamically to changing traffic conditions, thereby reducing congestion and wait times for passengers.

The future of bus coaching will likely shift towards fully autonomous fleets, where lidar and advanced sensors play a central role in ensuring safety, efficiency, and sustainability. By eliminating human error and enhancing the ability of buses to interact with their environment, lidar could significantly contribute to the transformation of urban public transportation.



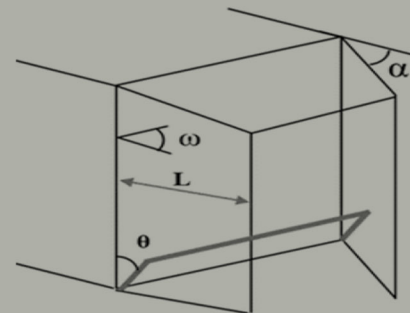
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NEUM MYSTIC PORTAL



AERODYNAMICS > BOAT TAIL CONCEPT

A boat-tail design on a truck, typically characterised by a tapered rear end, significantly improves aerodynamic efficiency. When the tail is shaped at an angle of around 13 degrees, it creates a smooth airflow transition from the rear of the vehicle, minimising drag. Research shows that this specific angle provides an optimal balance between aerodynamic resistance and practical design. Angles steeper than 13 degrees can cause turbulent airflow and increase drag. In contrast, flatter angles may not achieve the same level of airflow detachment, reducing the effectiveness of the design. A 13-degree boat-tail shape on a truck can reduce drag by up to 10-15%, improving fuel efficiency, reducing CO2 emissions, and better overall performance (Quick, 2009). The key to its success is the controlled air detachment that reduces the vehicle's wake, preventing air turbulence from increasing drag.



This aerodynamic principle can be implemented on a luxury bus as well. Incorporating a 13-degree boat-tail design into the rear of a bus could reduce the drag caused by the large, flat rear end, which is a major source of resistance in conventional bus designs. Since buses are large vehicles travelling at relatively high speeds on highways, the drag reduction could result in better fuel efficiency, particularly for long-distance routes. The additional benefit includes lower noise levels due to reduced turbulence, offering a quieter ride for passengers. Implementing a boat-tail design would involve adjusting the rear structure to taper smoothly while ensuring the transition does not interfere with the vehicle's structural integrity or capacity. This could be achieved by using lightweight composite materials and modern design techniques to ensure that the aesthetic and functional aspects of the bus are preserved.



AERODYNAMICS

> AIRCURTAIN CONCEPT

Aerocurtains located at the front corners of a bus can provide significant aerodynamic benefits by managing airflow and reducing drag. The aerocurtains are designed to streamline the vehicle's exterior, direct airflow more efficiently and minimise turbulent airflows to reduce drag. Buses have large frontal areas; hence, aerocurtains can help smooth air transition around the front corners and reduce vortex formation, Lowers drag and fuel inefficiency (Muthvel, 2013).

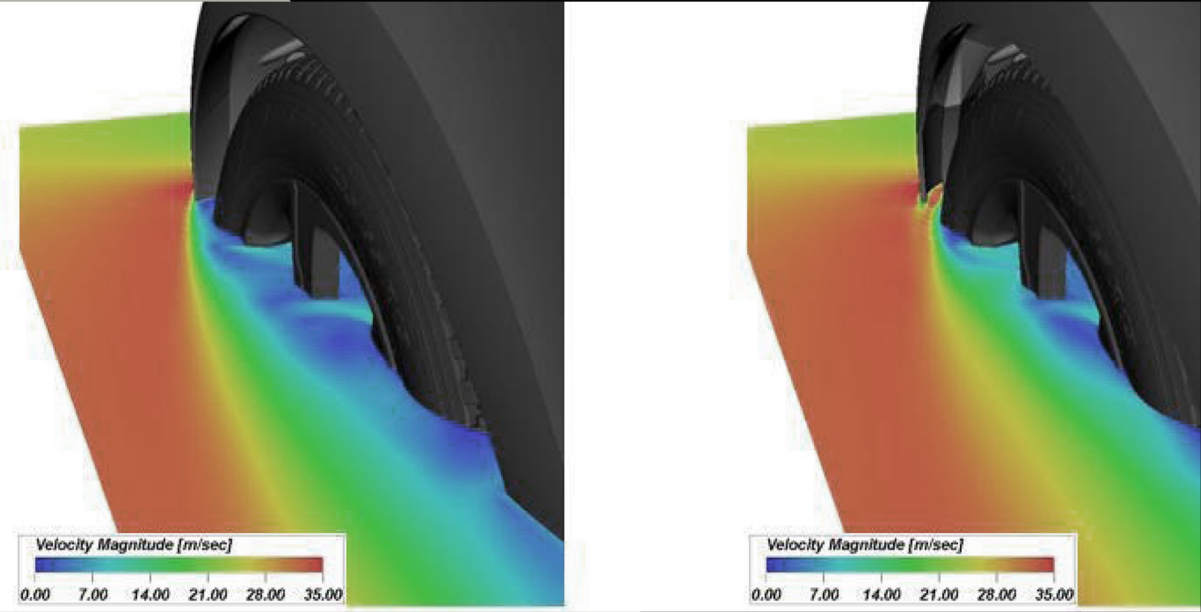
Reduced Drag: Aerocurtains can lower the drag coefficient (Cd) by smoothing airflow around the front corners, improving the vehicle's overall aerodynamic efficiency. This results in reduced fuel consumption and less wear on the engine, enhancing the bus's sustainability

Increased Stability: The aerocurtain facilitates managing airflow for fuel efficiency and vehicle stability. The vehicle can handle crosswinds and high-speed travel more effectively by reducing the turbulent wake around the bus's front corners.

Improved Driver Experience: Reducing turbulence at the front portion of the vehicle enables a smoother ride, thus potentially lowering the load on the vehicle's steering and suspension systems and offering a more comfortable experience for passengers and drivers.

To summarise, integrating aerocurtains into the front corners of a bus would offer significant advantages in terms of operational costs and environmental impact. Aerodynamics-focused improvements could play a key role in making bus travel more efficient and sustainable by reducing drag, improving fuel efficiency, and enhancing stability.

**Improved aerodynamics
reduce fuel consumption and
less wear on the components**



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NEOPLAN MYSTIC PORTAL



>TARGET AUDIENCE FOR NEOPLAN

Primary: High-end travellers, luxury tour operators, and futuristic city transport systems.

Neoplan's target audience focuses primarily on high-end travellers, luxury tour operators, and futuristic city transport systems. This aligns with the company's legacy of providing innovative, luxurious travel experiences. High-end travellers who seek premium services and exceptional comfort are particularly drawn to Neoplan's blend of cutting-edge design and historical craftsmanship. These travellers anticipate beyond transportation; they desire an immersive and elevated experience transcending space-time.

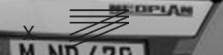
Luxury tour operators who specialise in curating bespoke experiences are another key audience. These companies cater to specific clients who expect the best in every aspect of their journey (Holden, 2023). Neoplan's luxury coaches, with their combination of comfort, advanced technology, and iconic design, align well with the demands of the Luxury tour operators.

Futuristic city transport systems also represent a strategic secondary market. Cities embrace sustainable, innovative public transportation solutions to provide better urban outcomes. The inclusion of electric drivetrains and autonomous systems positions the Neoplan brand as a potential leader in shaping the future of mass transit.





Neoplan 2040 E Coach



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NEOPLAN MYSTIC PORTAL



TRAVELING



“A LENGTHY JOURNEY THAT BREEZES BY”

$$T_e = \frac{T_a}{(E + F)}$$

T_e = Experienced time (how long the experience feels).

T_a = Actual time (objective duration of the experience)

E = Engagement level (the degree to which activities and surroundings captivate the traveler; higher engagement reduces the perception of time).

F = Flow state (a psychological state of immersion; higher flow significantly reduces the perception of time passage).

>Luxury Travel: A Journey Through the Relativity of Time

Luxury travel transcends the physical realm of indulgence, offering a profound temporal experience where the perception of time itself transforms. Rooted in the idea of relativity, a luxury journey becomes a capsule where moments seem to fly by with extraordinary grace, leaving travelers basking in the memory of fleeting, yet impactful, experiences.

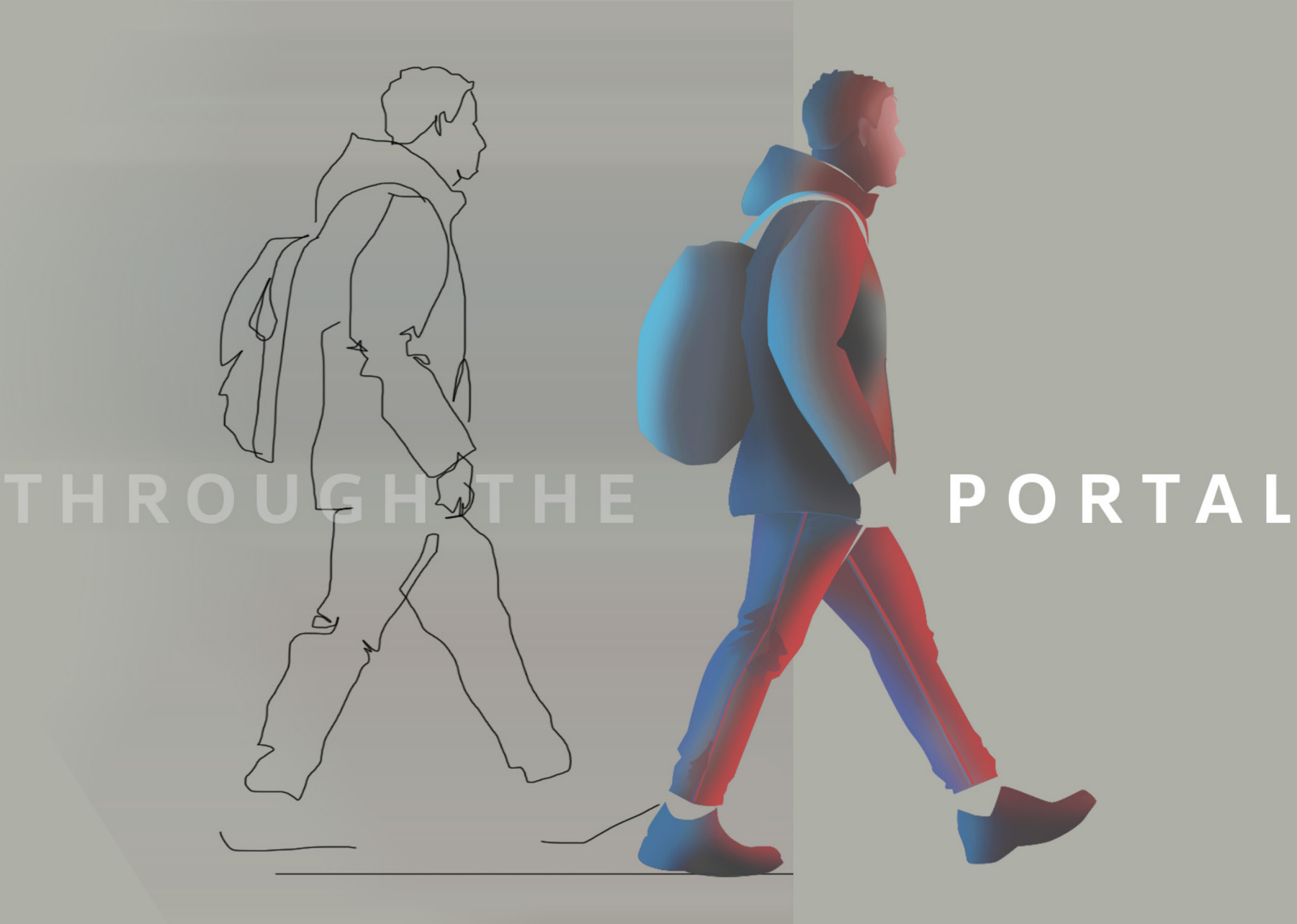
At its core, luxury travel curates a seamless flow. In the humdrum of everyday life, the grind of schedules amplifies the passage of time, making each hour a calculable, often tedious, measure. By contrast, a luxury experience removes friction—no queues, no rush, no compromises—creating an unbroken continuity of pleasure. Imagine being whisked away in a private jet where a few hours in the sky feel like mere moments, as personalized service and comfort dissolve the boundaries between minutes and hours.

This distortion of time can also be tied to heightened sensory engagement. Luxury immerses travelers in unique environments, from a serene overwater villa in the Maldives to a private yacht gliding through the Mediterranean. Every element, from the soft caress of custom linens to the whisper of the ocean breeze, captures the senses so fully that the concept of “watching the clock” disappears. Time breezes by not because it's being ignored, but because every second feels deeply lived.

In luxury travel, both E and F are maximized, thus reducing the denominator and compressing the perception of time (T_e) relative to the actual duration (T_a) This is why luxury trips often feel shorter than expected yet deeply fulfilling.

Engagement (E): High engagement—such as participating in tailored activities, immersive cultural interactions, or indulging in sensory delights—enhances focus on the present, making time feel shorter.

Flow (F): Luxury travel often creates ideal conditions for a flow state, where challenges and skills align perfectly, leading to a loss of awareness of time. Examples include a serene spa experience or a thrilling yet personalized adventure.



The concept of the portal experience in luxury travel stems from the profound idea of time relativity, transforming the perception of long journeys into moments of effortless transit. By redefining how time is experienced during travel, this approach elevates the act of moving from one place to another into a seamless and luxurious flow, where hours feel like fleeting moments. This is achieved through meticulously designed environments, combining comfort, innovation, and aesthetic harmony to immerse travellers in an ambience where time seems to lose its weight.

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MYSTIC RUNE PORTAL



> **Moodboard: Luxury Travel = Mystic Rune Portal**

The use of "Mystic Rune" as a keyword to define the aesthetics of the Neoplan design was intended to evoke a sense of mystery and wonder. This concept brings a fresh interpretation of timeless design, blending the allure of ancient symbols with modern

The design captures the viewer's attention and stirs curiosity by incorporating elements that hint at the enigma.

It adds an air of sophistication, making it an eye-catching, luxurious, and forward-thinking vehicle that invites new interpretations of future travel.

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NEOPLAN MYSTIC PORTAL



> Evaluation of the research

The portal design concept for the 2040 Neoplan E-Coach integrates Neoplan's heritage with a futuristic vision, using mystic rune-inspired portals as visual cues to embody a unique and compelling aesthetic. This design aligns with three core objectives of the project, which are analyzed below:

1. Luxury Travel and Time Relativity

The portal concept symbolises the transformative experience of luxury travel. Drawing from the theory of time relativity, luxury travel is more than a physical journey; it transforms our perception of time, making moments feel momentary yet significant. The portal represents a metaphorical gateway, inviting passengers to leave behind the mundane and enter a realm where time feels fluid and indulgent. This abstraction resonates with high-end travellers seeking more than a mere transit from one location to another — they crave an experience that redefines the journey itself, visualising the transition as stepping through a portal to a transitory realm.

2. Timeless Aesthetic Through Heritage and Mysticism

The portal concept combines Neoplan's iconic design heritage with a sense of mysticism. Neoplan has a legacy of innovation, from the high-decker Cityliner to modern luxury coaches, and this project seeks to extend that lineage into 2040 with a futuristic yet enduring aesthetic. The use of runes evokes a resurgence of ancient wisdom and a sense of mystery, which leads to the theme of transcendence. This design ensures that the coach appeals both as a practical solution and as an art piece that reflects the values of luxury and cultural depth.

3. Sustainability Through Luxury Electric Coaches

The E-Coach incorporates advanced electric technology, offering a sustainable alternative to individual cars for group travel. Compared to 20 electric cars transporting the same number of passengers, the coach reduces emissions by up to 75%, minimising environmental impact while delivering exceptional comfort and efficiency. The portal design reinforces the futuristic and sustainable ethos by symbolising progress and transformation, aligning with the goals of reducing congestion, lowering carbon footprints, and embracing renewable technologies.

Conclusion

The portal concept successfully bridges Neoplan's rich history, aesthetic innovation, and sustainability objectives. It encapsulates the transformative essence of luxury travel while serving as a practical solution for eco-conscious transportation. This design not only sets the 2040 E-Coach apart but also positions it as a forward-thinking icon in the future of mobility.

A portal concept to tie in time relativity and heritage.

>Project Outline

1. Heritage Integration: Reflect Neoplan's historical elements in the new design and luxurious feel.
2. Mystic and Iconic Appeal: Incorporate design elements inspired by ancient portals to create a mystical and iconic appearance.
3. User Experience: Ensure that the design enhances the user experience by making the coach inviting, intriguing, and memorable.

Exterior Design:

1. Shape and Form: Use sleek, flowing lines that hint at both the legacy Neoplan design and the curvatures seen in ancient portal architectures.
2. Lighting: Integrate ambient and dynamic lighting that resembles the glowing aura of mystical portals. This includes LED light strips and OLED display panel.
3. Materials: Utilise advanced materials that offer both durability and a futuristic look, such as smart glass panels that can change opacity or colour.
4. Symbolism: Include subtle engravings or patterns that mimic ancient runes or symbols, giving a nod to the mystic theme.

Interior Design:

1. Comfort and Luxury: Maintain Neoplan's reputation for luxury with high-quality materials, spacious seating, and cutting-edge amenities.
2. Ambiance: Use lighting and design elements to create a serene, almost otherworldly atmosphere, making passengers feel like they are embarking on a journey through time.

Technical Specifications:

1. Package: Incorporate BEV architecture and display good bus proportion
2. Sustainability: Incorporate eco-friendly technologies and materials to align with future environmental standards.
3. Innovation: Utilize the latest advancements in autonomous driving, connectivity, and passenger comfort technologies.

10



>2040 New Logo development

The redesigned logo embodies
futurism and stability.

NEOPLAN

-present-

2

NEOPLAN

Timeless Bold + Dynamic A

1

NEOPLAN

Light + Electric + High tech

3

NEOPLAN

Timeless bold + Continuity to A



Final Logo Design

The Neoplan logo for the 2040 E-Coach was designed to embody a harmonious blend of futurism and stability, reflecting the brand's core ethos. Incorporating a light and high-tech aesthetic highlights the advanced technologies and forward-thinking philosophy underpinning the coach's design. Sleek lines, subtle gradients, and a minimalist approach were used to create a sense of innovation and modernity, making the logo appear dynamic and futuristic.

However, the logo was intentionally given a wider profile to ensure the design remains grounded and balanced. This broader base provides a visual anchor, evoking a sense of stability and robustness, which is critical for a brand synonymous with safety, luxury, and reliability in transport. The balanced approach also pays homage to Neoplan's heritage, reflecting the company's history of blending cutting-edge innovation with practical, enduring design principles.

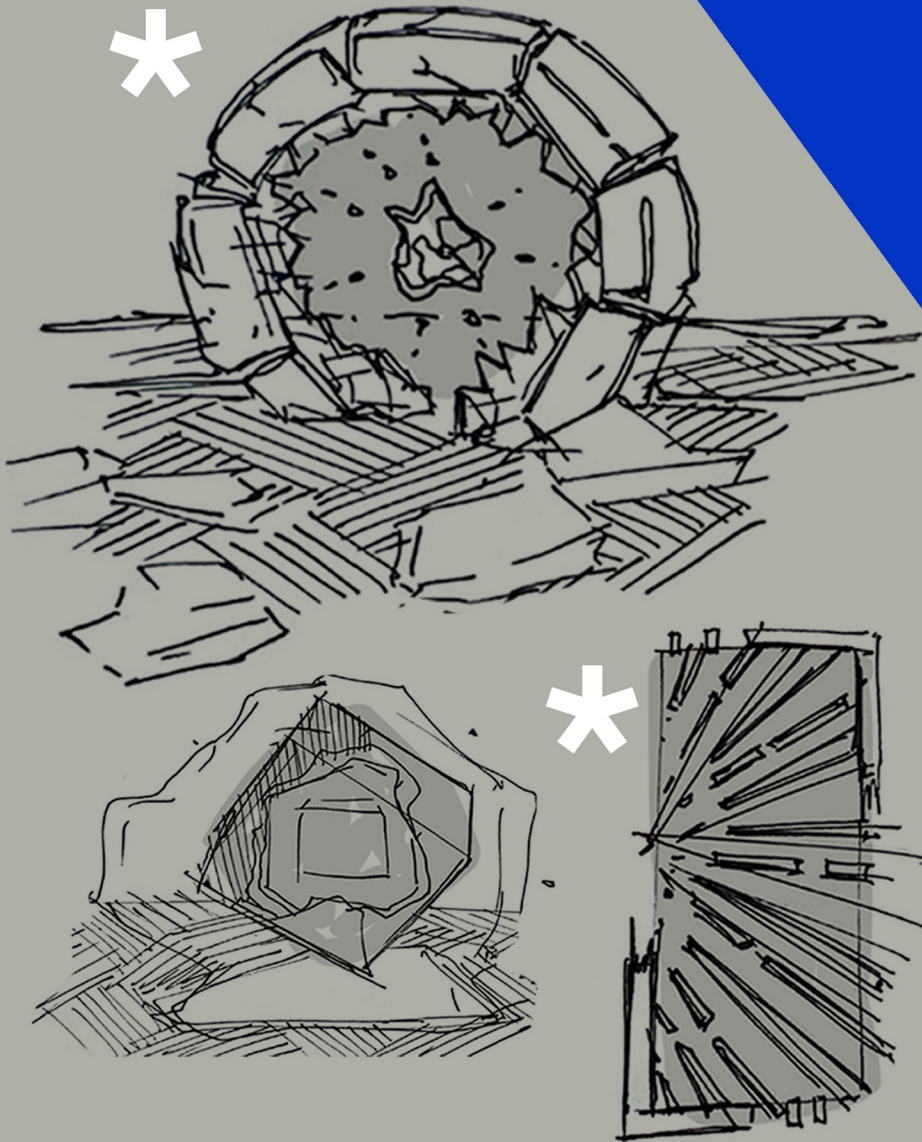
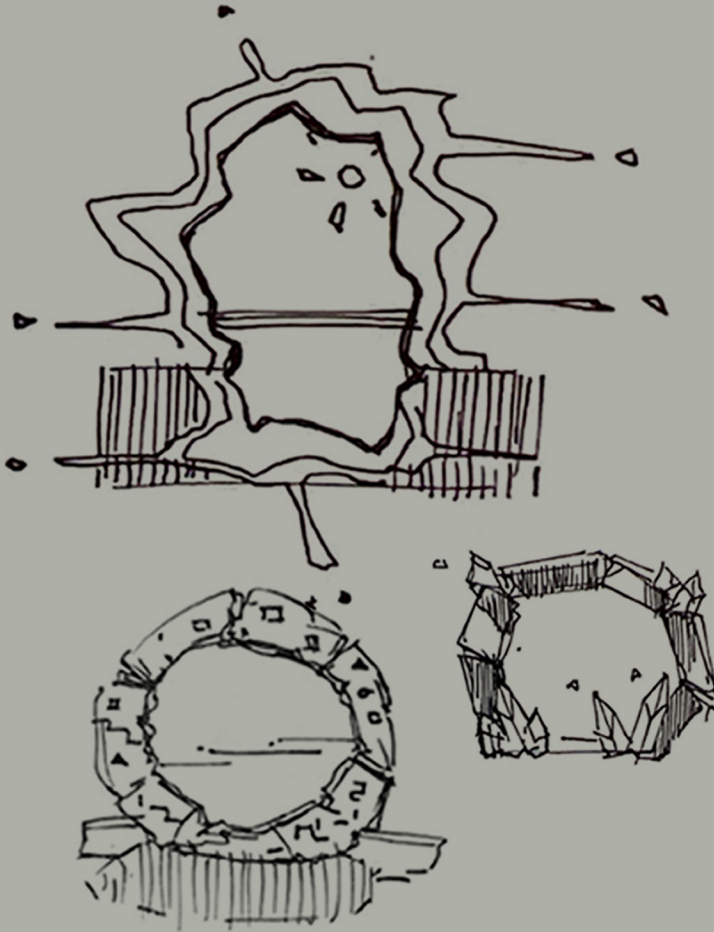
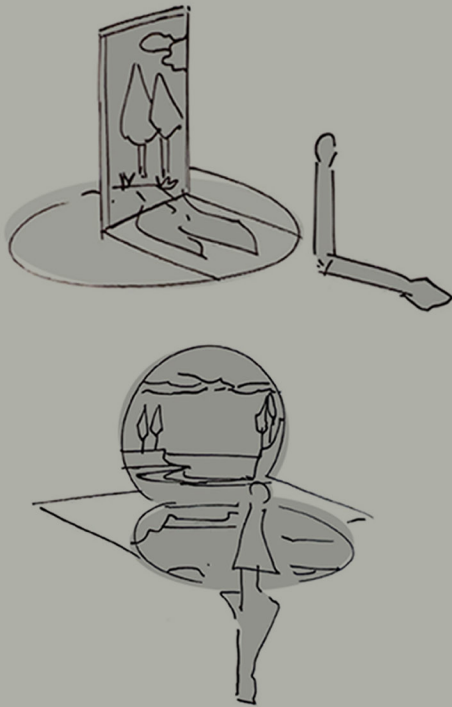
By merging lightness with width, the logo effectively conveys a dual message: a forward-looking embrace of technological advancements and a steady connection to Neoplan's legacy of dependable, high-quality engineering. This balance ensures the logo appeals to both existing brand loyalists and future-oriented travellers seeking luxury and innovation.

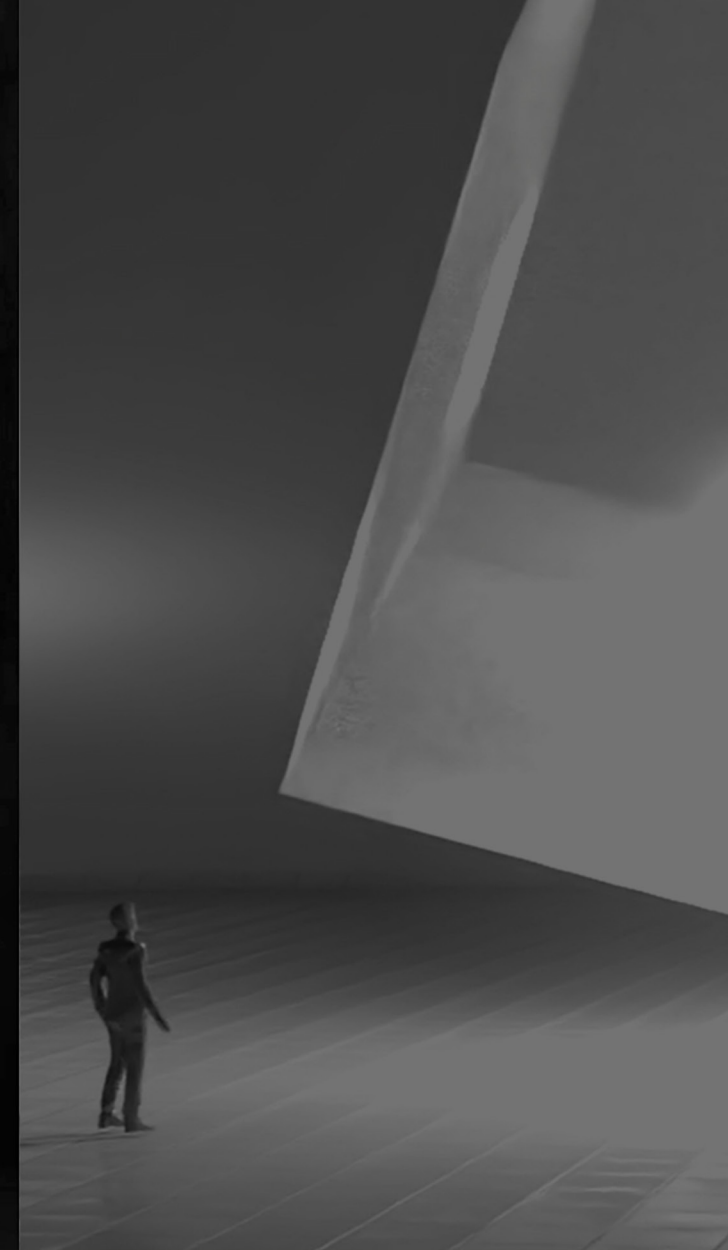
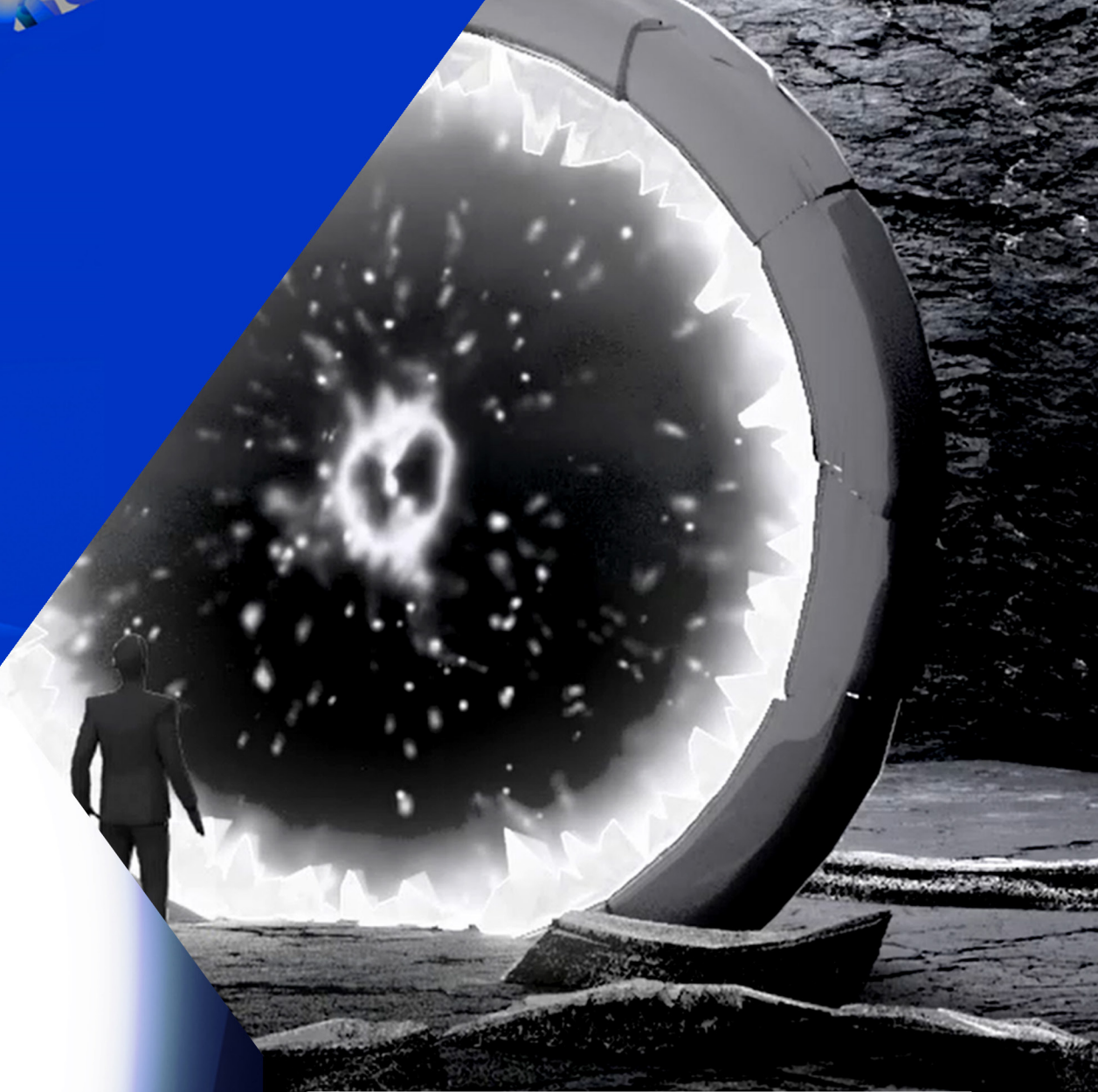
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Defining what Portal looks like?

Finding the aesthetics of a portal was pivotal in establishing the design foundation for the Neoplan electric coach. The concept of the portal embodies seamless transitions, reflecting the futuristic and innovative spirit of electric mobility.





This approach guided the creation of a design language that captures fluidity, sophistication, and progressiveness. By integrating sleek lines, expansive glass elements, and dynamic proportions, the coach becomes a visual gateway to modern travel. This foundation not only shapes the vehicle's iconic identity but also enhances its role as a symbol of effortless, sustainable journeys, redefining how passengers perceive time and movement in luxury travel.

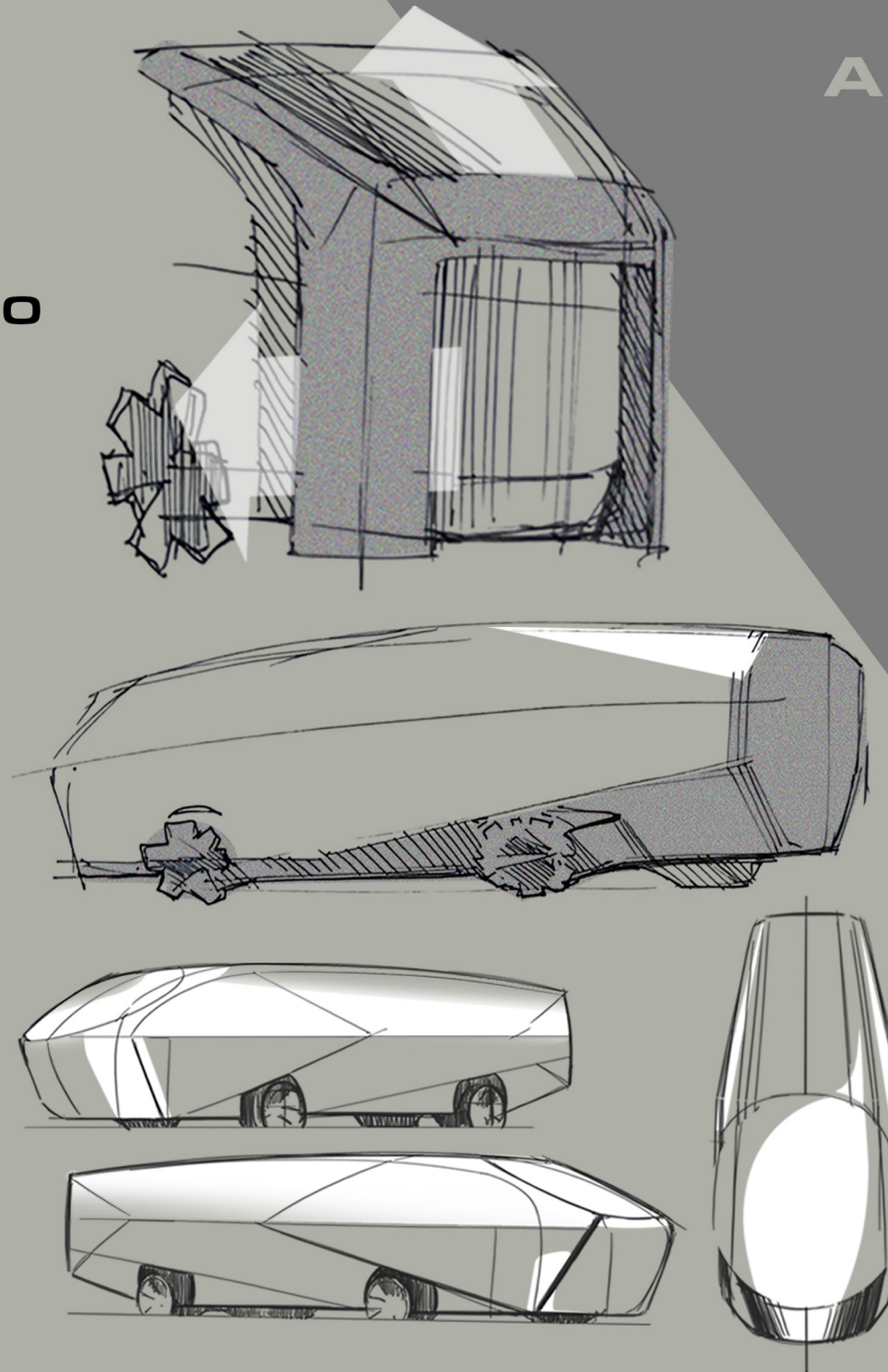
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NEOPLAN MYSTIC PORTAL

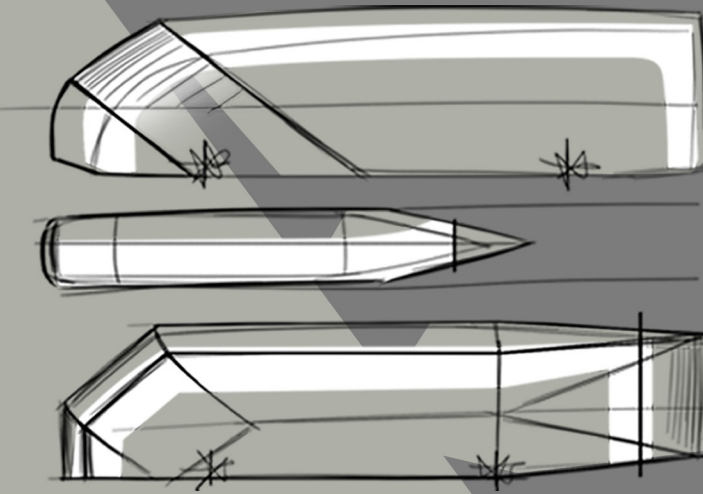
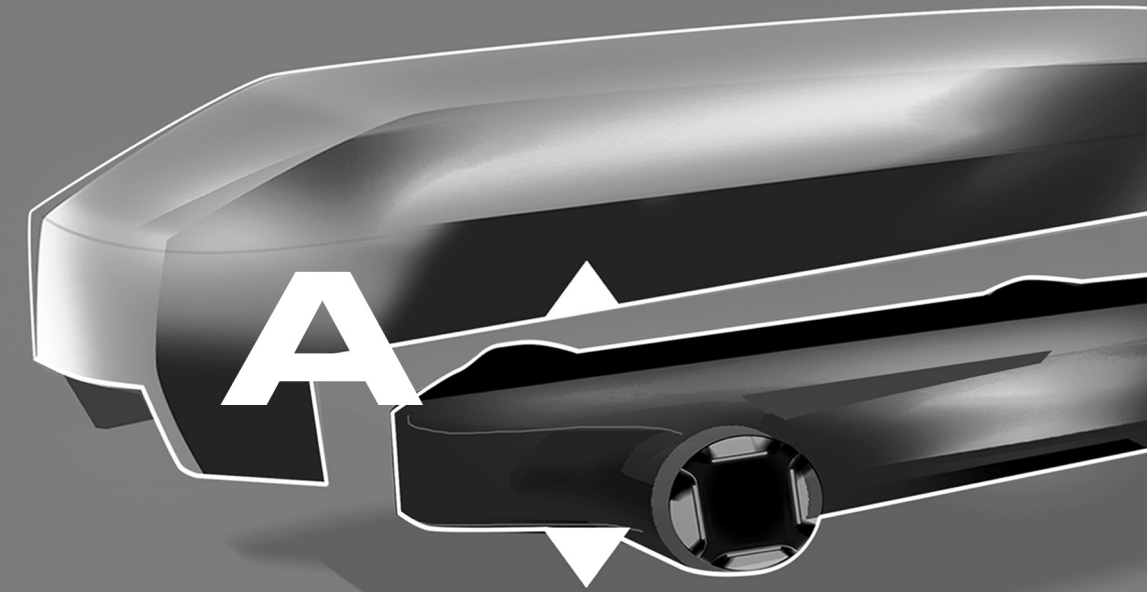


> Defining what Aero looks like?

In developing the Neoplan electric coach, incorporating an aerodynamic concept into the design was crucial to driving innovation. The focus was on achieving efficiency and elegance through key elements like a boat tail ending (shown in B), a smoother frontal area, and integrated air curtains (Shown in A). The boat tail taper minimizes drag by streamlining airflow at the rear, while the smooth frontal area reduces resistance, ensuring better energy efficiency. Air curtains strategically direct airflow around the vehicle, enhancing stability and performance. These aerodynamic features not only optimize functionality but also contribute to a cutting-edge design language, reinforcing Neoplan's commitment to progressive and sustainable travel.

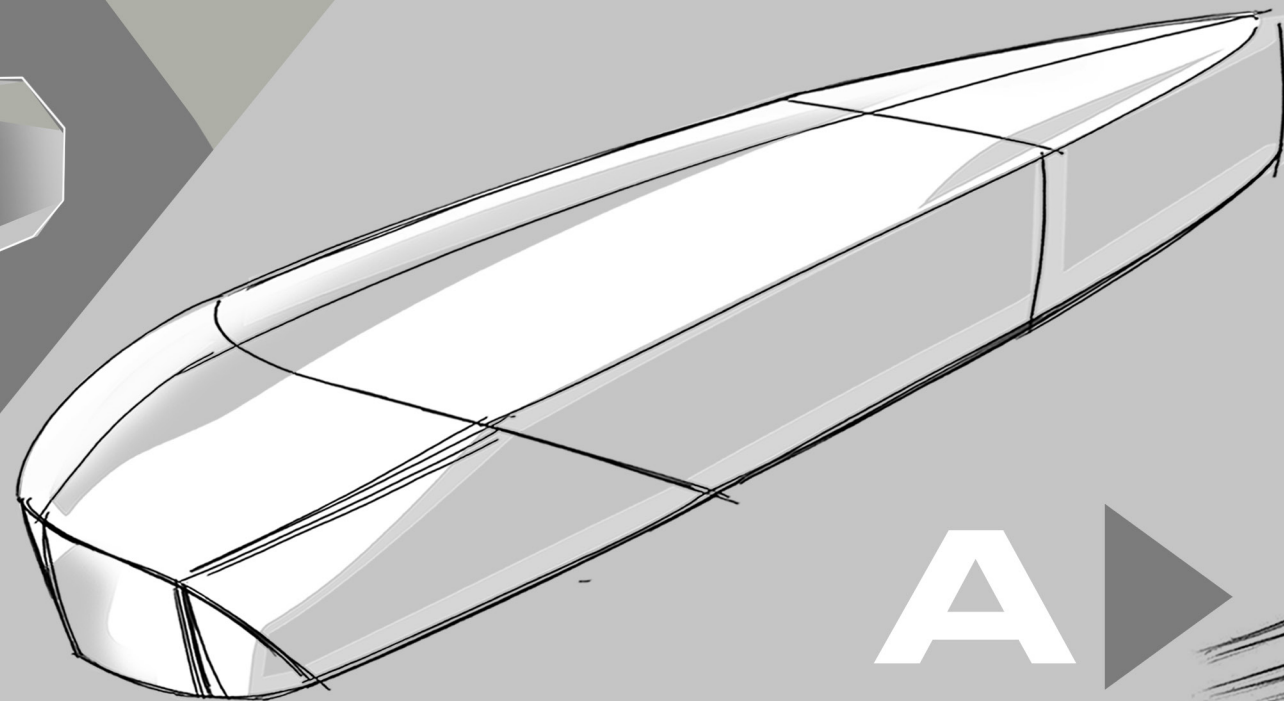
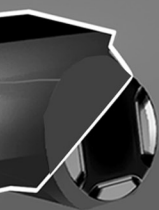
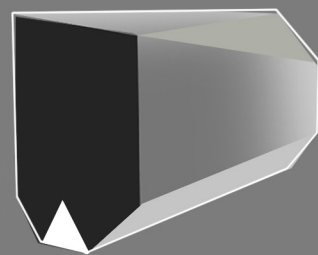


AERO CONCEPTS

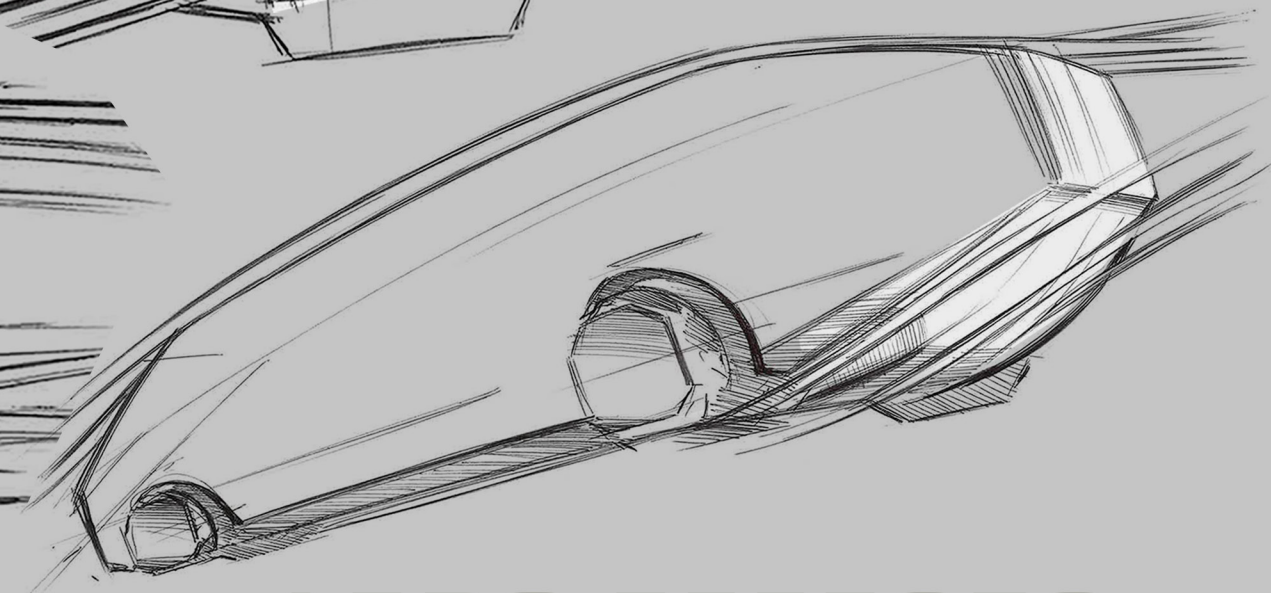
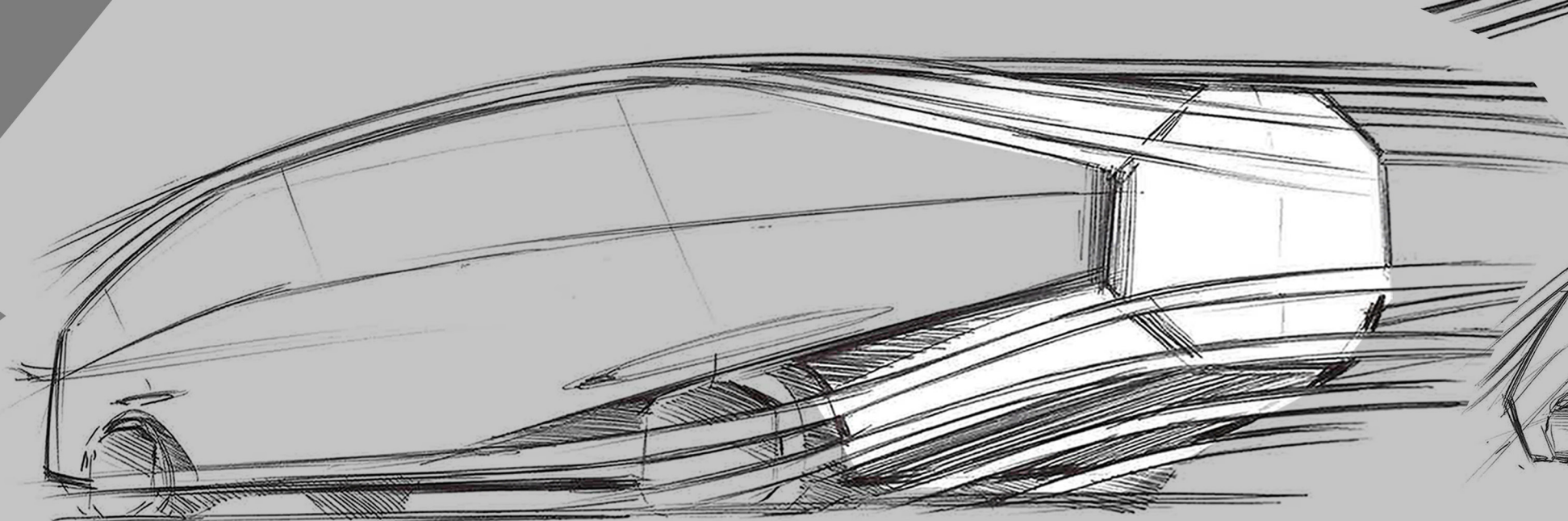
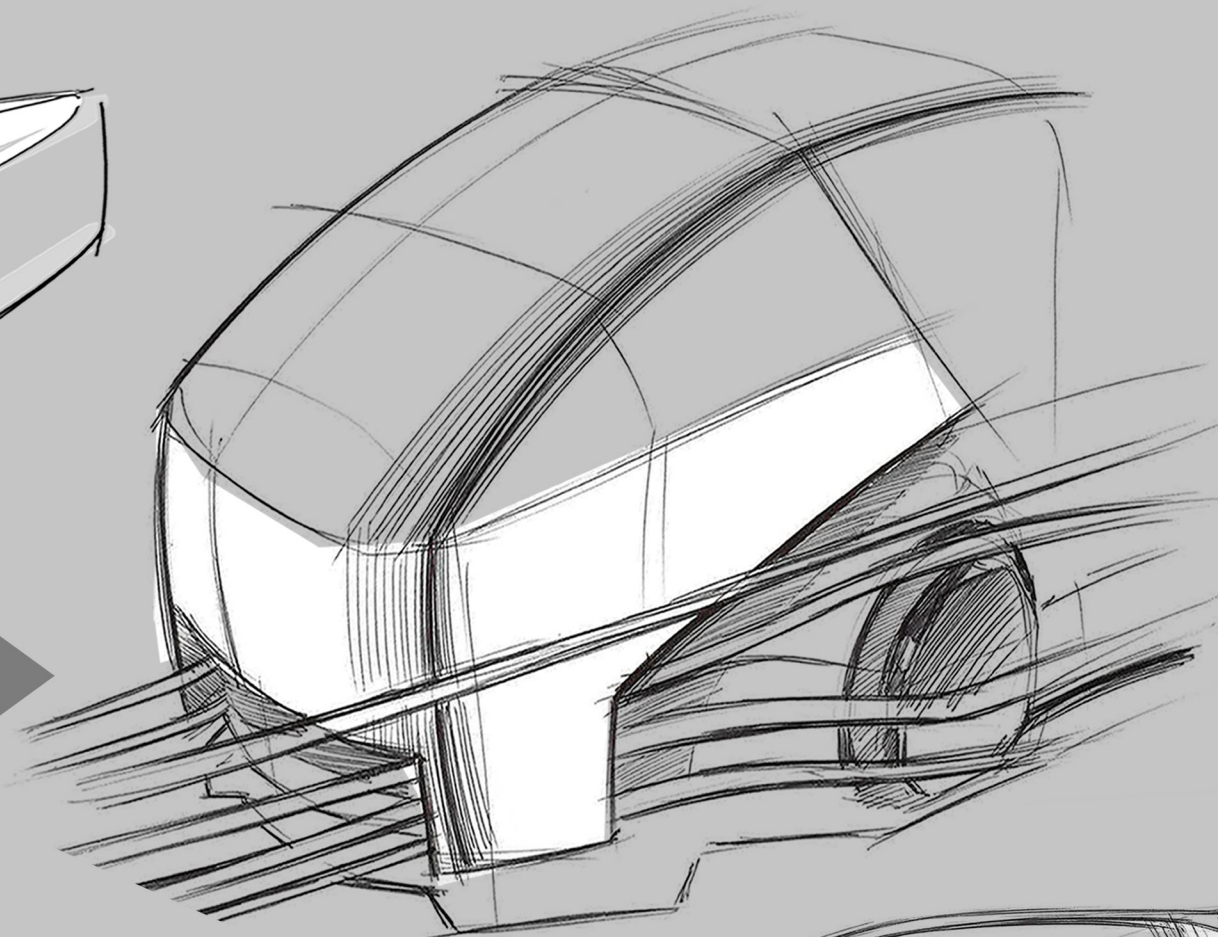


B

B



A



AERO EFFECTS

1 3

ChronoLiner
NEOPLAN MYSTIC PORTAL

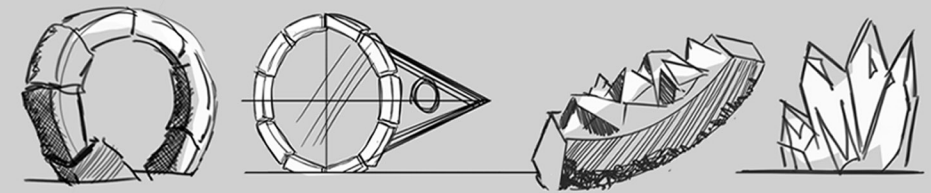


> Concept A Lucid Gateway

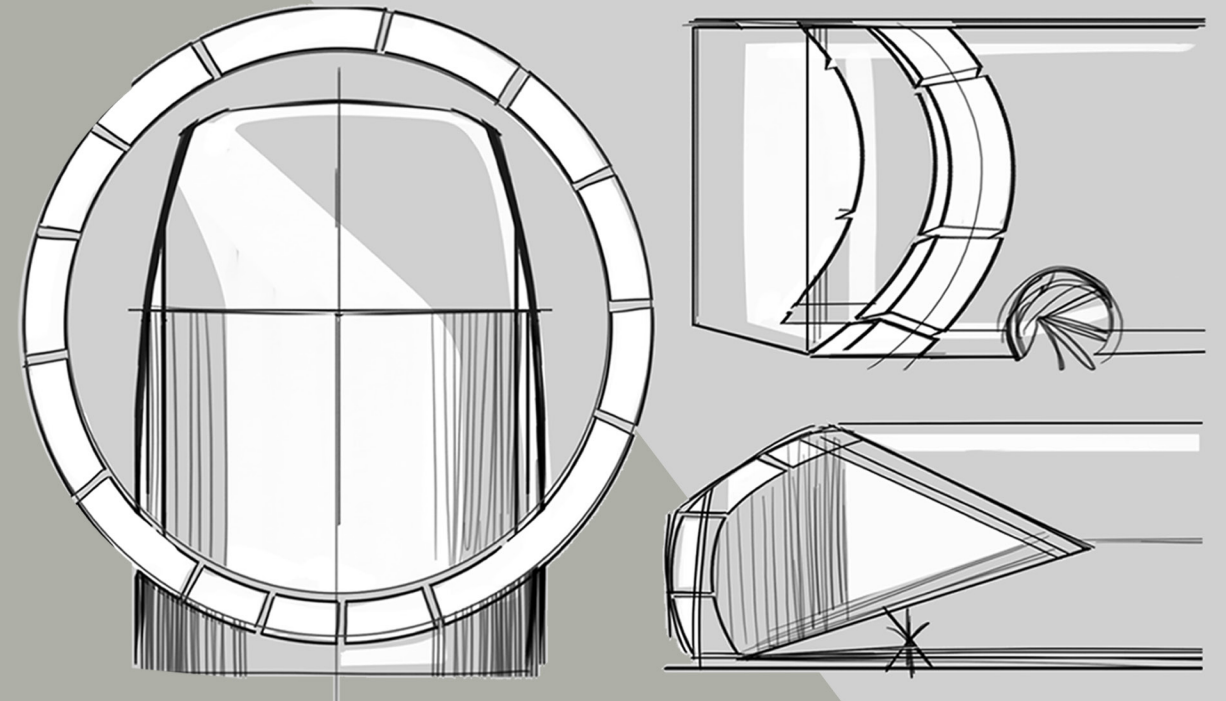
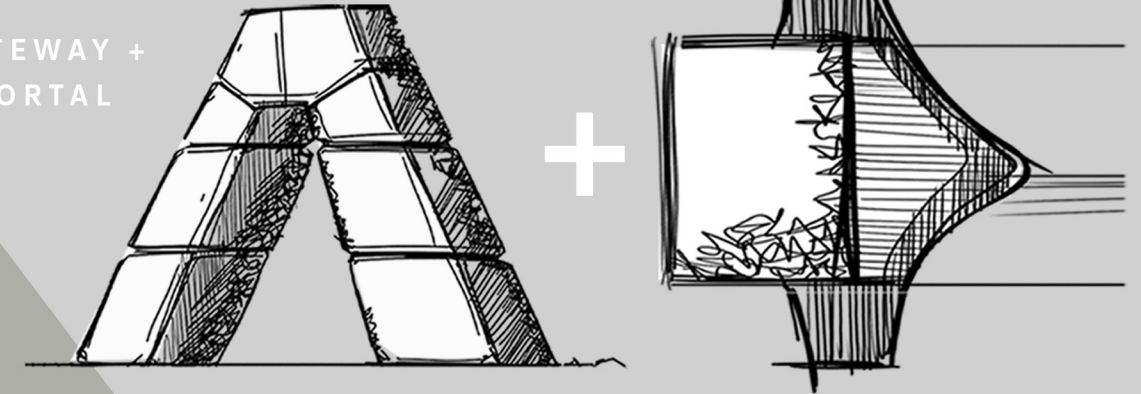
The concept is an ancient portal formed from a stone ring etched with runes.

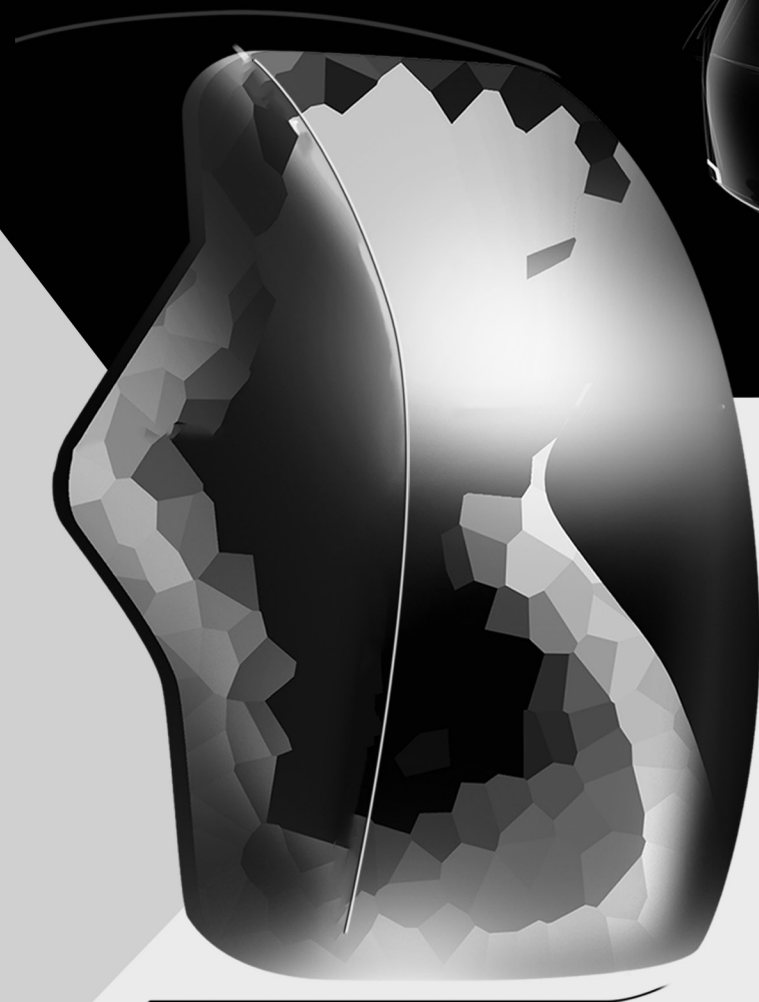
The conceptual element of "ancient" and "rune" is enhanced by amplifying the ideation of a stone containing a gem. The concept is to have an internal crystalline visualisation similar to a sparkling multi-faceted gemstone contained within a smooth stone.

The smooth exterior of the stone represents the time flow of history and legacy, smoothing the Neoplan brand, whilst the interior gemstone depicts a separate mythical space that provides luxurious immersive travel.

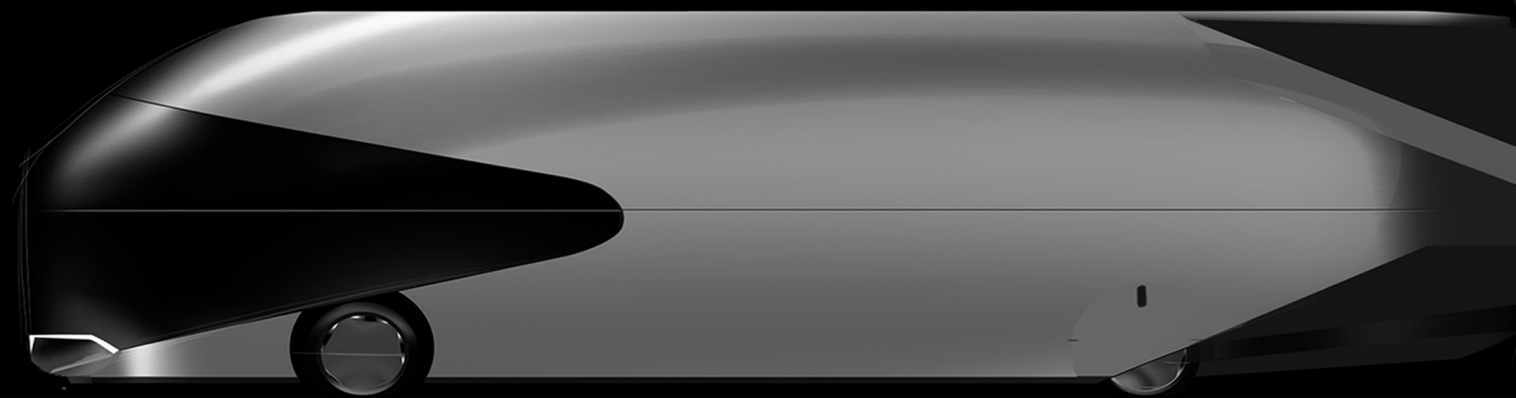
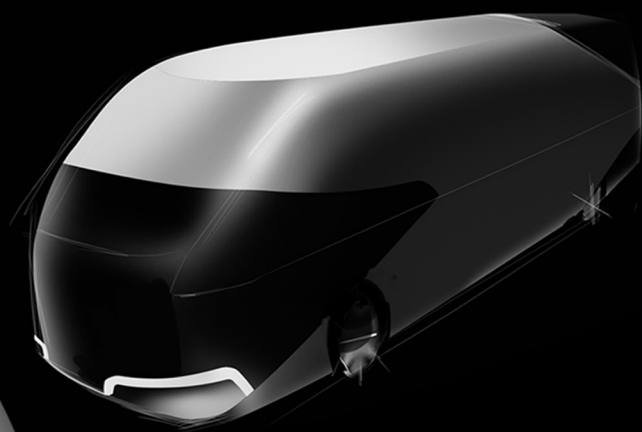


GATEWAY +
PORTAL





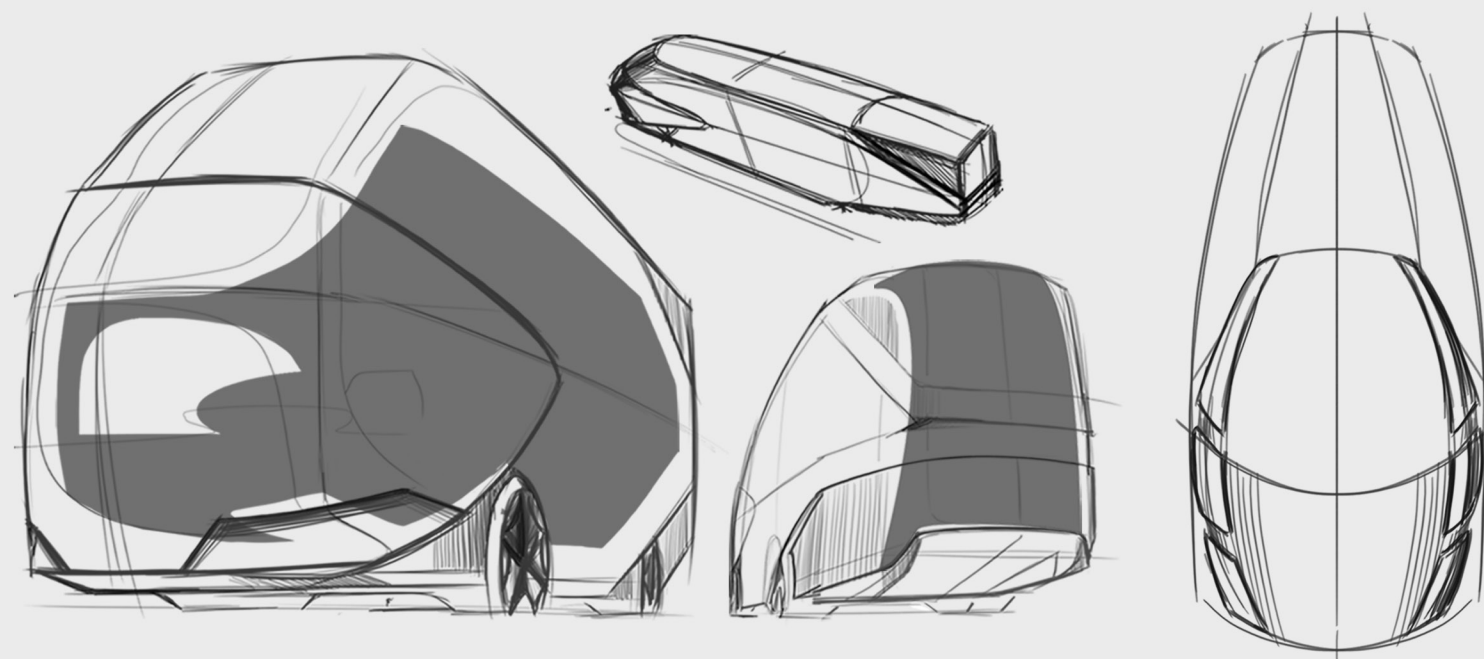
**CRYSTALISATION
MYSTIC FACIA**



LUCID GATEWAY GRAPHICS

A crystalline façade is developed at the interior of the bus. Contrarily, the exterior will have a smooth aerodynamic surface.

The long line with the A cut was developed on the front dlo and on the rear black surfaces, which is a graphic interpretation of the wormhole between the two rune gateways (at the starting point and the destination) when viewed from a 3rd person's perspective.

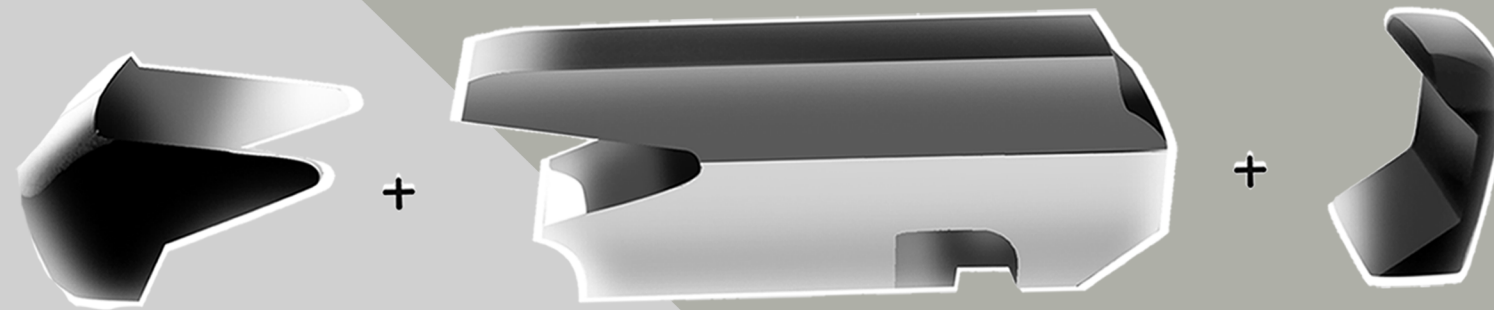


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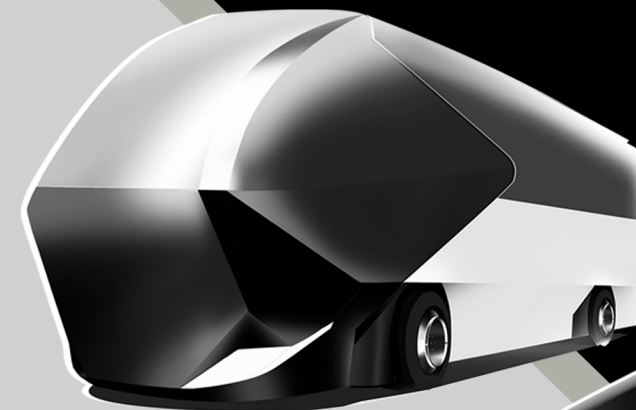
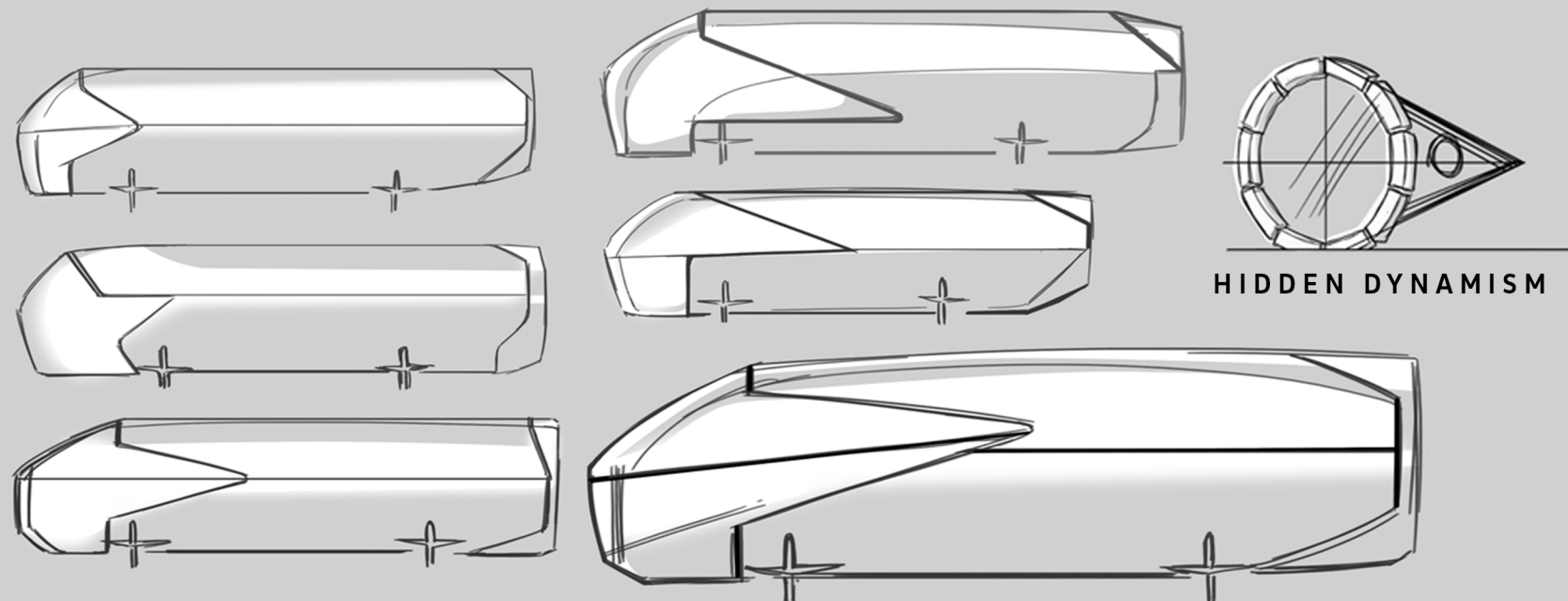
ChronoLiner
NEOLIN MYSTIC PORTAL

> Concept A Lucid Gateway

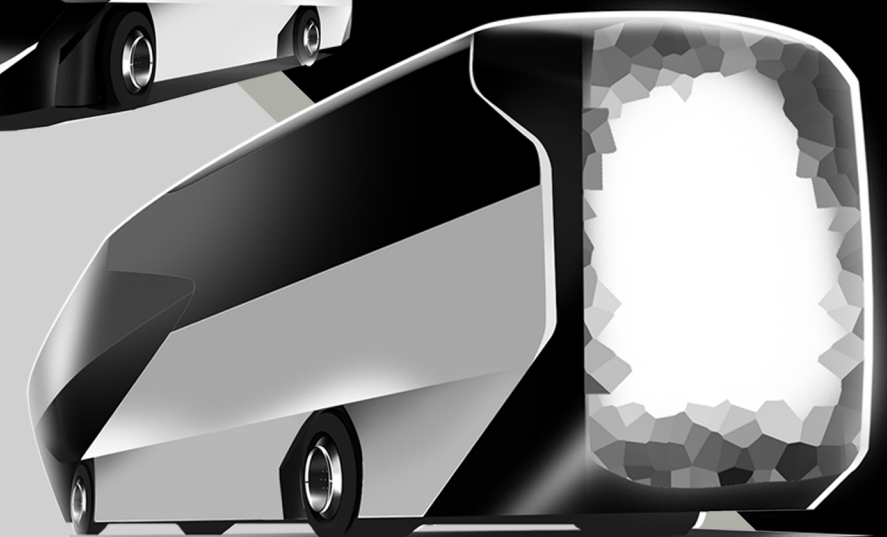
The A shape was defined, and the three modular sections were used as a the visual language.
The sections of the wheel arches are extended to the front surface. This gives a longer wheelbase and strongly implies that the vehicle is long and stable.



3 MODULAR PARTS

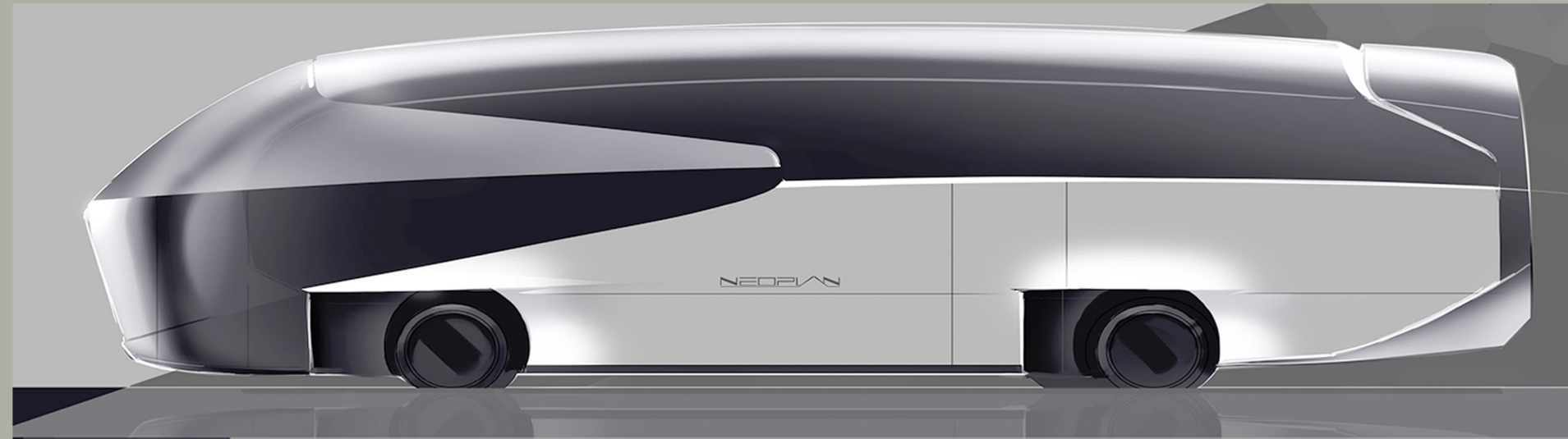


PORTAL
GATE



A crystalline façade is developed at the interior of the bus. Contrarily, the exterior will have a smooth aerodynamic surface.

The long line with the A cut was developed on the front dlo and on the rear black surfaces, which is a graphic interpretation of the wormhole between the two rune gateways (at the starting point and the destination) when viewed from a 3rd person's perspective.



14

ChronoLiner
NEOLIN MYSTIC PORTAL

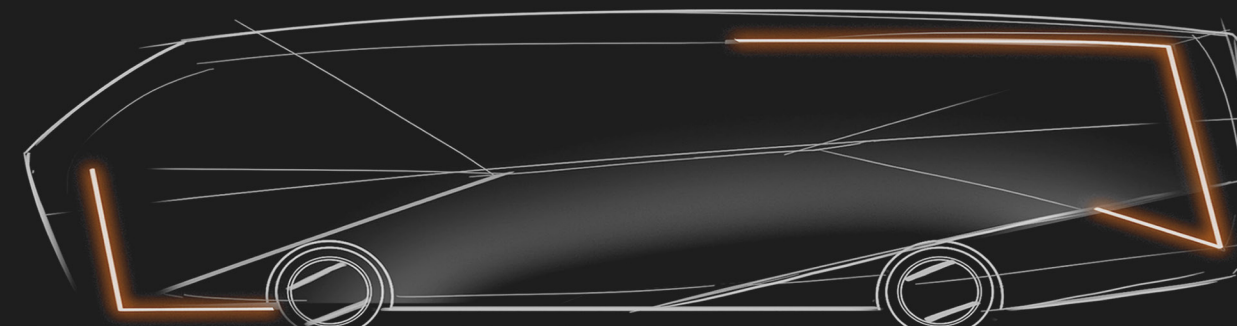
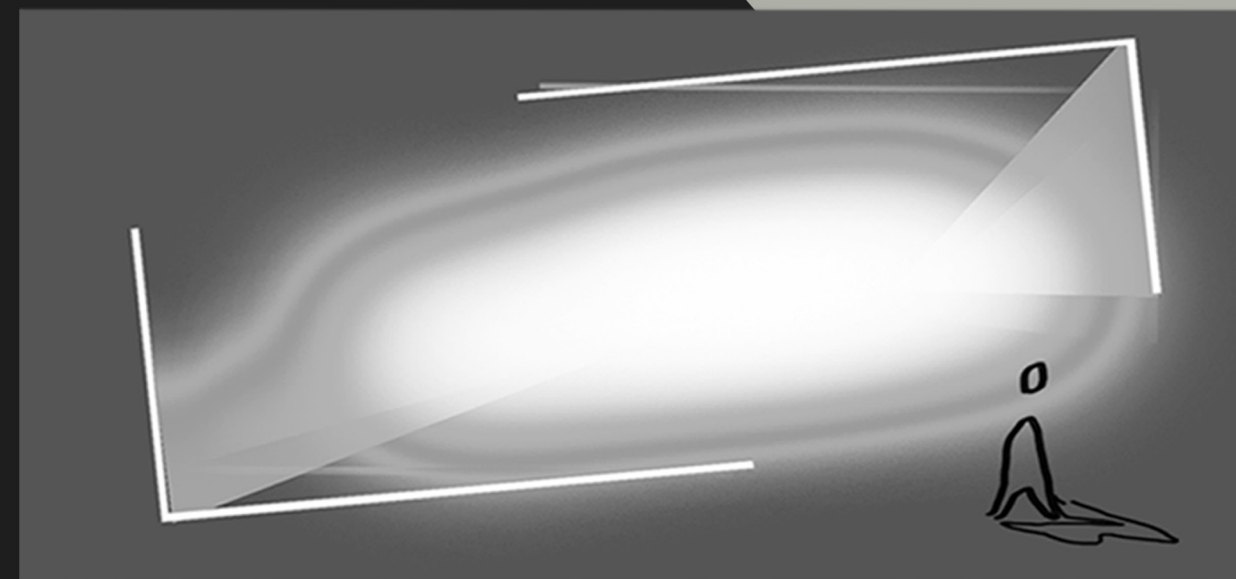


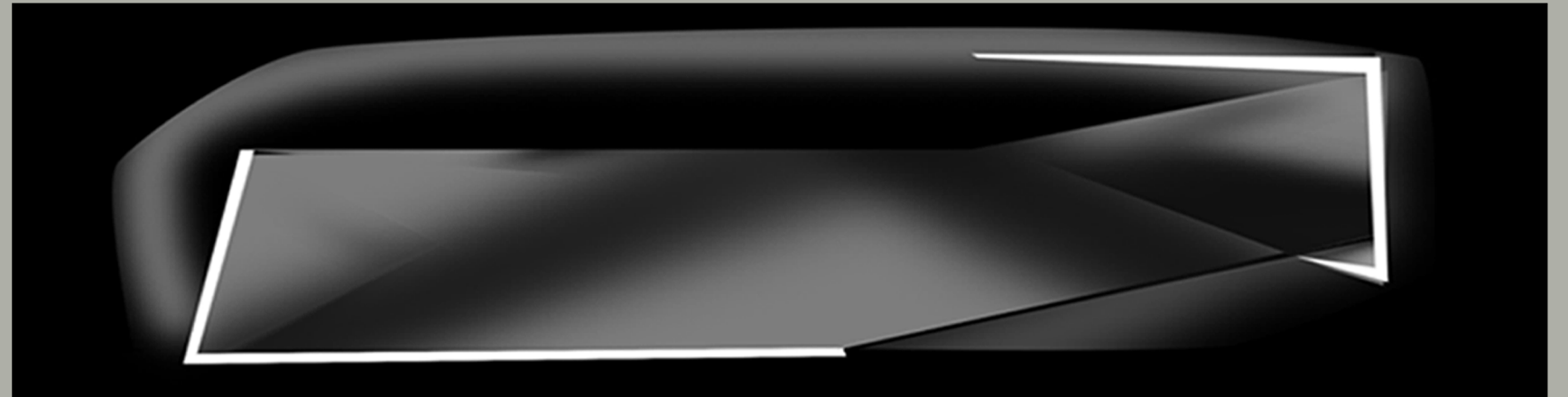
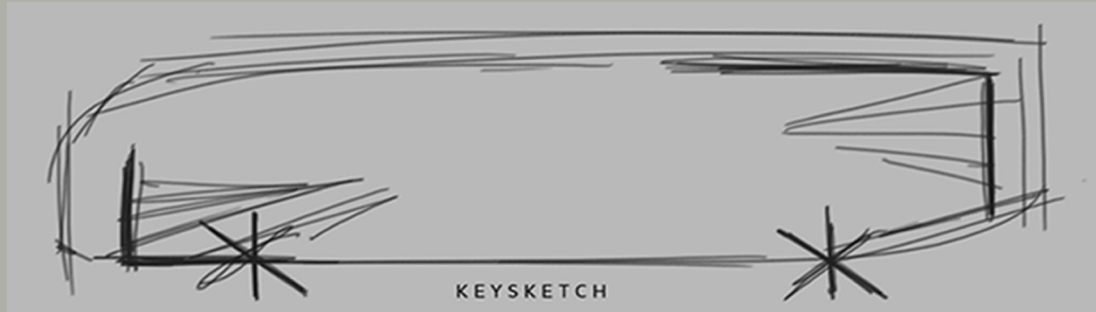
> Concept B Hyperspace Portal

The concept is a futuristic portal that takes passengers to an extraterrestrial place via Faster than Light (FTL) travel.

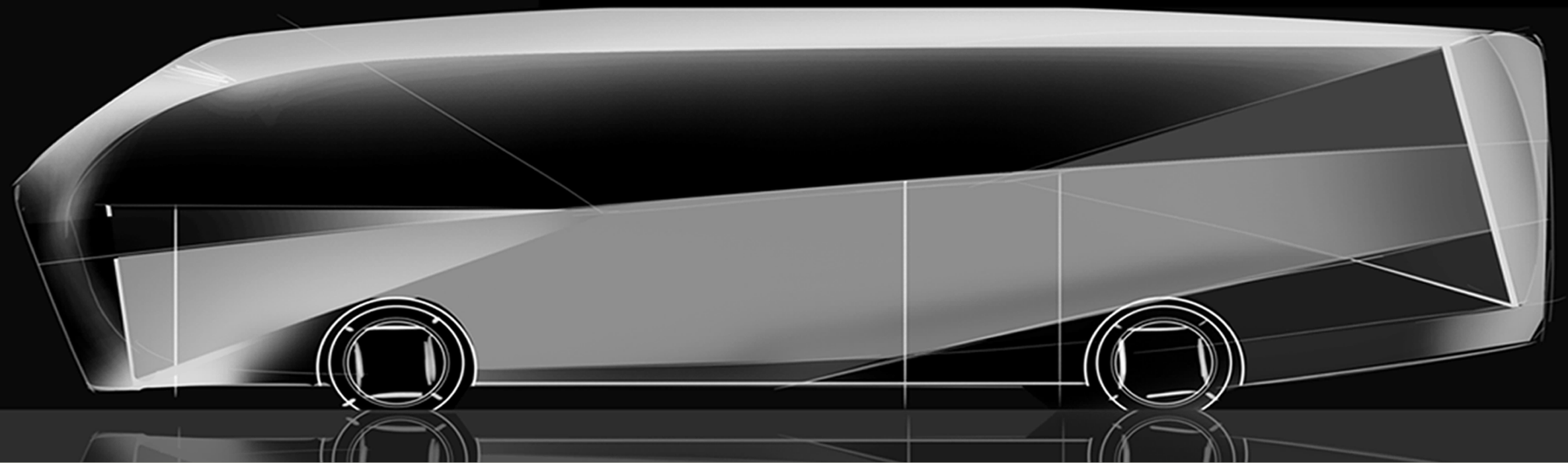
The interior of the coach will be conceptualised as the warp tunnel between the two gateways. Therefore, the concept deliberately intends the passenger to experience the surreal interior of the coach and contrast it with our normal physical realm outside.

Utilising the light streak idea provides an image of a side elevation of the warp tunnel. Further development of the bus silhouette using the light streak concept gives the bus's side profile to be more 3D.





HYPERSPCE PORTAL FROM THE SIDE



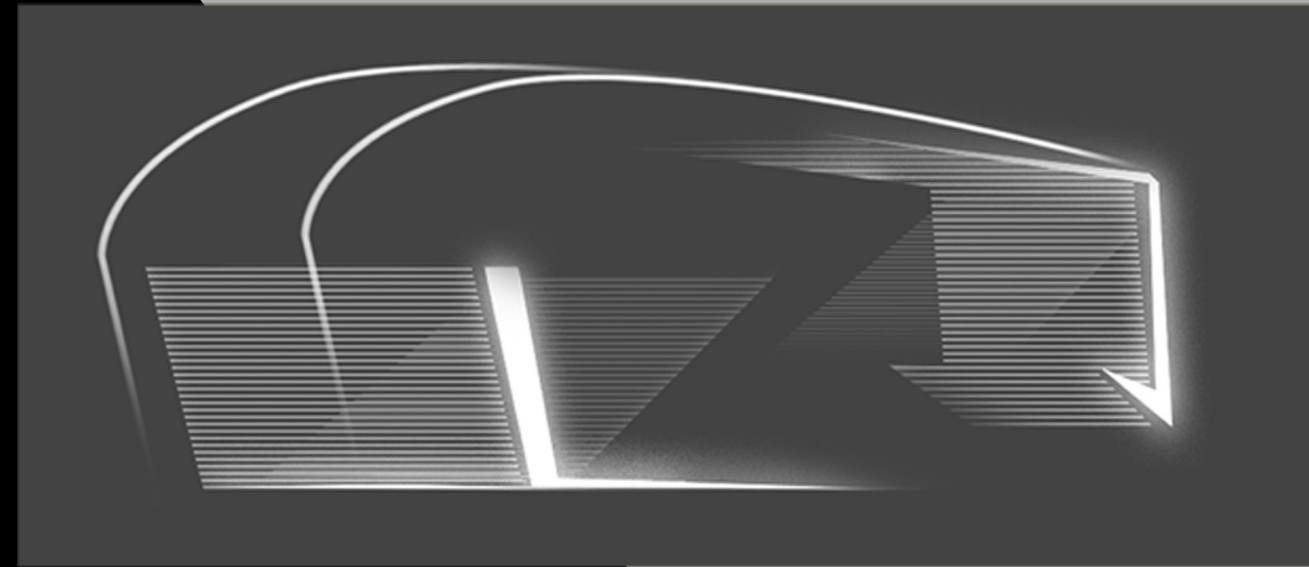
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ChronoLiner
NEOBIAN MYSTIC PORTAL

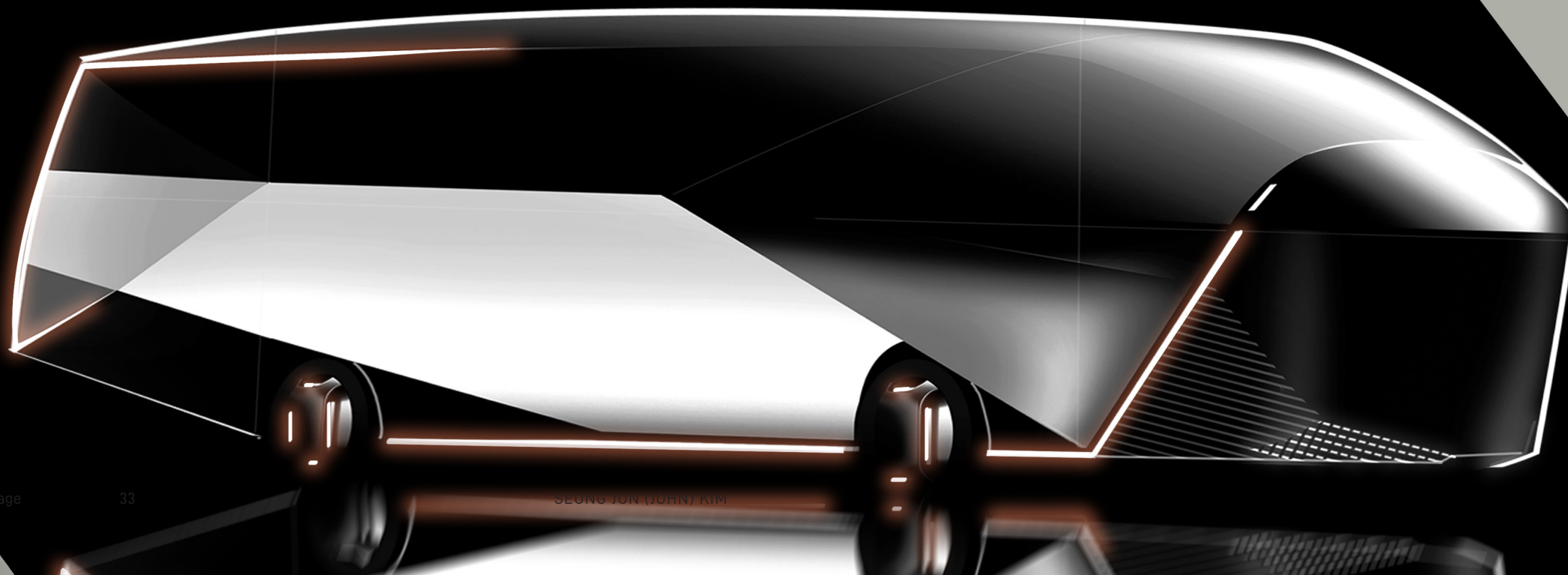


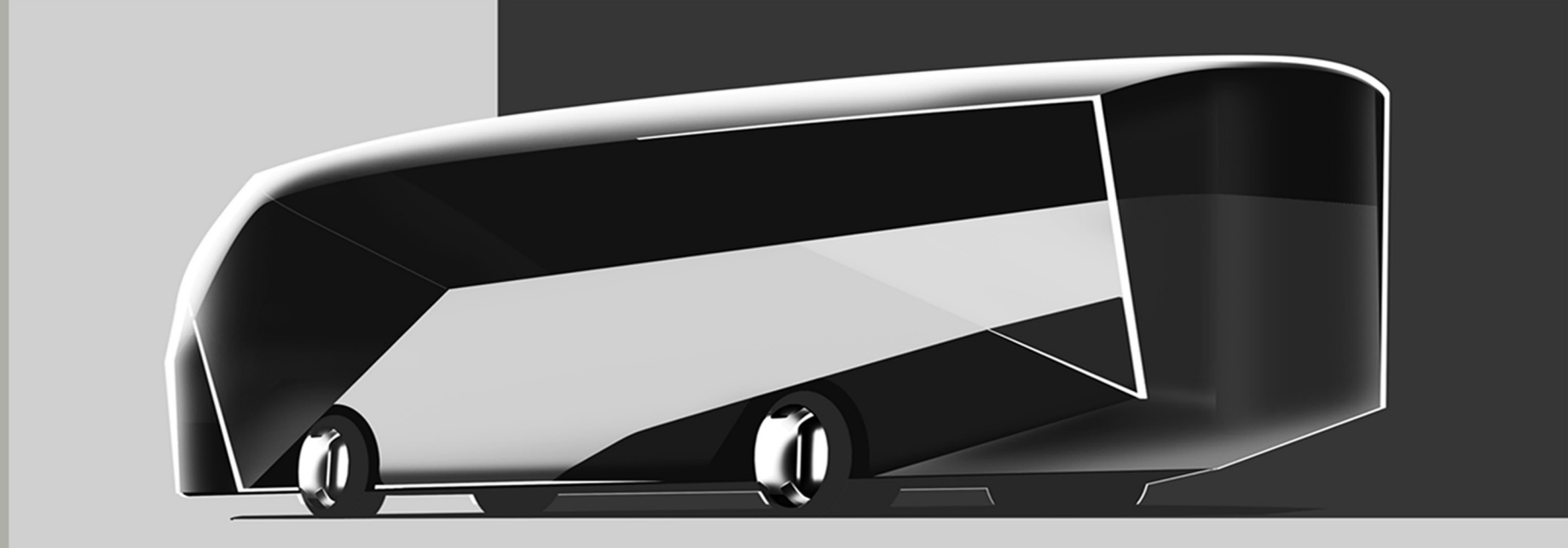
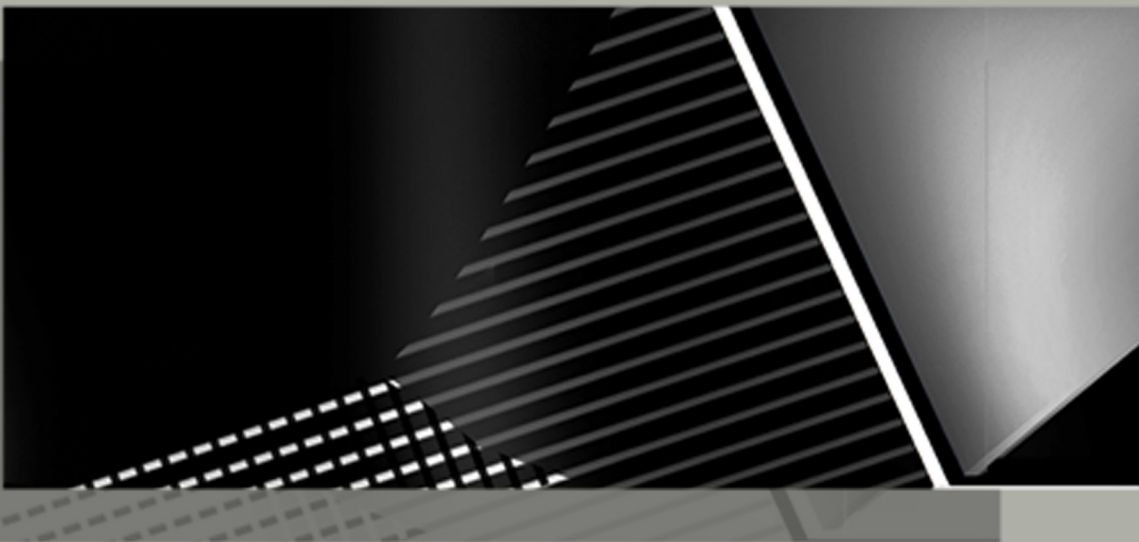
> Concept B Hyperspace Portal

The light design to bring techno ray tracing.
The side light graphics provide an idea of how the photon moves on the warp tunnel, creating light streaks across the side elevation of the warp tunnel. As a result, the side light conceptually and visually connects with the vehicle's side profile.

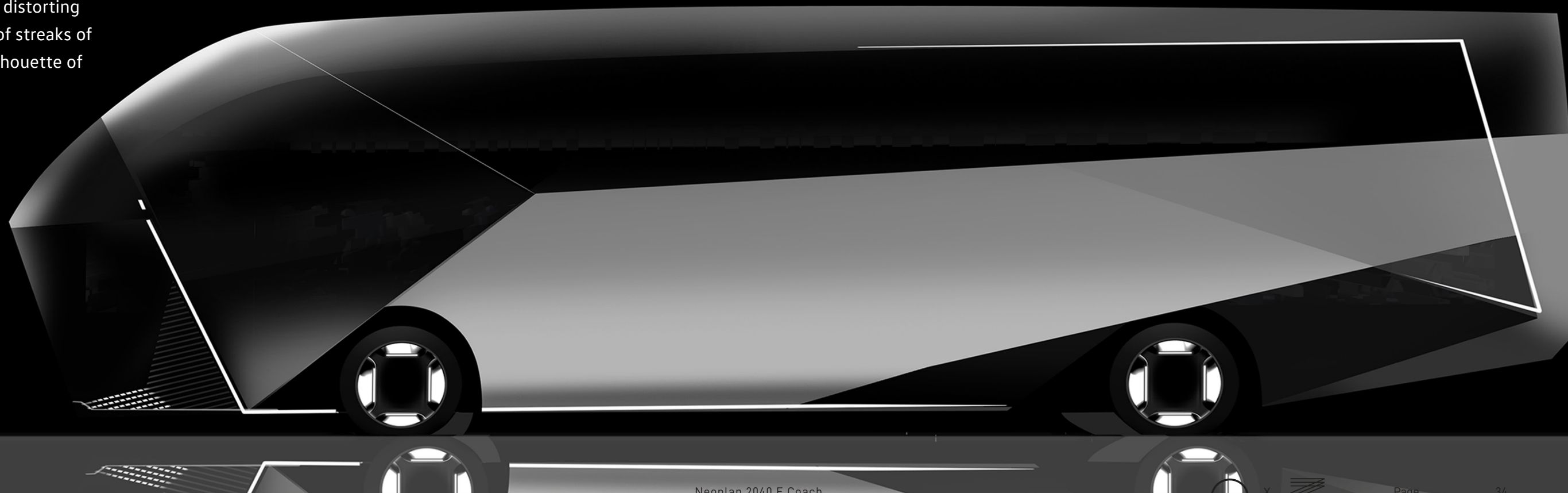


TECHNO RAY TRACING





The concept shows the idea of streaks of light implying a faster-than-light (FTL) travel distorting time-space. The idea of streaks of light is used for the silhouette of the bus and visually expresses the side elevation of the warp tunnel viewed from our normal physical realm.



15

ChronoLiner
NEOPLAN MYSTIC PORTAL

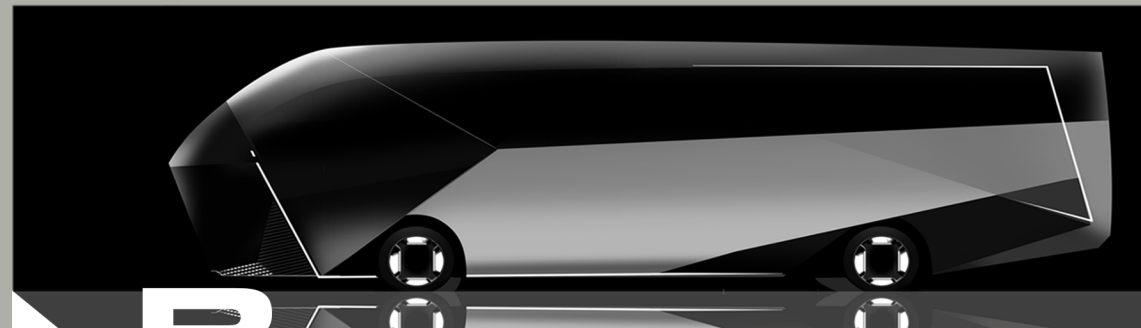
> Concept A+B Mystic Rune Portal

This concept combines key concepts from Concept A (Lucid Gateway) and Concept B (Hyperspace Portal). Specifically, this concept links the legacy and futuristic advancement to reintroduce and redefine the timeless luxury in the form of a Neoplan coach.

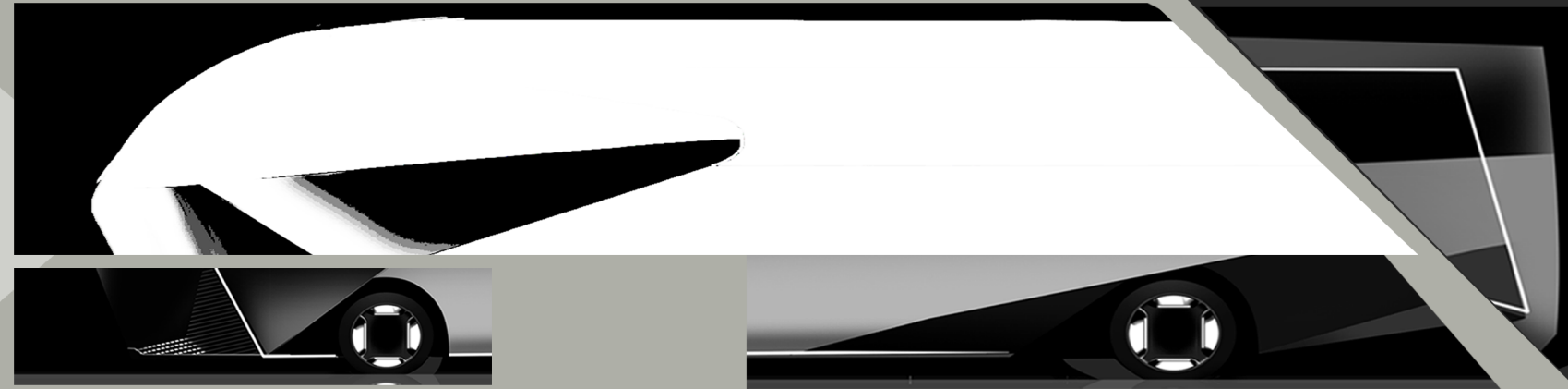


A

+



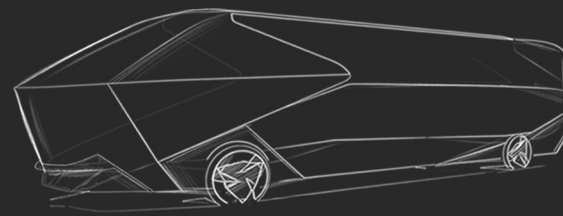
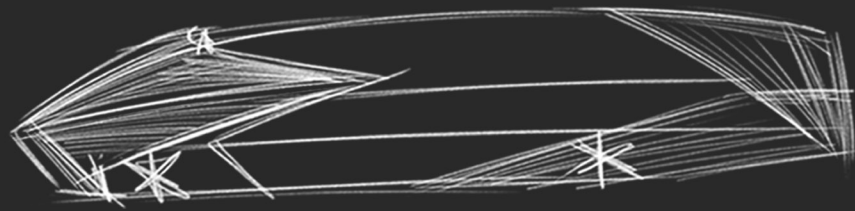
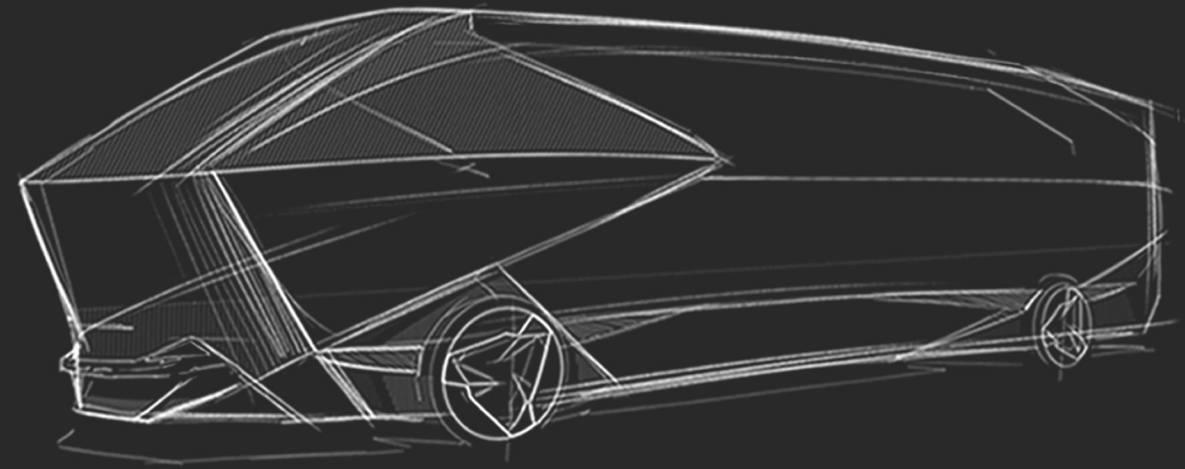
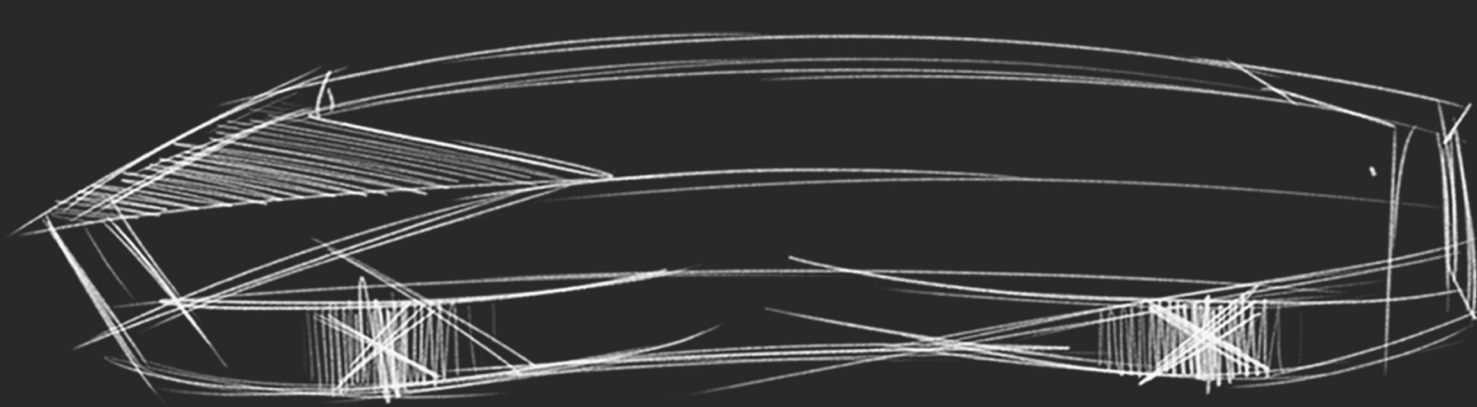
B



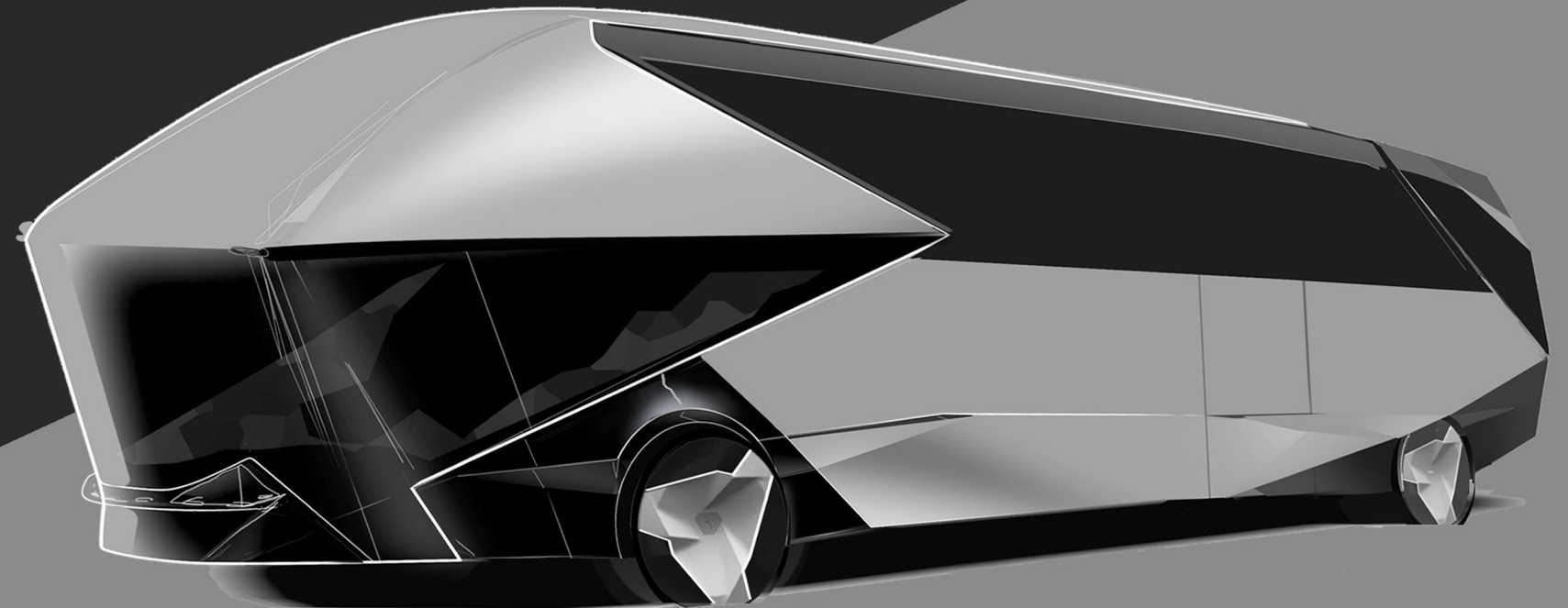
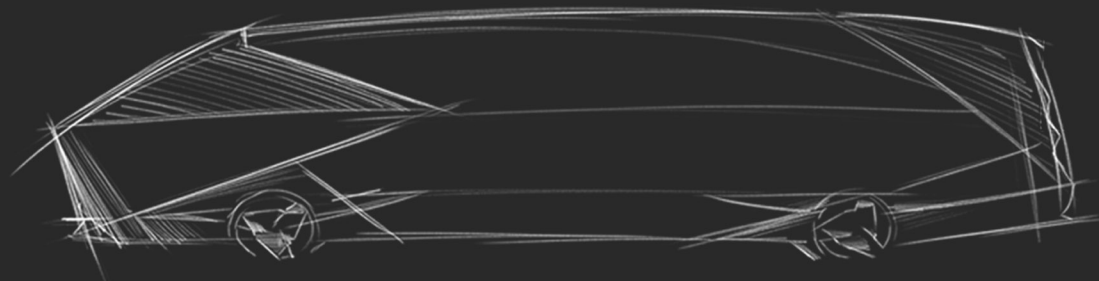
A+B

EMOTIONAL MACHINE

Conceptually, the separation of the luxurious space and the reality is perceived through the experience of walking through an entry. Therefore, The concept amplifies and emphasises the act of stepping into and out of the portal that leads to a momentary luxurious space concealed from the normal physical realm.



MYSTIC RUNE
PORTAL **A+B**



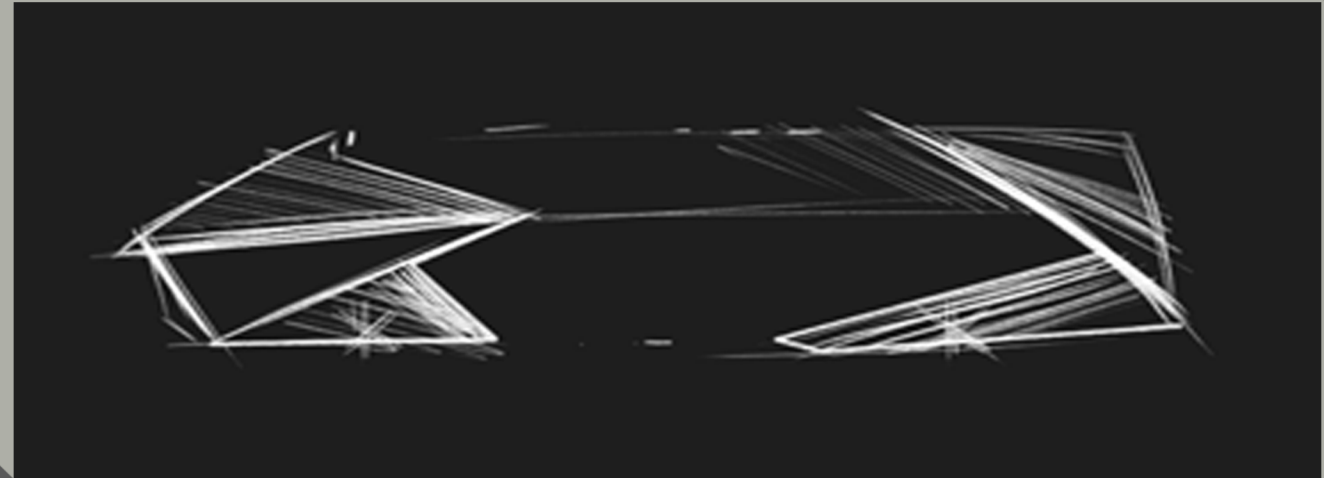
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ChronoLiner
NEOLIAN MYSTIC PORTAL

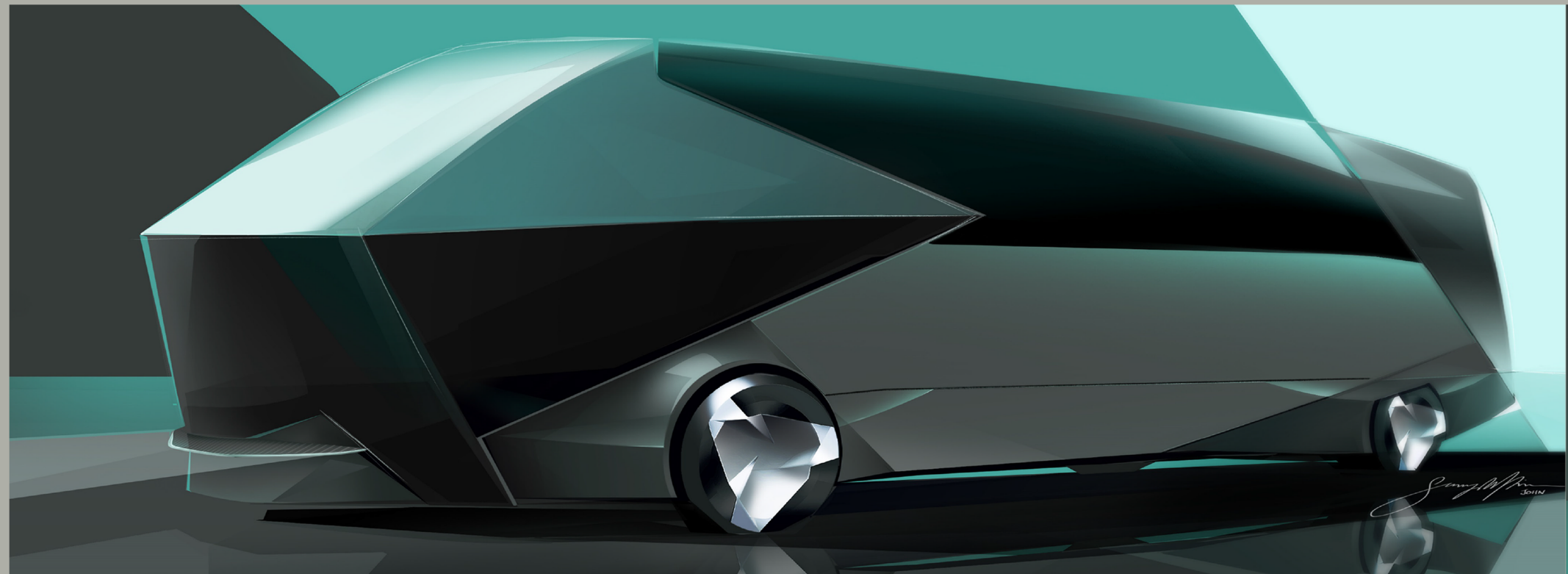


> Concept A+B Mystic Rune Portal

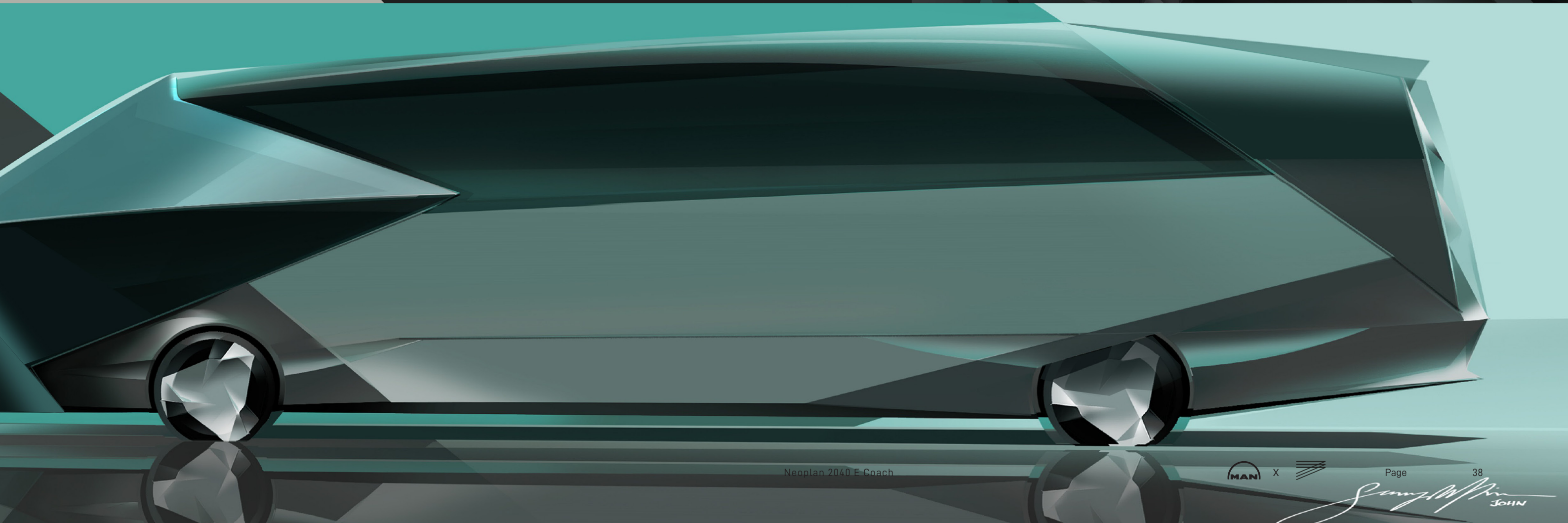
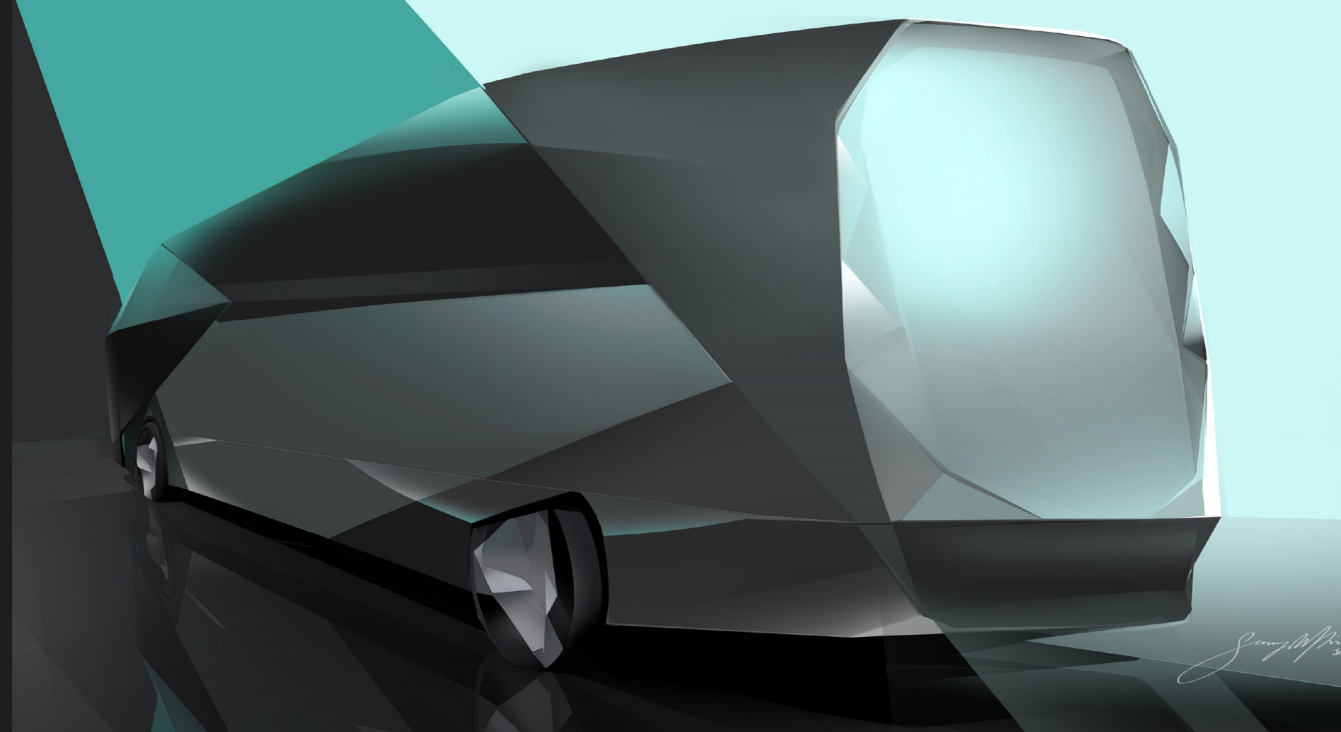
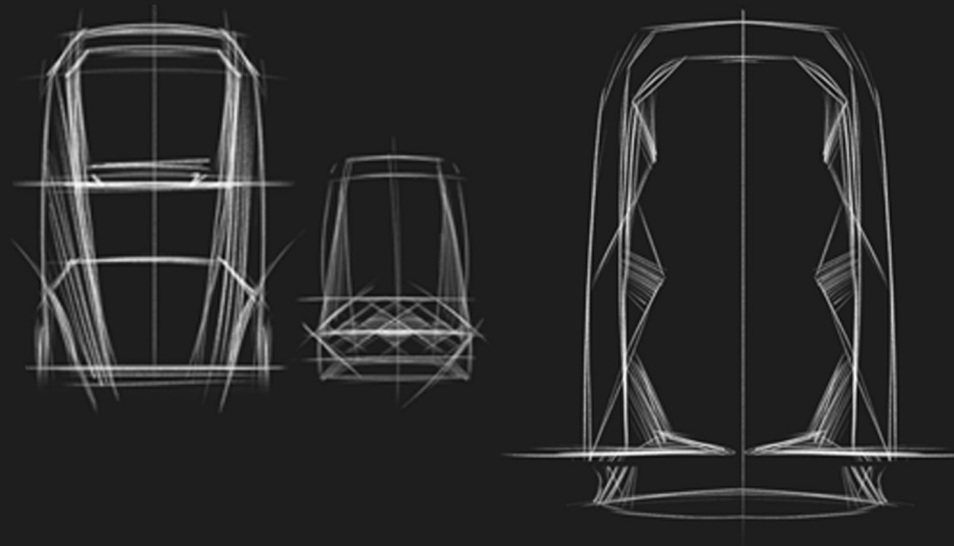
Concepts A and B were combined to find a balance in terms of the proportion of the bus.
The limitation of the side profile was explored to give an impression of 3D further by cutting into the vehicle into the wheel arch areas and creating more typology-induced light catcher on the upper segment of the wheelhouse.



3 MODULAR PARTS



A+B

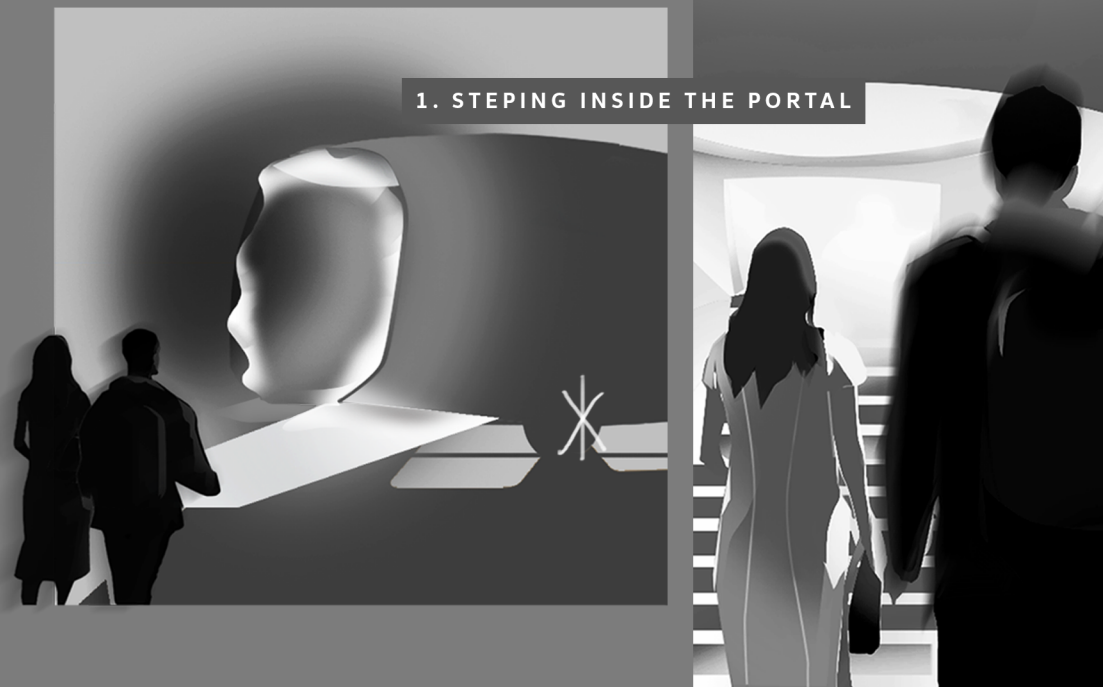
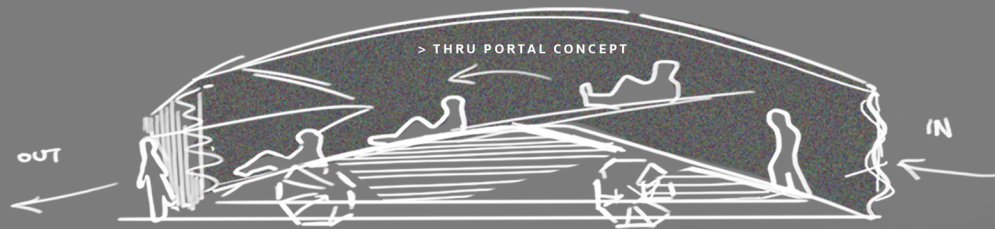


16

ChronoLiner
NEOLIN MYSTIC PORTAL

> Mystic Rune Portal Experience >>>

Concepts A and B were combined to find a balance in terms of the proportion of the bus. The limitation of the side profile was explored to give an impression of 3D further by cutting into the vehicle into the wheel arch areas and creating more typology-induced light catcher on the upper segment of the wheelhouse.



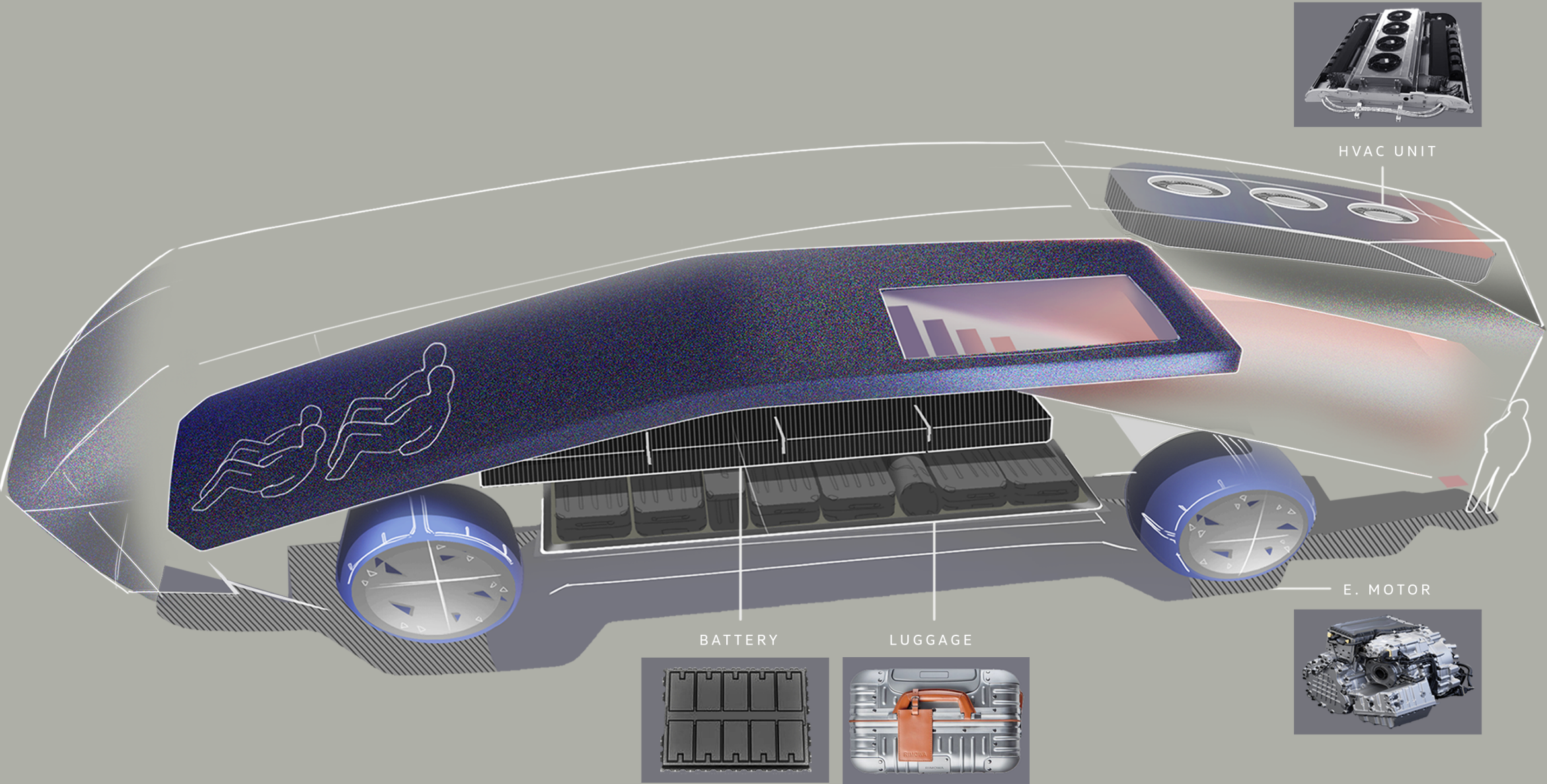
>Mystic Rune Portal
>>> Package



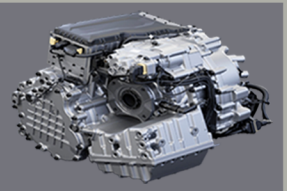
PRIVATE BOARDING



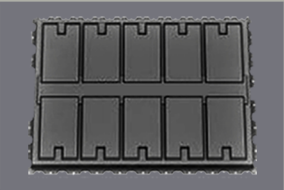
THEATER SEATING



HVAC UNIT



E. MOTOR



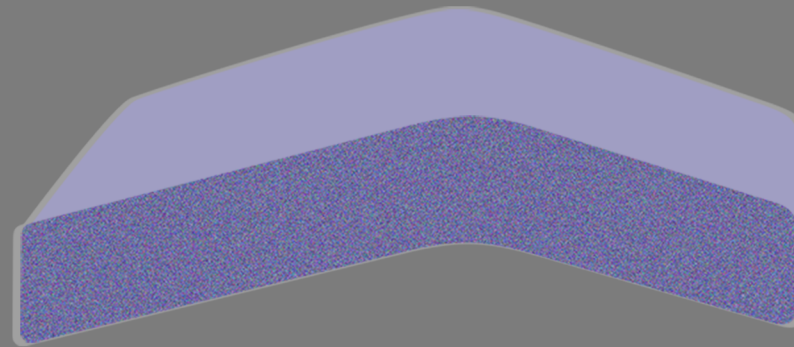
BATTERY



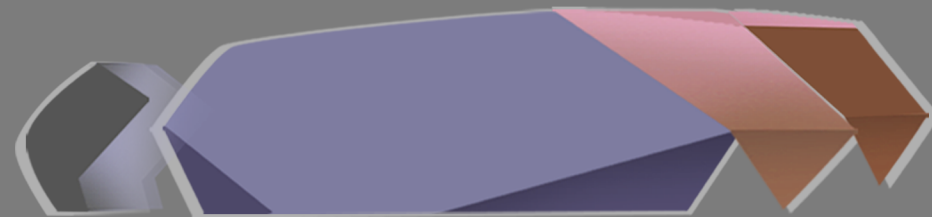
LUGGAGE

17

> Mystic Rune Portal Development

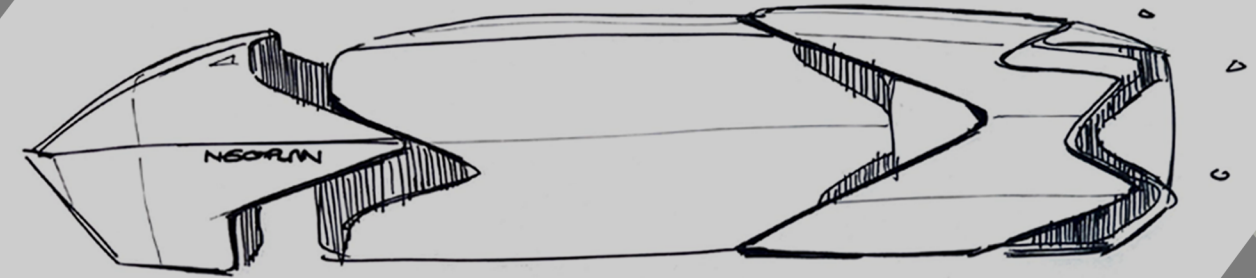


THEATER



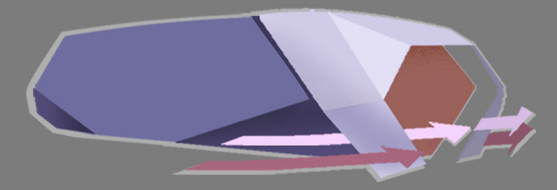
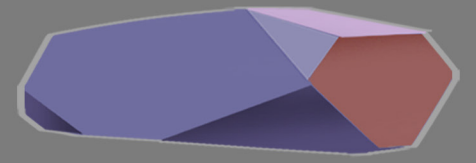
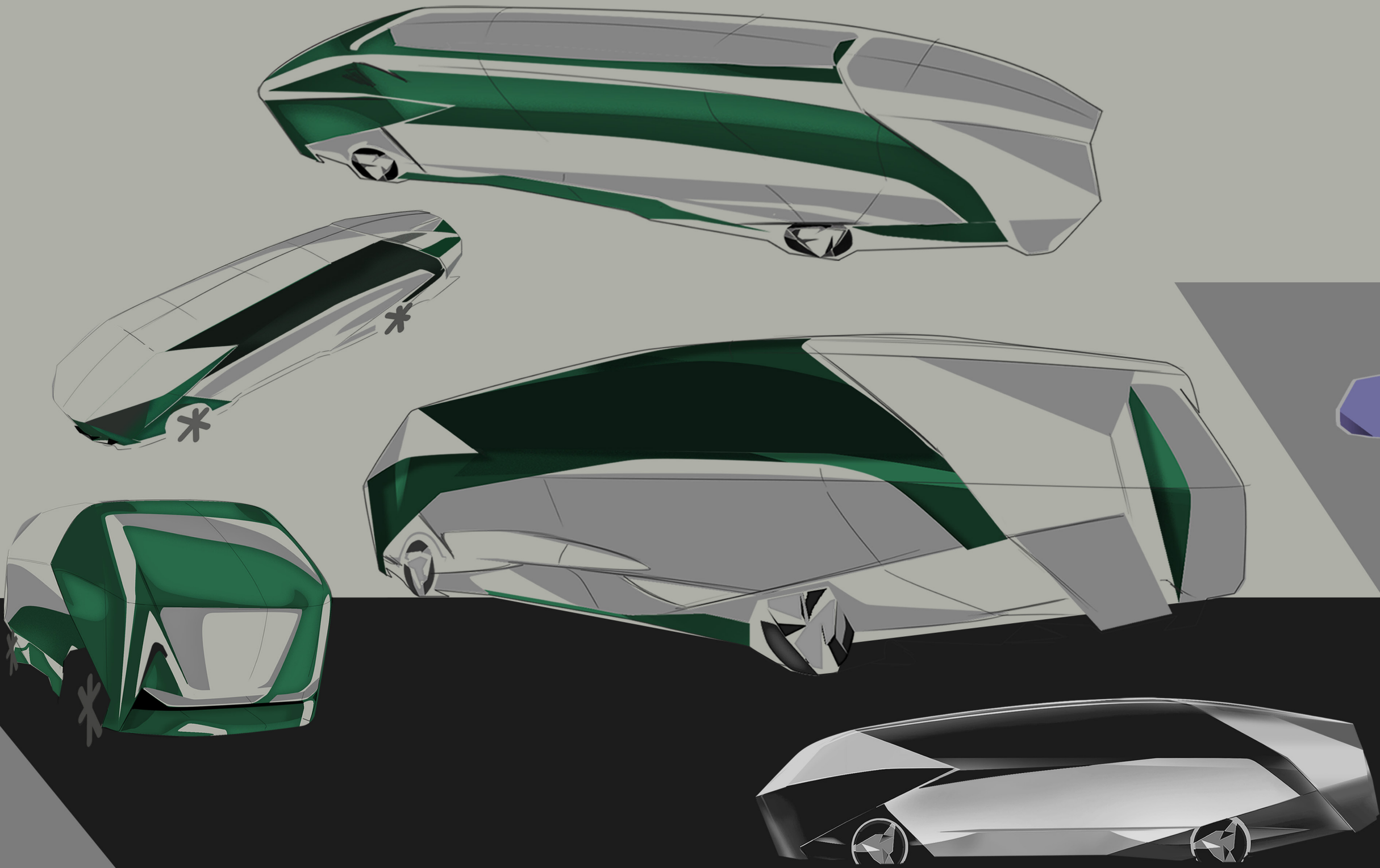
+ AERO

Emotional design in the context of aerodynamics enhances the vehicle's aesthetic and functional appeal by focusing on three modular parts: the front fascia, the side panels, and the rear structure. Each module is crafted to not only improve aerodynamics but also to elicit emotional responses, fostering a sense of connection between the vehicle and its driver.



AERO WRAP

By integrating these parts, the design creates a distinctive character that emphasises unique topological features, enhancing performance and visual impact. This innovative approach transforms the vehicle into a dynamic expression of personal identity, making every journey an emotionally engaging experience.

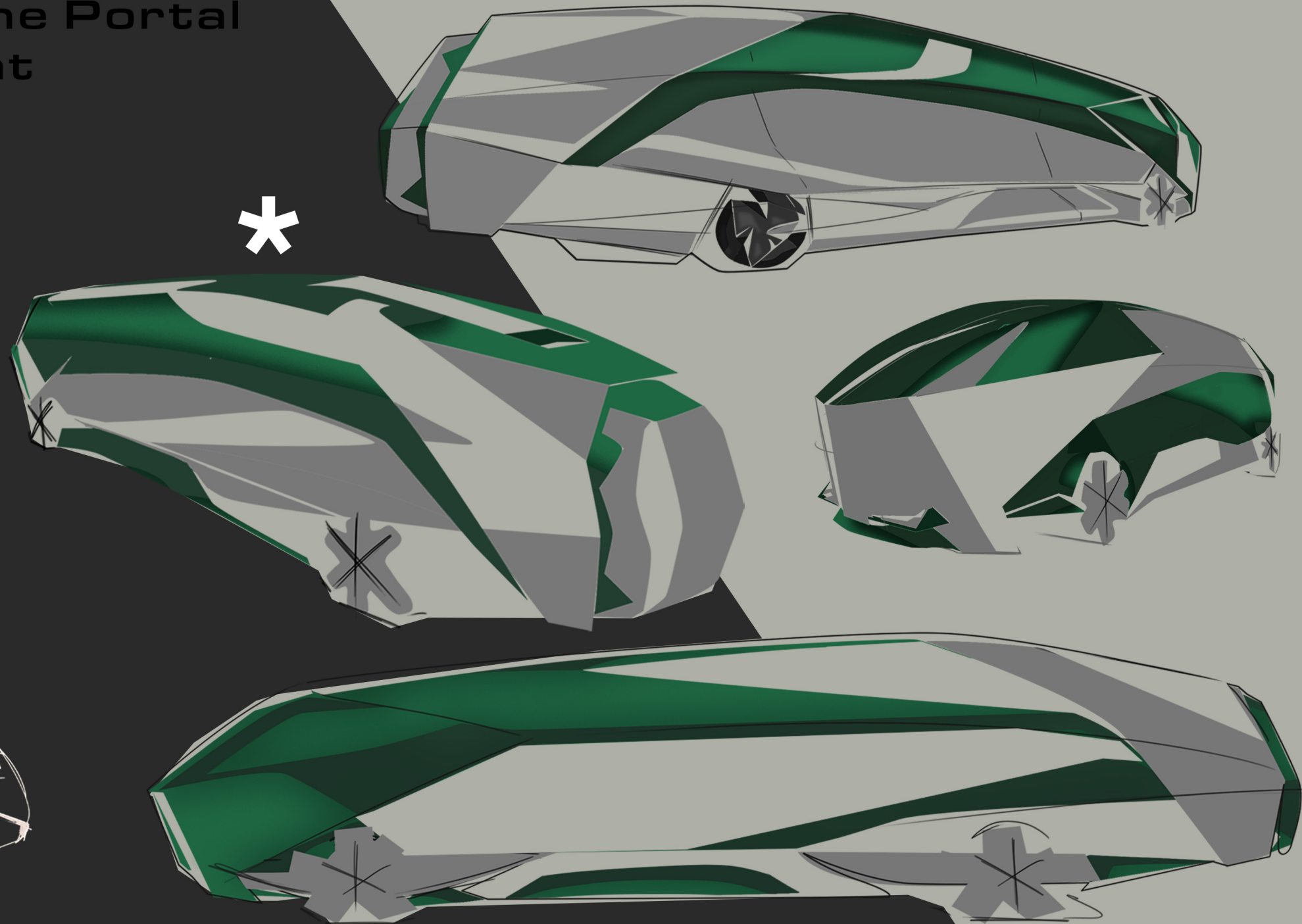
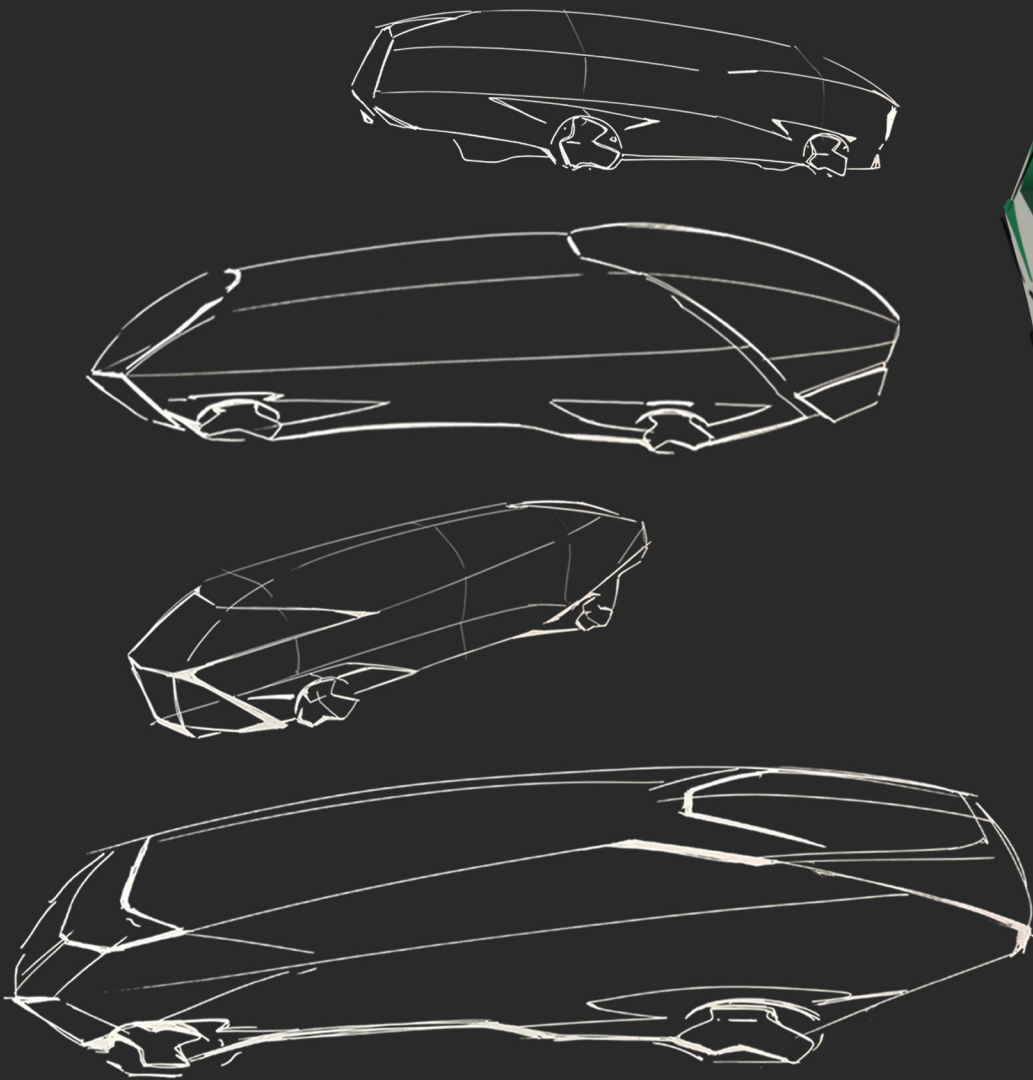


REAR FLYING
BUTTRESS

17

> Mystic Rune Portal Development

ChronoLiner
NEOPLAN MYSTIC PORTAL

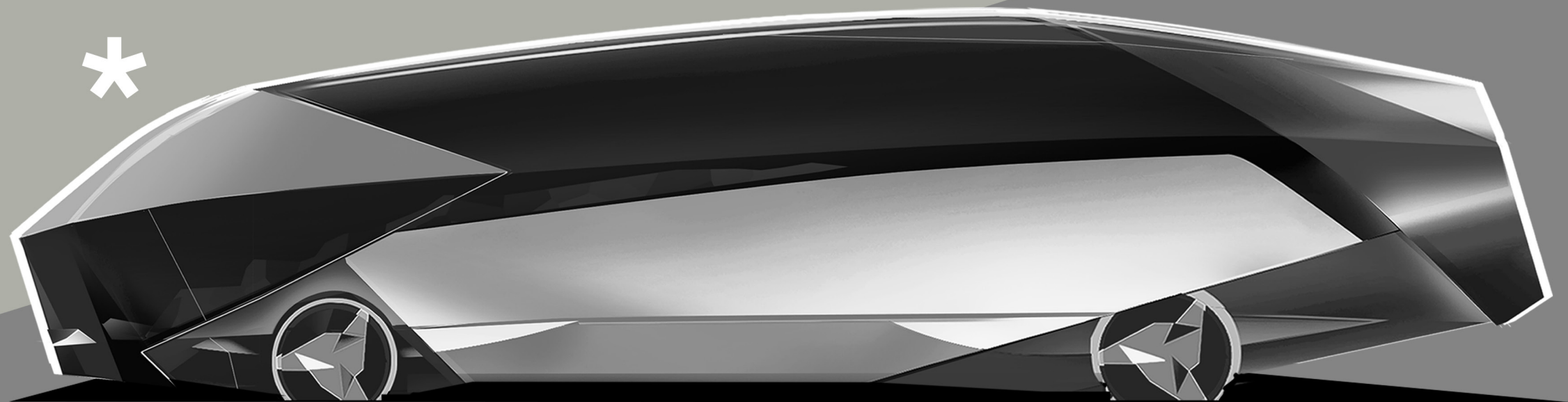


Creating a new side profile and new silhouette to be more dynamic.
The peak point is at the back, so the overall profile and silhouette have kinetic power even when the coach is stationary.

This creates a forward stance and brings a nod to Neoplan hvac rear position and creates both linearage and advance design.



FORWARD STANCE



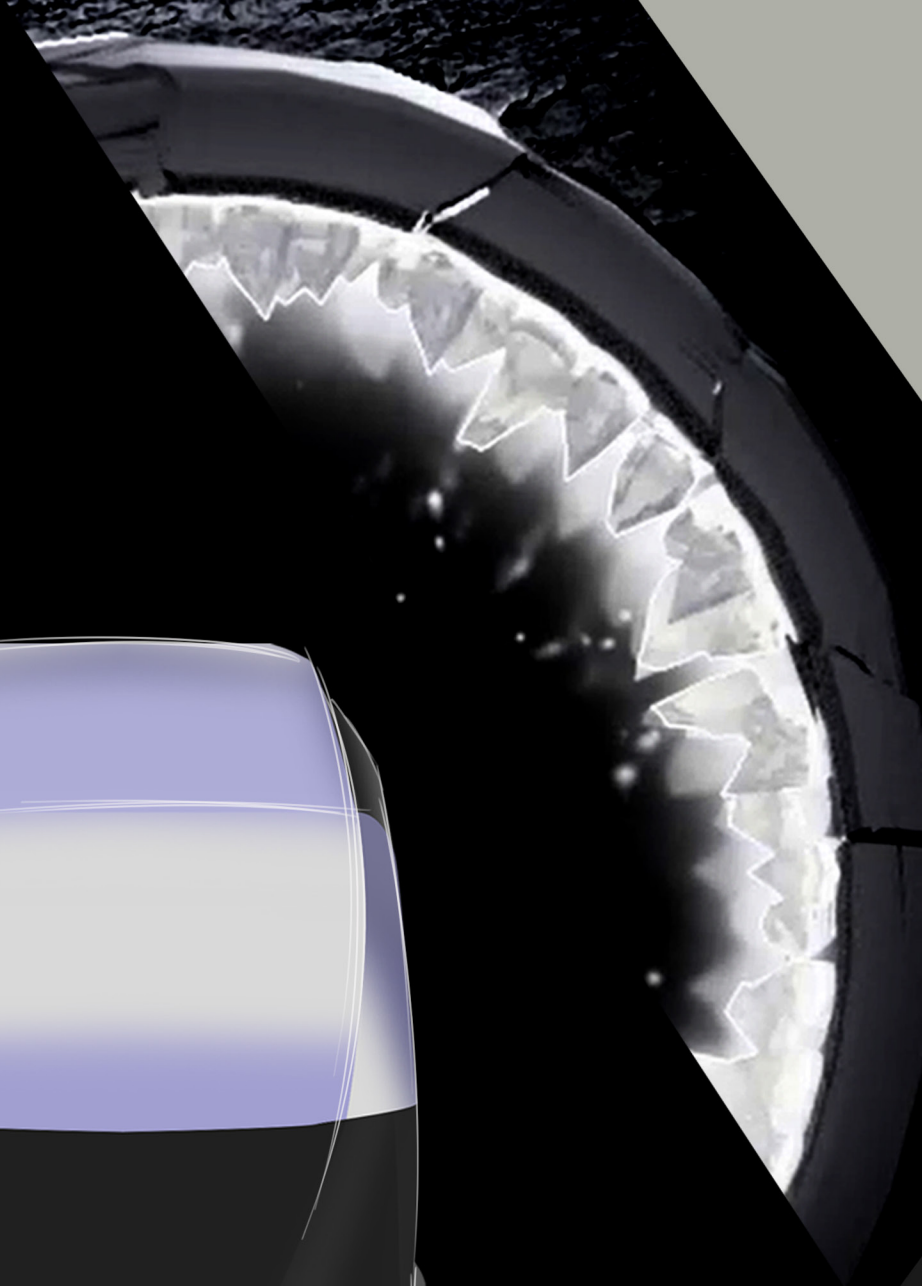
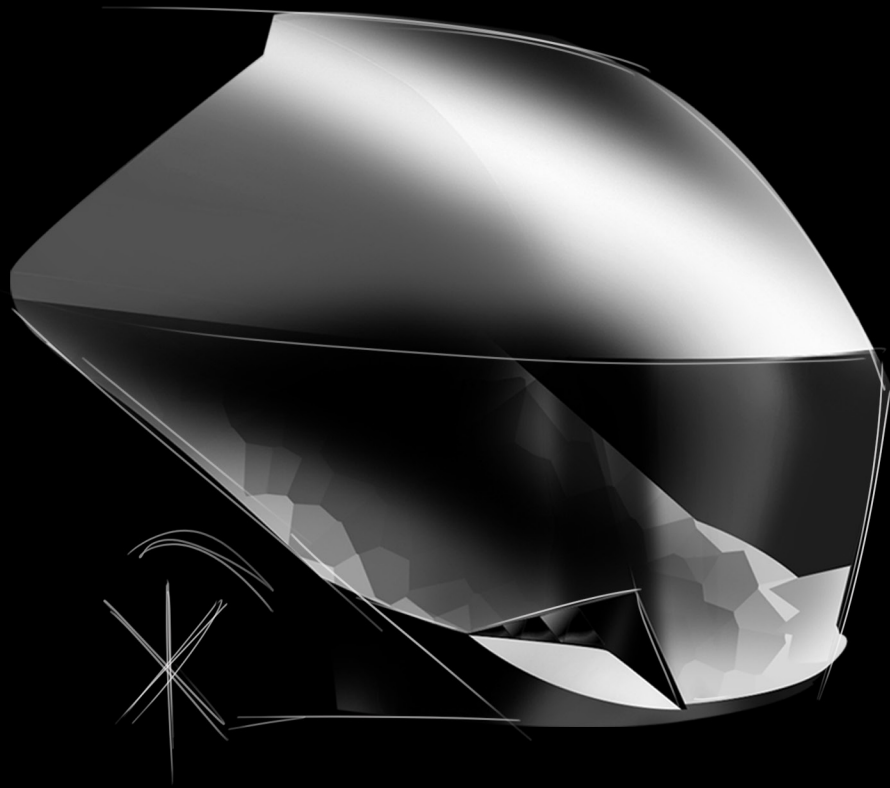
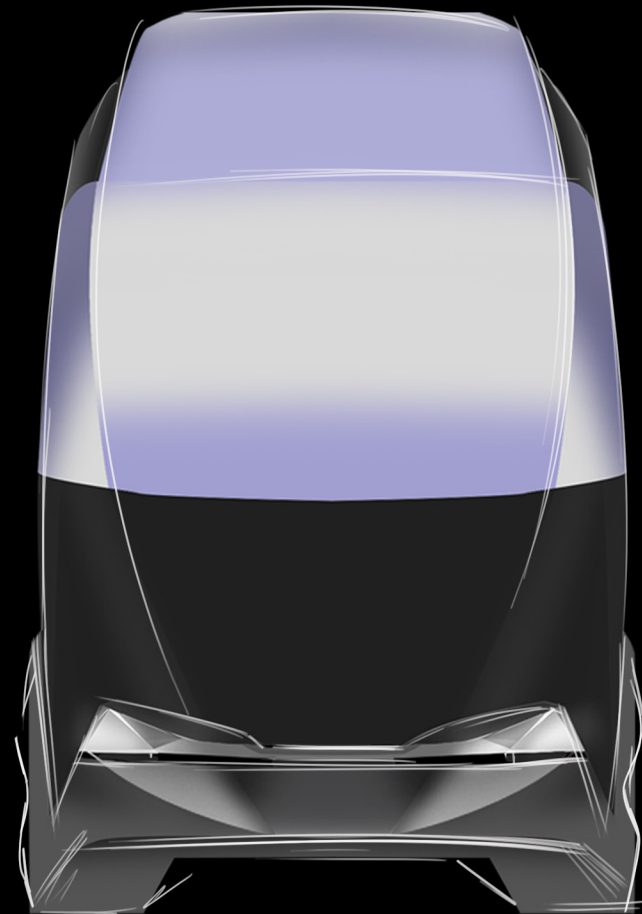
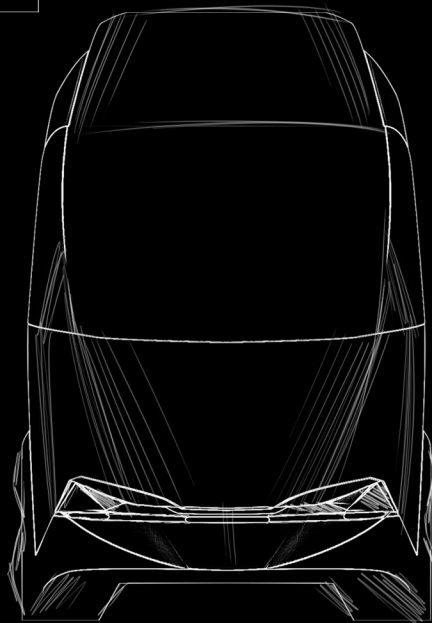
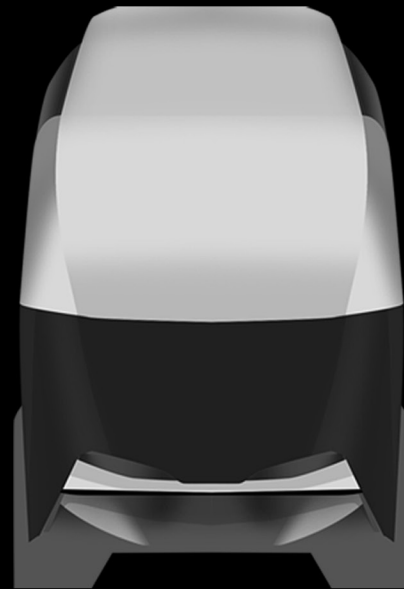
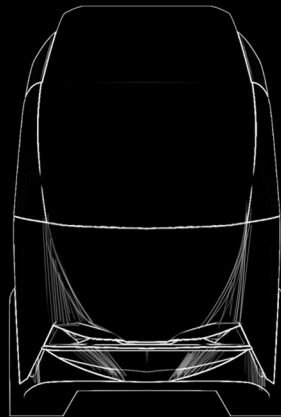
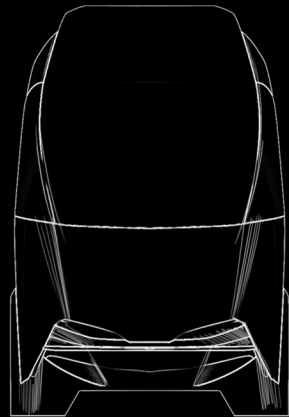
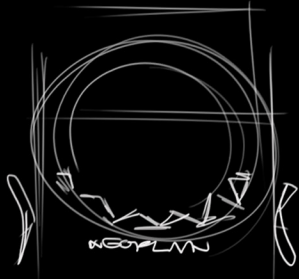
18

> Mystic Rune Portal Front Development

ChronoLiner
NEOPLIN MYSTIC PORTAL



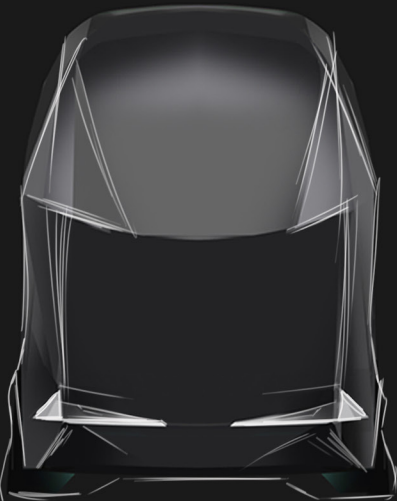
MYSTIC
CRYSTAL



This captivating element enhances the vehicle's futuristic appeal while maintaining a sense of simplicity and strength. The fusion of sleek modernity with an almost otherworldly presence creates a bold yet elegant statement. The crystal's ethereal glow, paired with the structured portal framework, transforms the front into a symbol of both power and mystery, offering a visionary aesthetic that is both innovative and awe-inspiring.

The frontal design of the Neoplan concept showcases a striking portal façade, seamlessly blending innovation with enchantment. At its centre, a mystical crystal is introduced, infusing the design with an air of magic and wonder.

PORTAL
FACADE



Neoplan 2040 E Coach



x



Page

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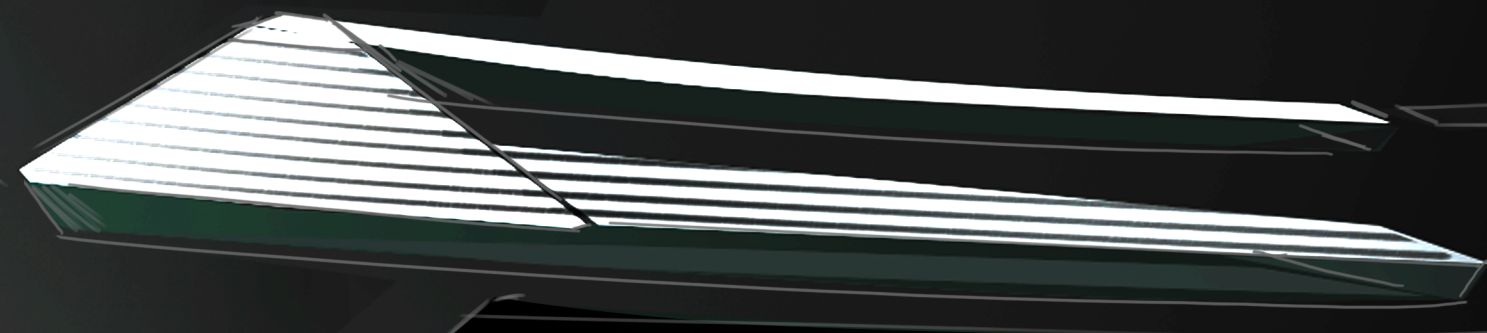
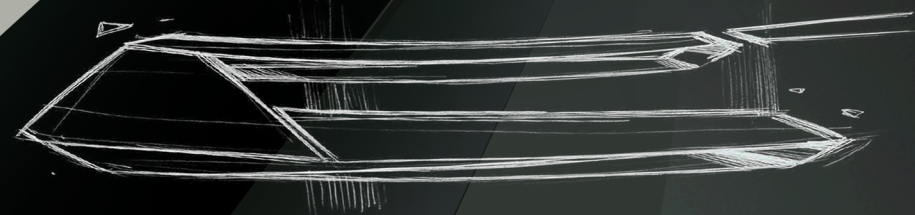
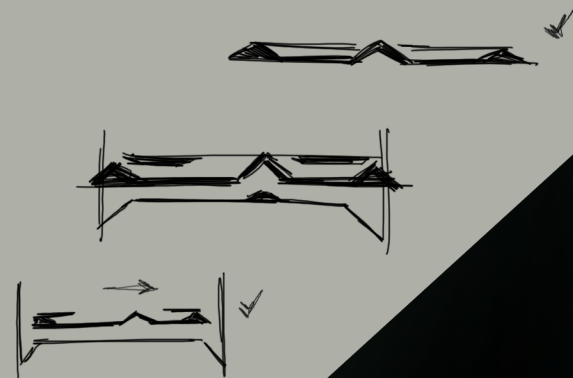
ChronoLiner
NEOPLAN MYSTIC PORTAL

> Mystic Rune Portal Front Facia Development

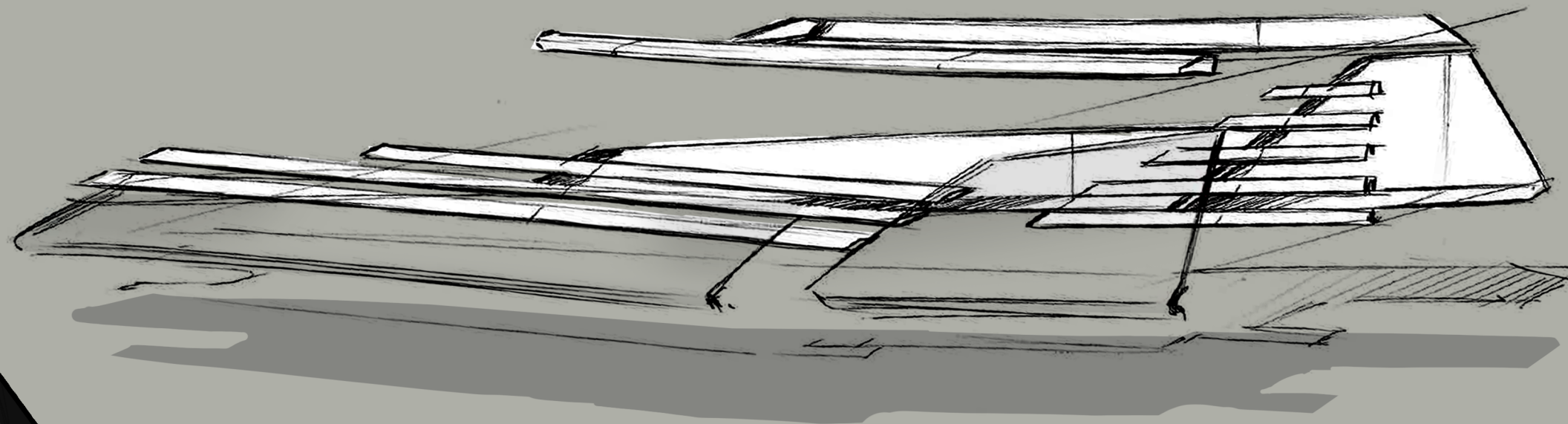
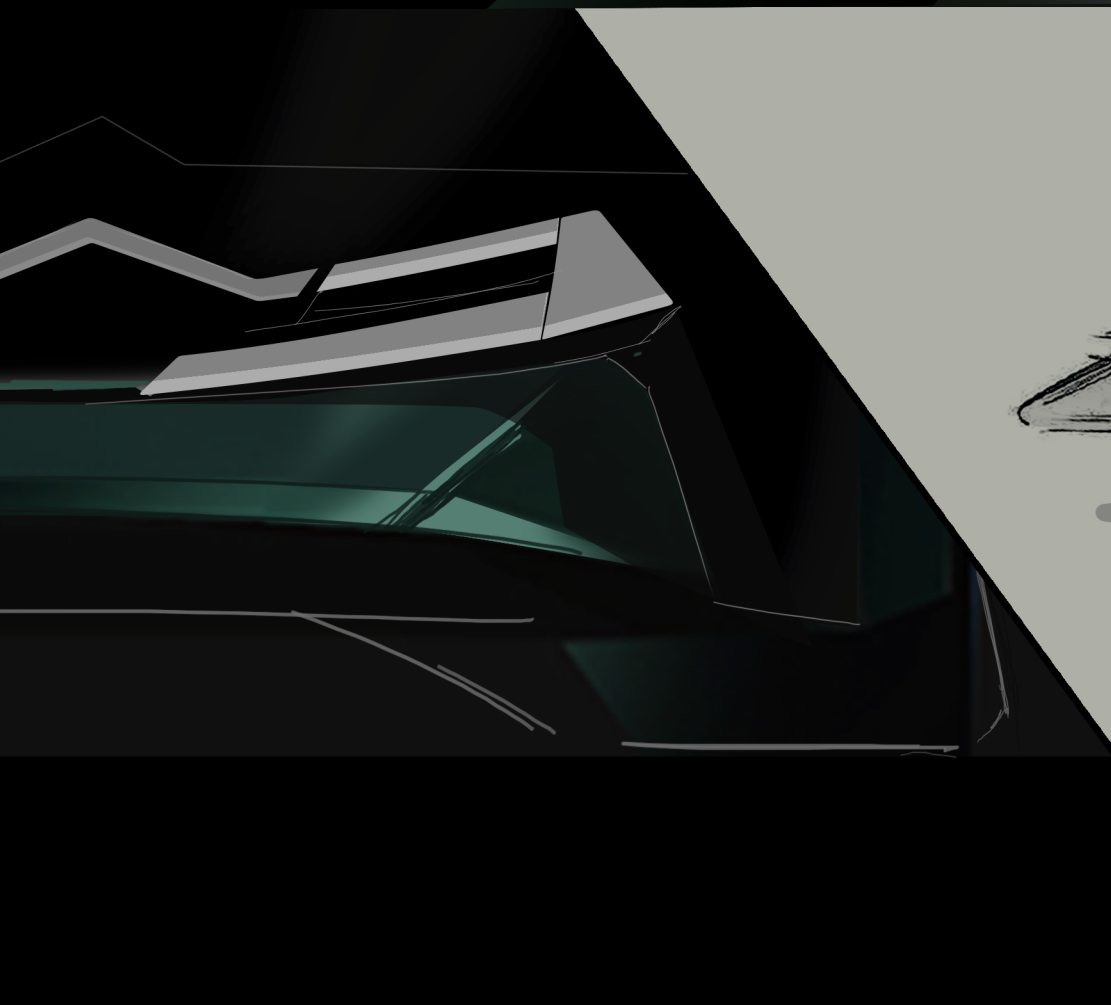
The development of Neoplan's front fascia design began with a careful study of past models, evolving step by step to create a refined yet revolutionary look. By retaining Neoplan's signature horizontal character, the new design introduces a distinctive front 'A' shape bar, seamlessly integrating tradition with modernity. This bold element enhances the brand's identity while offering a fresh and dynamic visual appeal. A strong horizontal emphasis is achieved by drawing inspiration from previous models, particularly those featuring a corrugated façade. This design language is elegantly translated into the intricate details of the front headlight design, reinforcing stability and adding depth to the overall aesthetic.



ED



ICONIC
TIMELESS

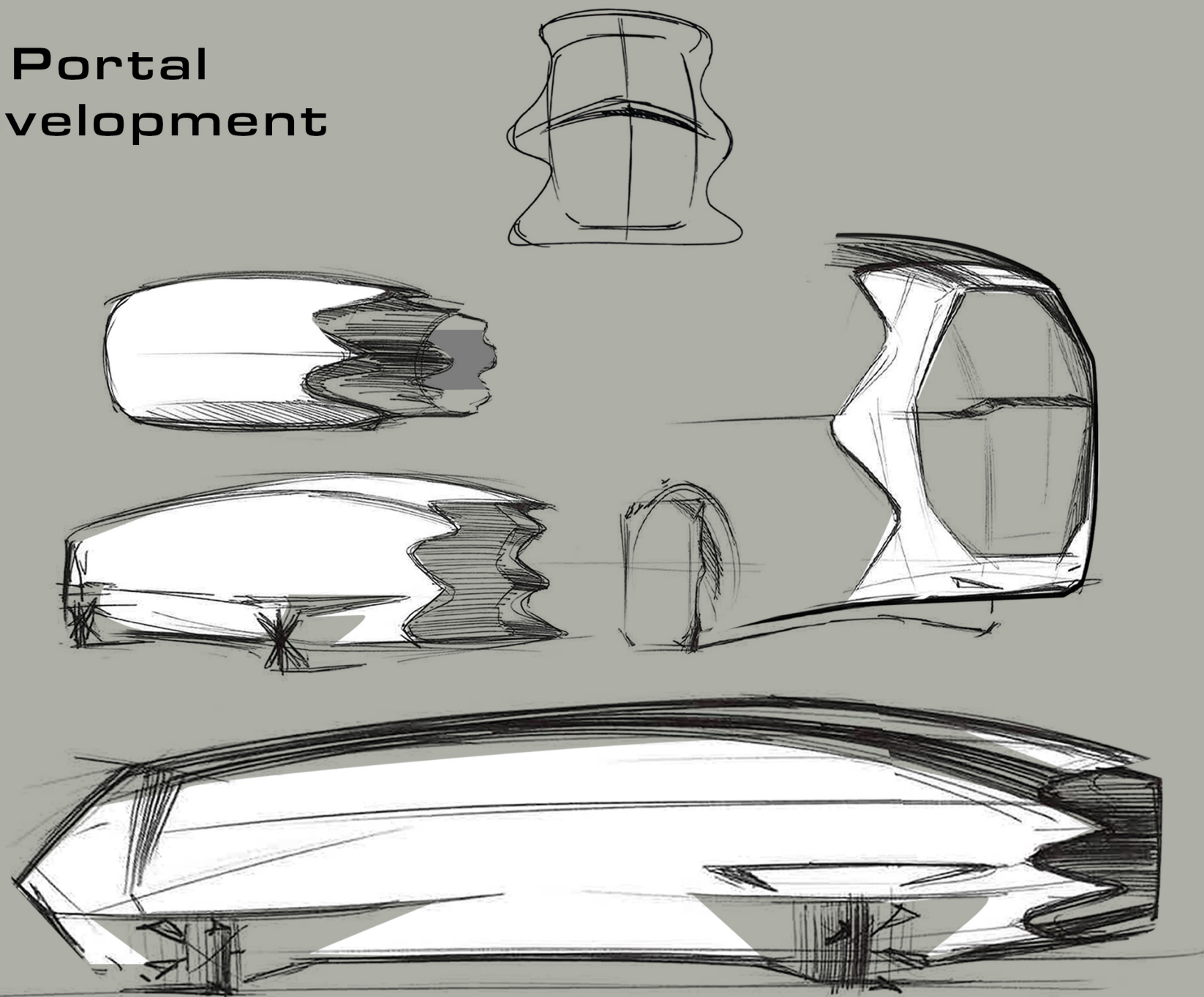


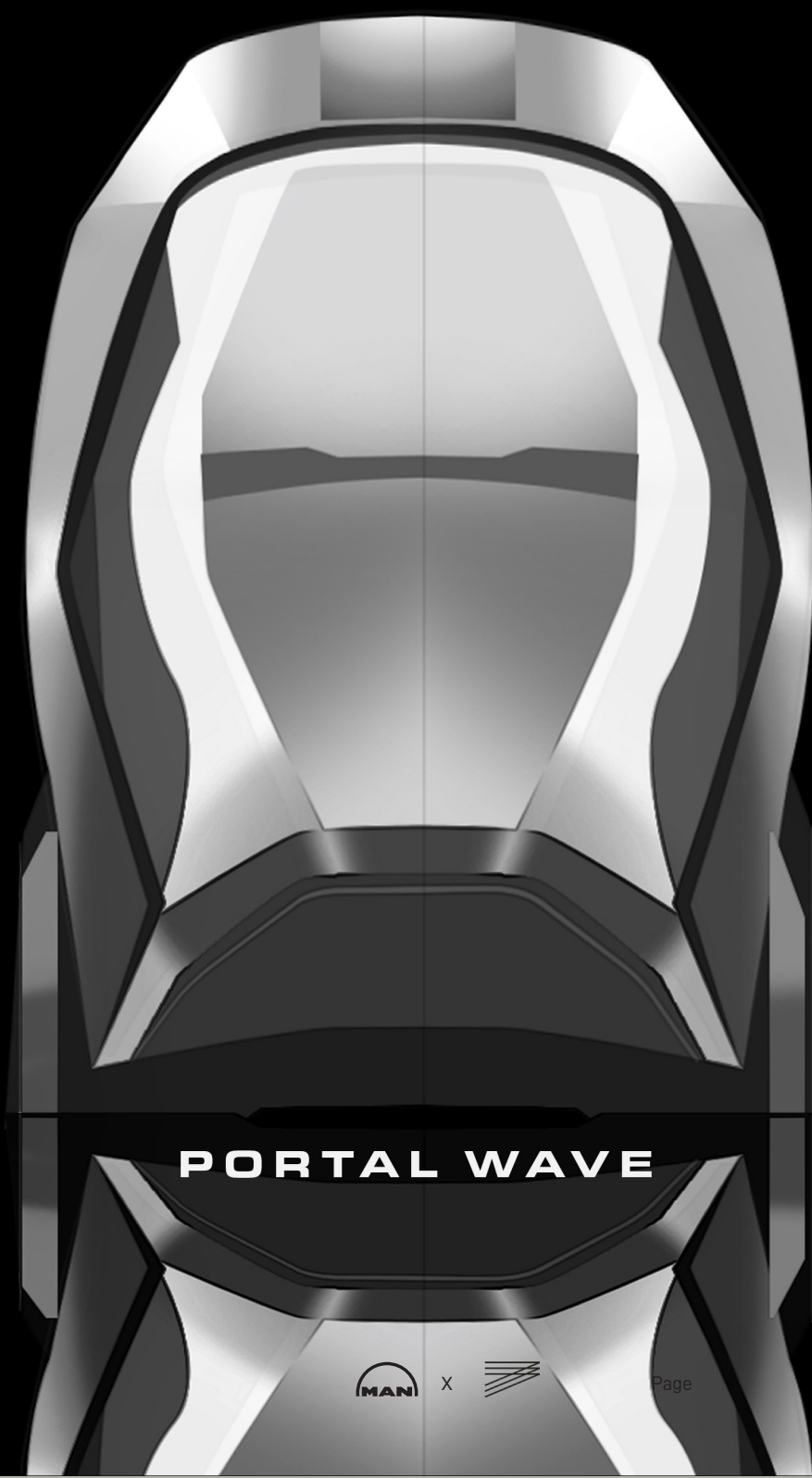
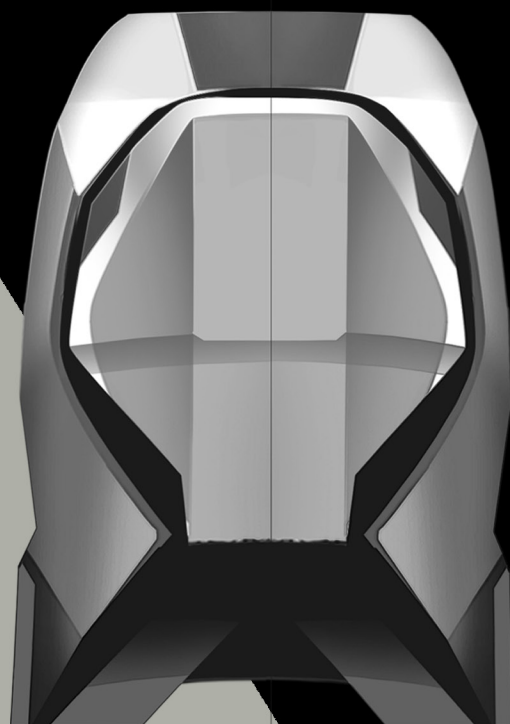
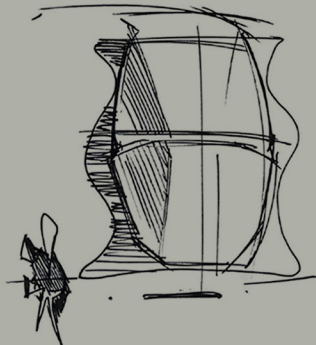
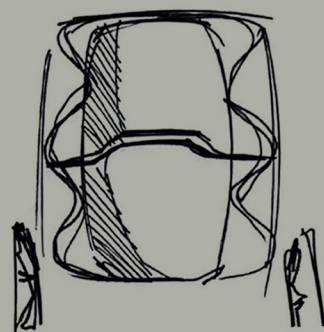
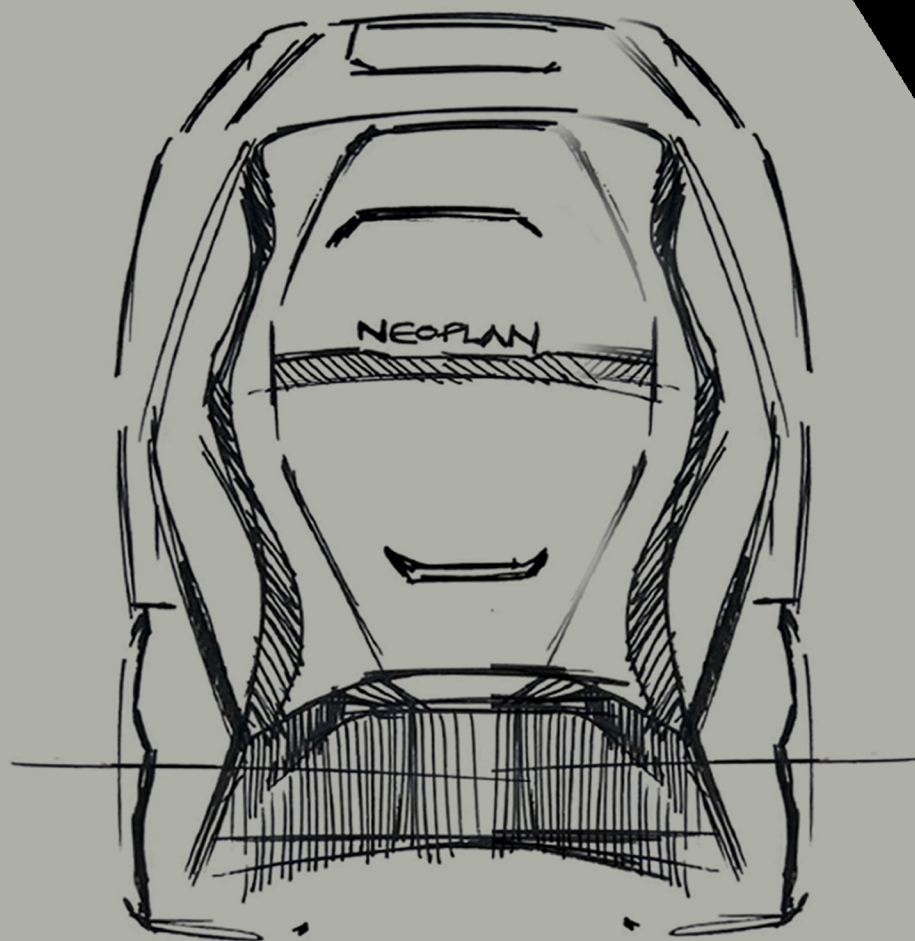
20

ChronoLiner 
NEOLIN MYSTIC PORTAL

> Mystic Rune Portal Rear Mask Development

The two-layer lighting design evokes the power of jet engines, mimicking the chevron fins of a turbine to suggest speed and effortless strength. This creates the impression of an active portal, enhancing the futuristic aesthetic. Additionally, the rear development introduces an artistic touch, with fluid, free-flowing movement that seamlessly unites the entire design. The combination of precision and elegance results in a dynamic yet sophisticated look, blending technical innovation with a sense of motion. This carefully integrated approach ensures a striking, cohesive design that captures both power and artistic expression.





Neoplan 2040 E Coach



X

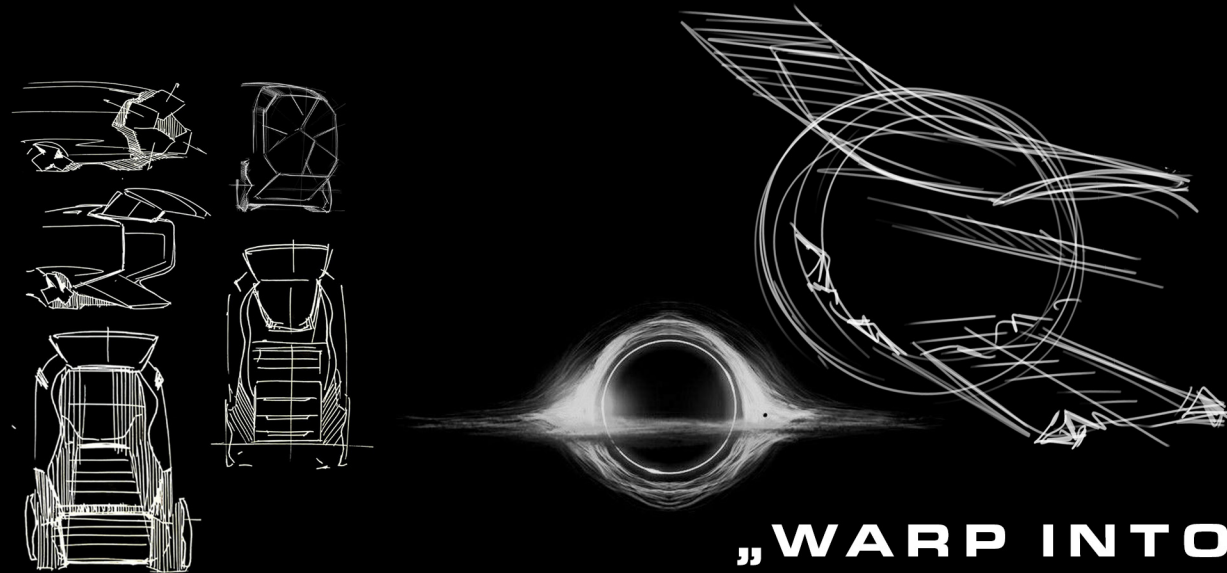


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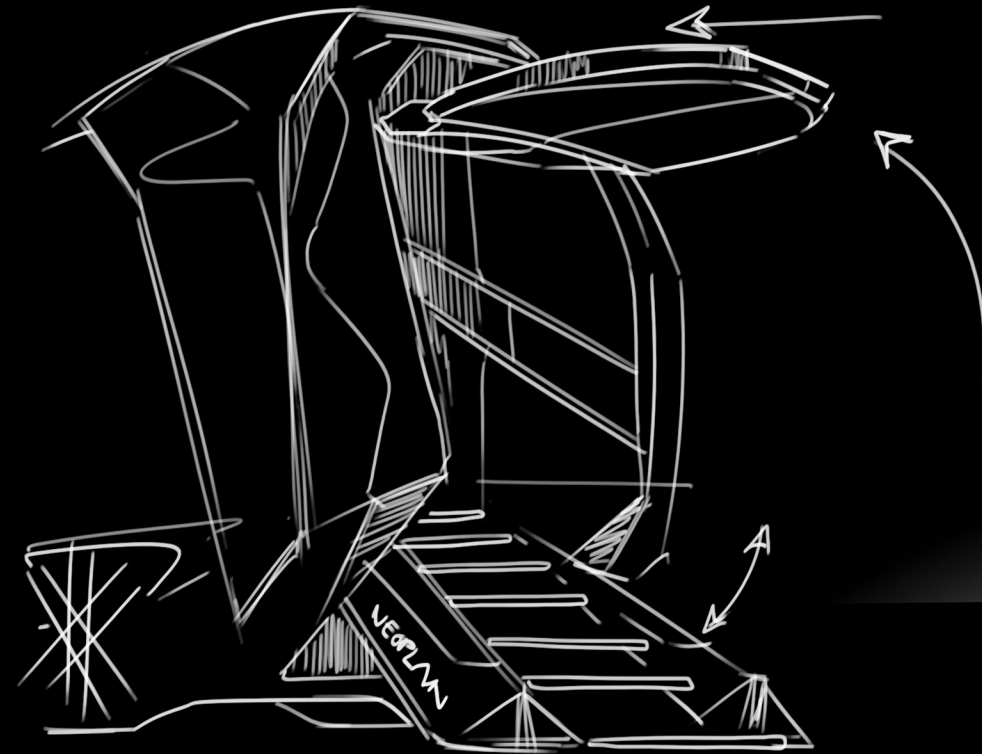
ChronoLiner
NEOPLAN MYSTIC PORTAL

> Mystic Rune Portal Rear Entry Development

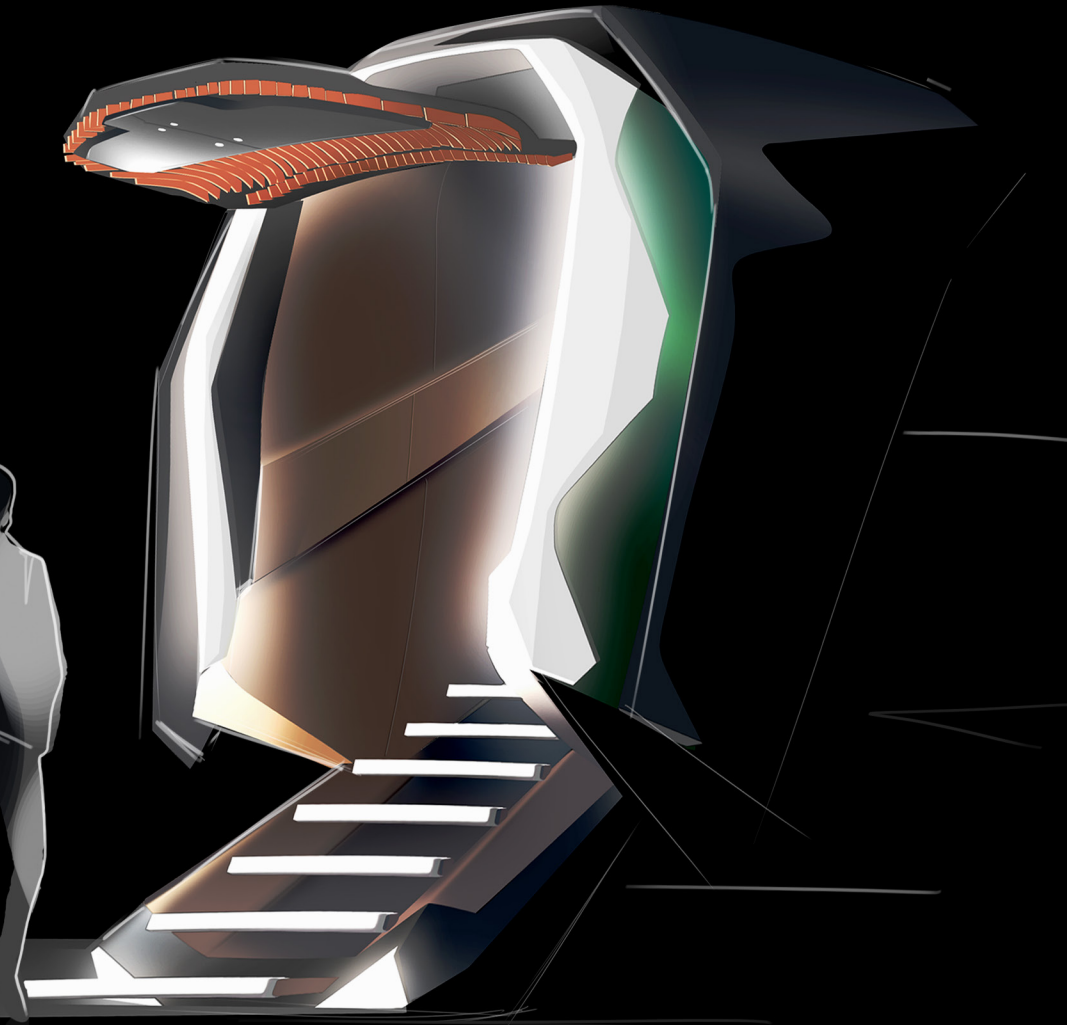
The rear entry of the new Neoplan design draws inspiration from the 1965 Neoplan Berlina bus, honouring its heritage with a modern interpretation. The distinctive rear entry design creates a sense of continuity, linking past and present. It introduces a warping effect to the portal, with the entry hatch seamlessly leading into the stairs. Additionally, the separated ramp enhances this effect, guiding the eye towards a vanishing point within the interior. This carefully crafted design not only respects Neoplan's legacy but also enhances functionality, offering a visually dynamic and innovative approach to passenger entry and movement within the bus.

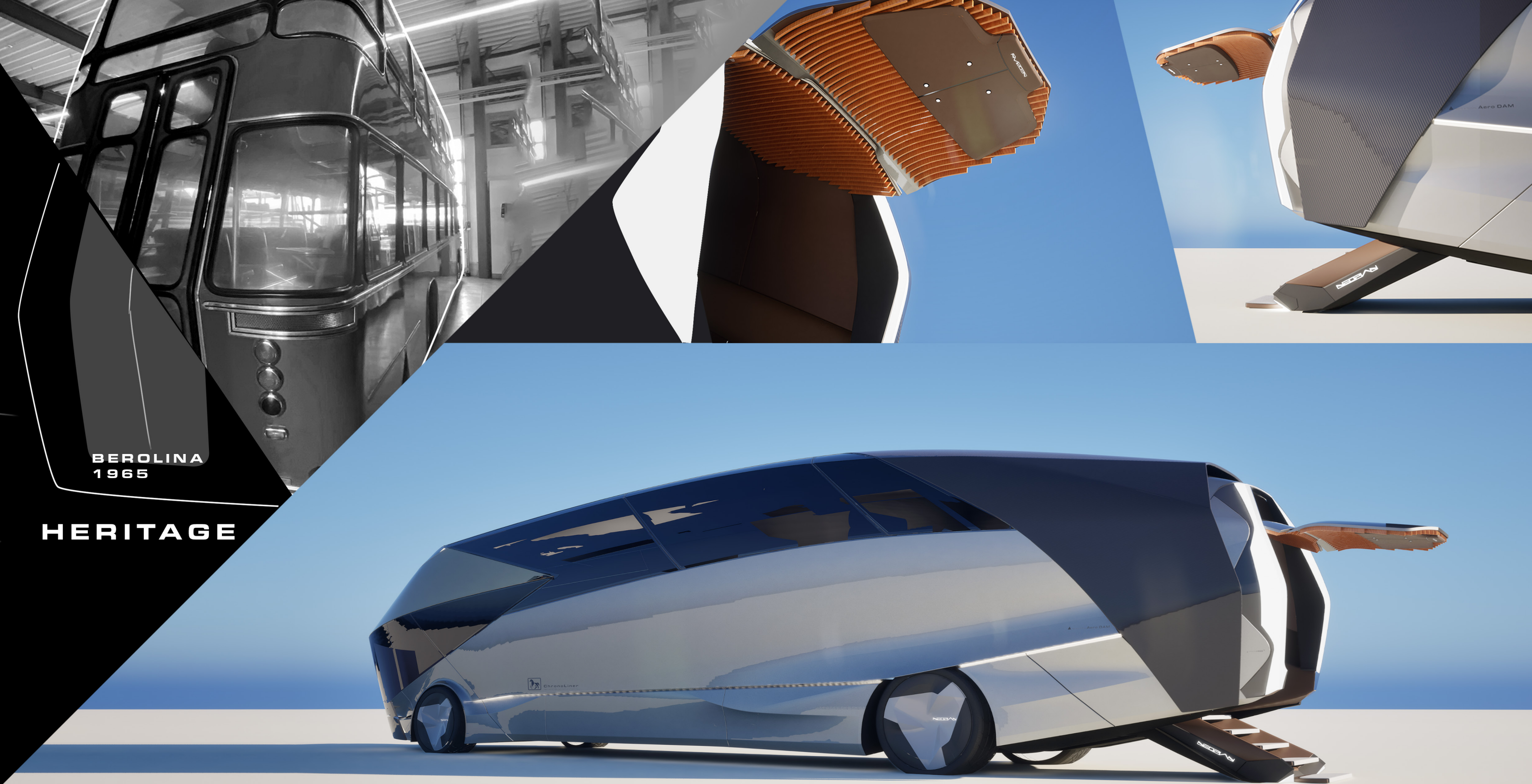


„WARP INTO“



REAR ENTRY





BEROLINA
1965

HERITAGE

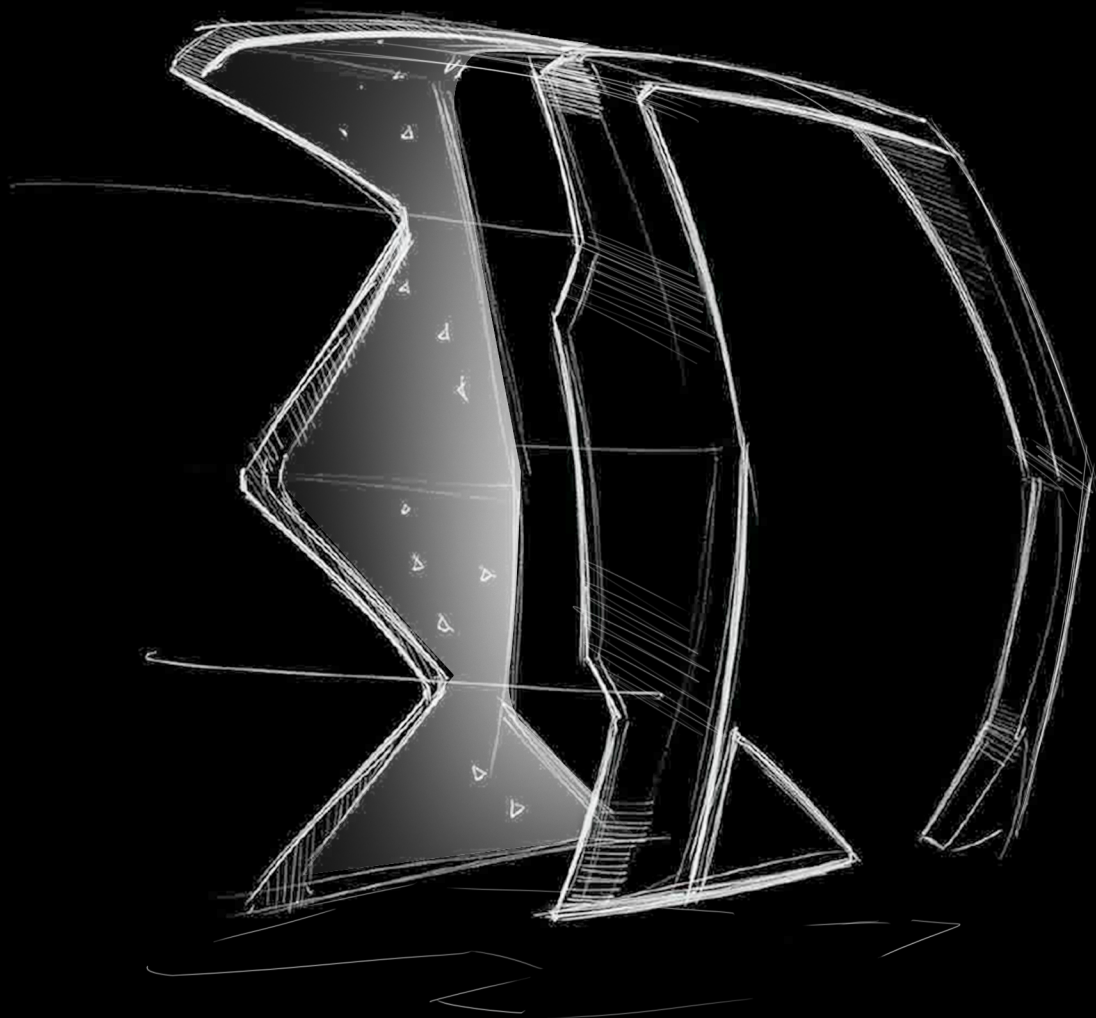
Neoplan 2040 E Coach

2 2

ChronoLiner
NEOLIN MYSTIC PORTAL

>Mystic Rune Portal Rear Light

The rear light consists of two layers, creating a portal effect enhanced by an animated warping particle effect. This gently draws the entry into the portal while evoking a sense of mystery and wonder. Combined with the chevron design outline, it reinforces the impression of an active portal, blending futuristic aesthetics with dynamic motion. This thoughtful integration results in a visually captivating and immersive design.

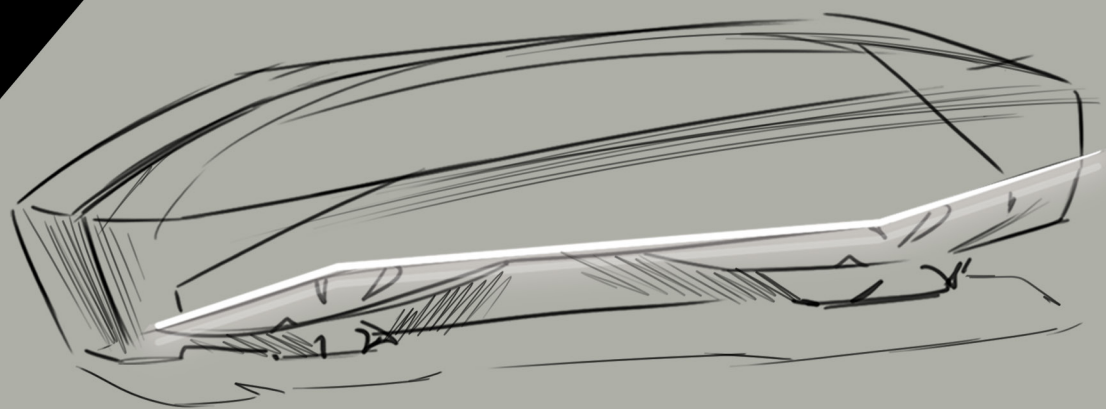


>Mystic Rune Portal Rune light detail

2 3

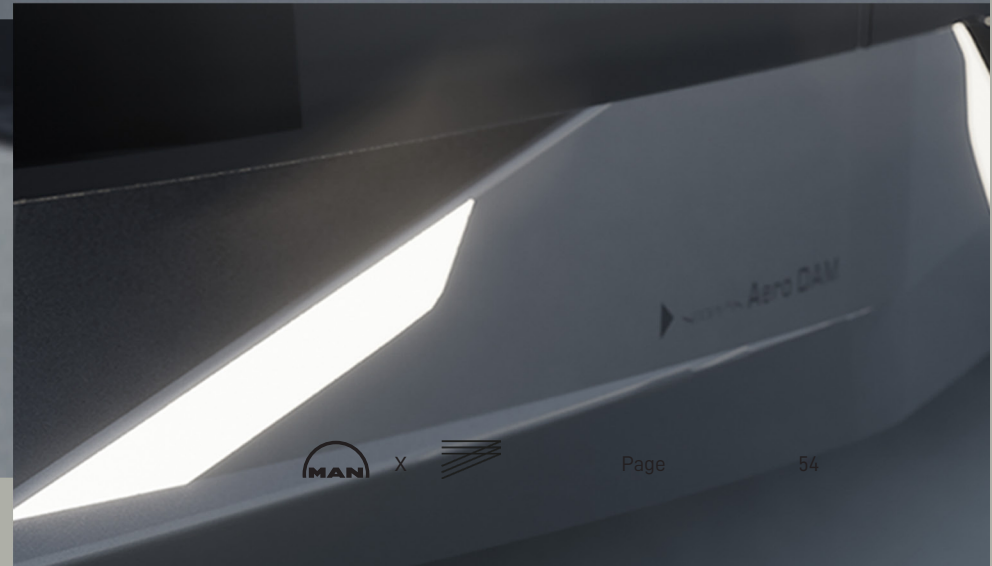
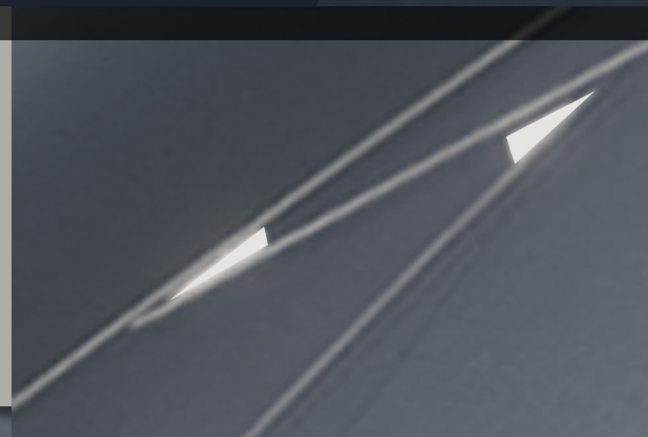
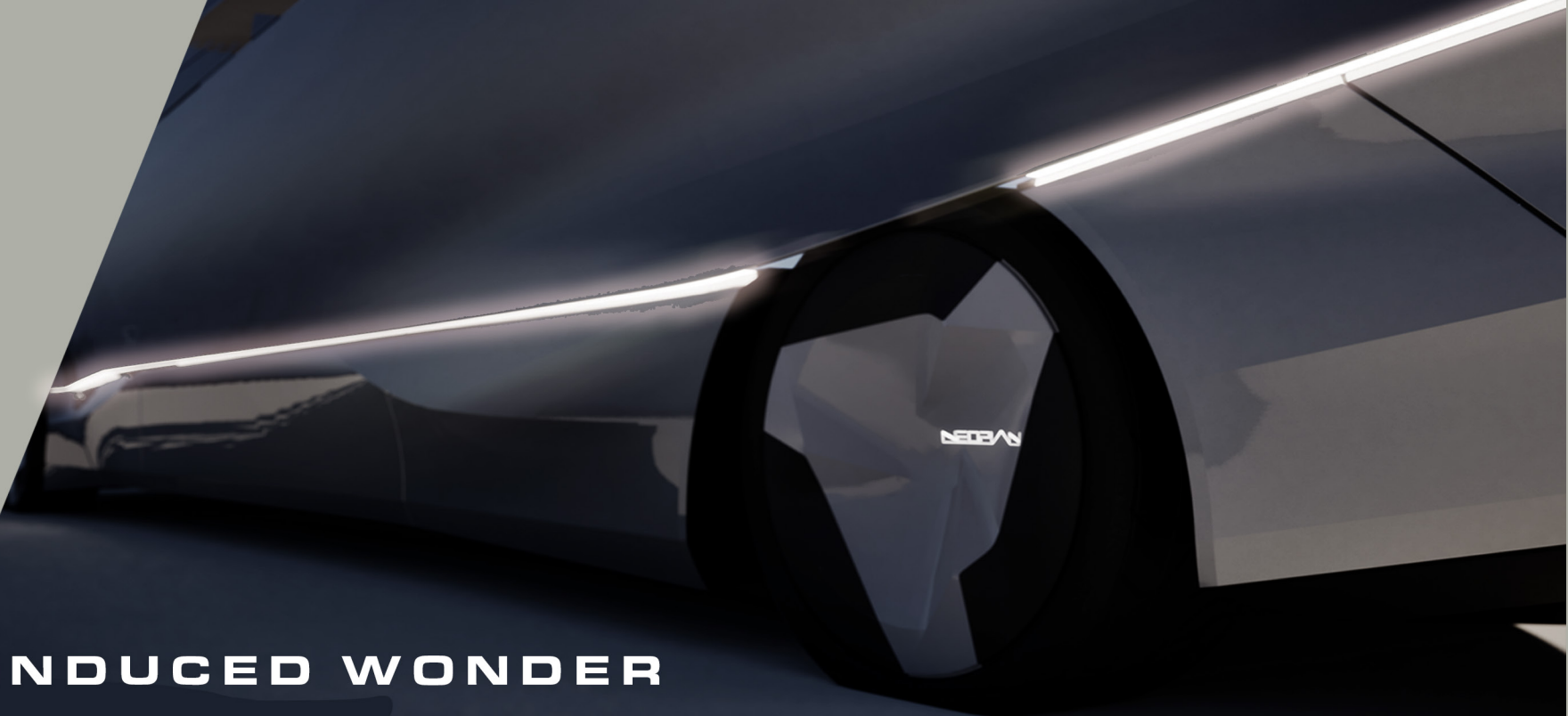
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The design features a light detail inspired by the Rune, symbolising Neoplan's timeless essence. This interpretation offers a fresh and intriguing take on enduring design, blending heritage with modernity. The Rune element evokes a sense of mystery and wonder, creating an emotional and unexpected experience. This mystical touch enhances the vehicle's character, making it not just a mode of transport but an artistic expression of timeless innovation.

INDUCED WONDER



Neoplan 2040 E Coach



X



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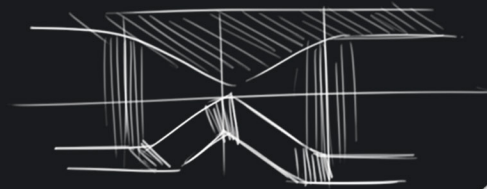
54

24



> Mystic Rune Portal Aero Wheel

The Aero wheel features a unique design, incorporating Neoplan's distinctive 'A' shape to create graphical separation and unexpected topological interaction. This innovative approach results in a visually striking design that blends heritage with emotion, enhancing both aesthetics and functionality while maintaining Neoplan's signature identity in a modern, dynamic form.



NEOPLAN „A“

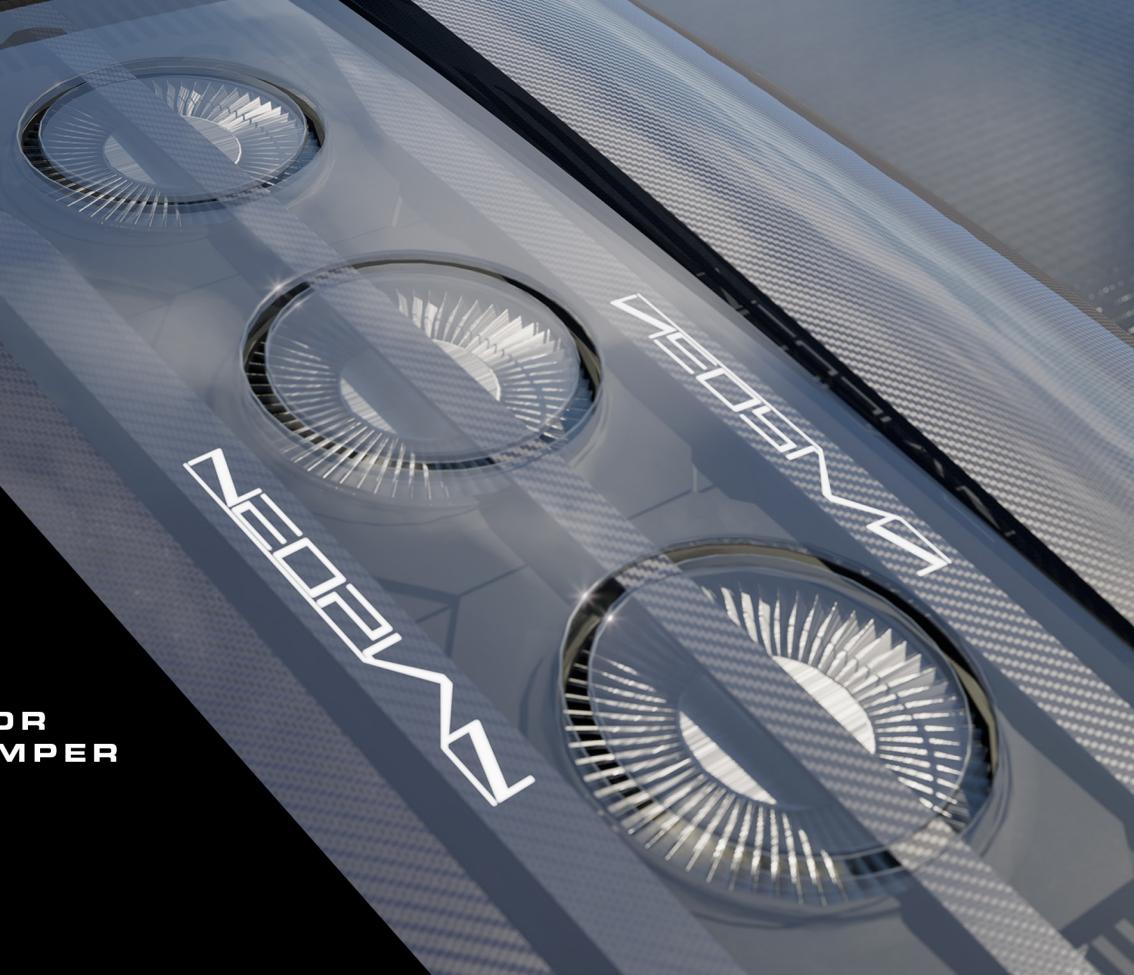
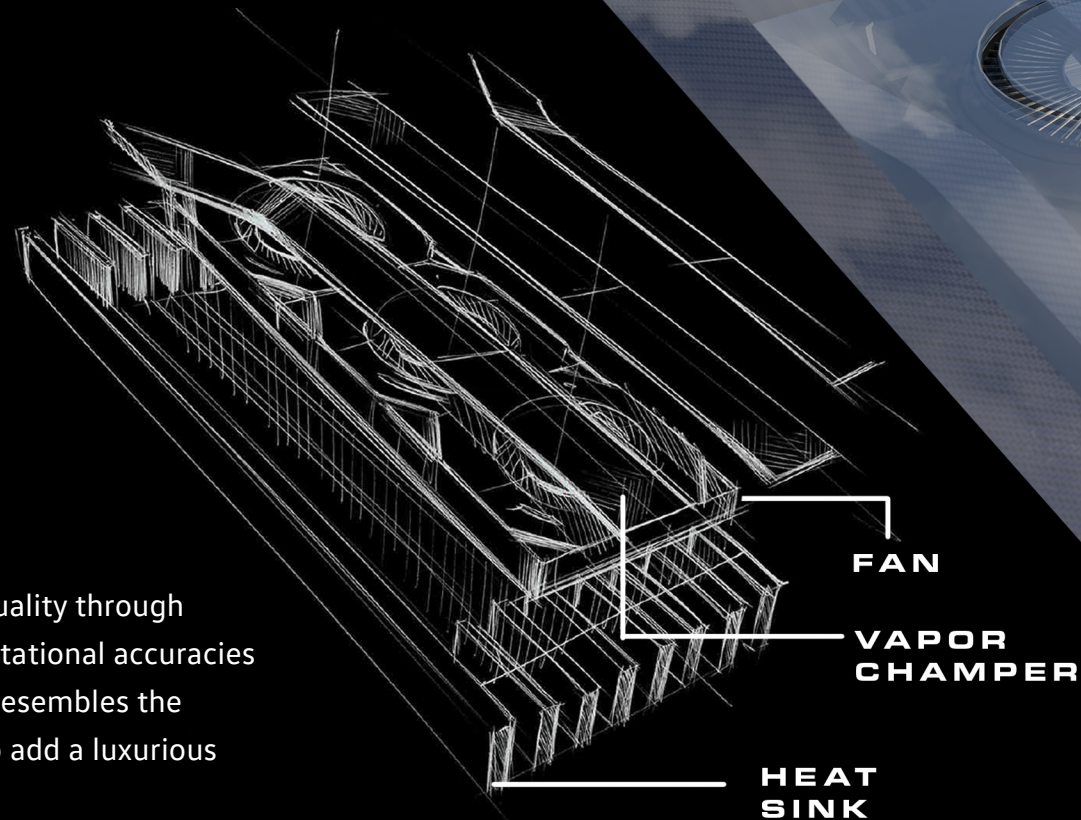
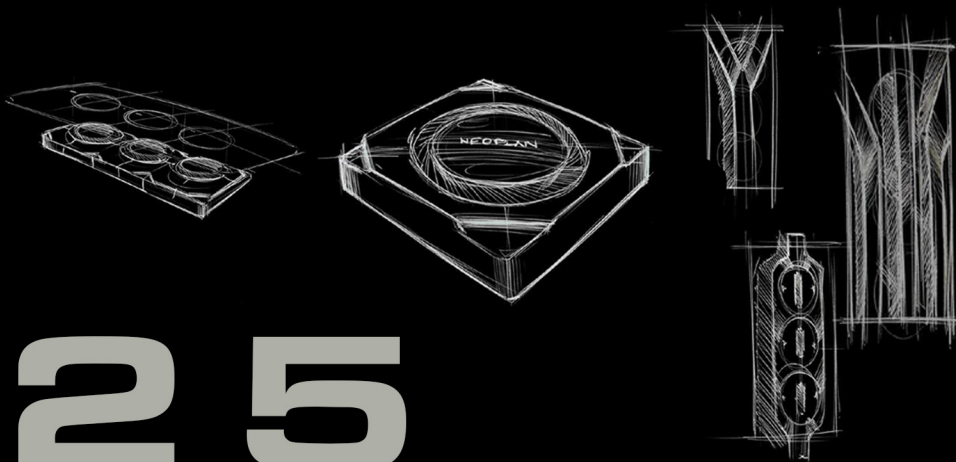
AERO
GRAPHICS
+ TOPOLOGY

25



>Mystic Rune Portal HVAC Module

HVAC provides luxurious quality through detail and suggests computational accuracies and proficiency. The form resembles the engine bay of a supercar to add a luxurious feeling to the coach.

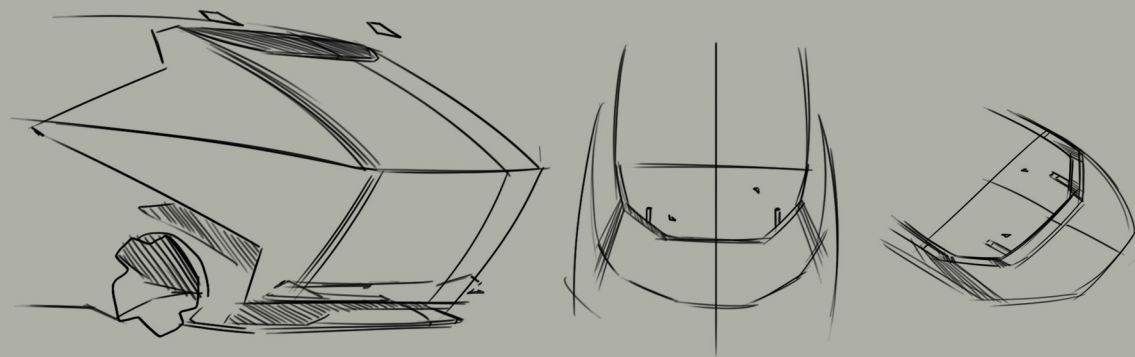


26



>Mystic Rune Portal LIDAR

A dedicated LIDAR technology space enhances Neoplan's technical essence and innovative spirit. Hexagonal elements and intricate details evoke a mystical aura, creating a sense of wonder and futuristic sophistication.



27

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NEOPLAN MYSTIC PORTAL



>Mystic Rune Portal Aero DAM

The new Neoplan design introduces an innovative aerodynamic advantage. Its sleek silhouette peaks at the rear and slopes down at a 14-degree angle, creating a boat-tail effect for enhanced efficiency.

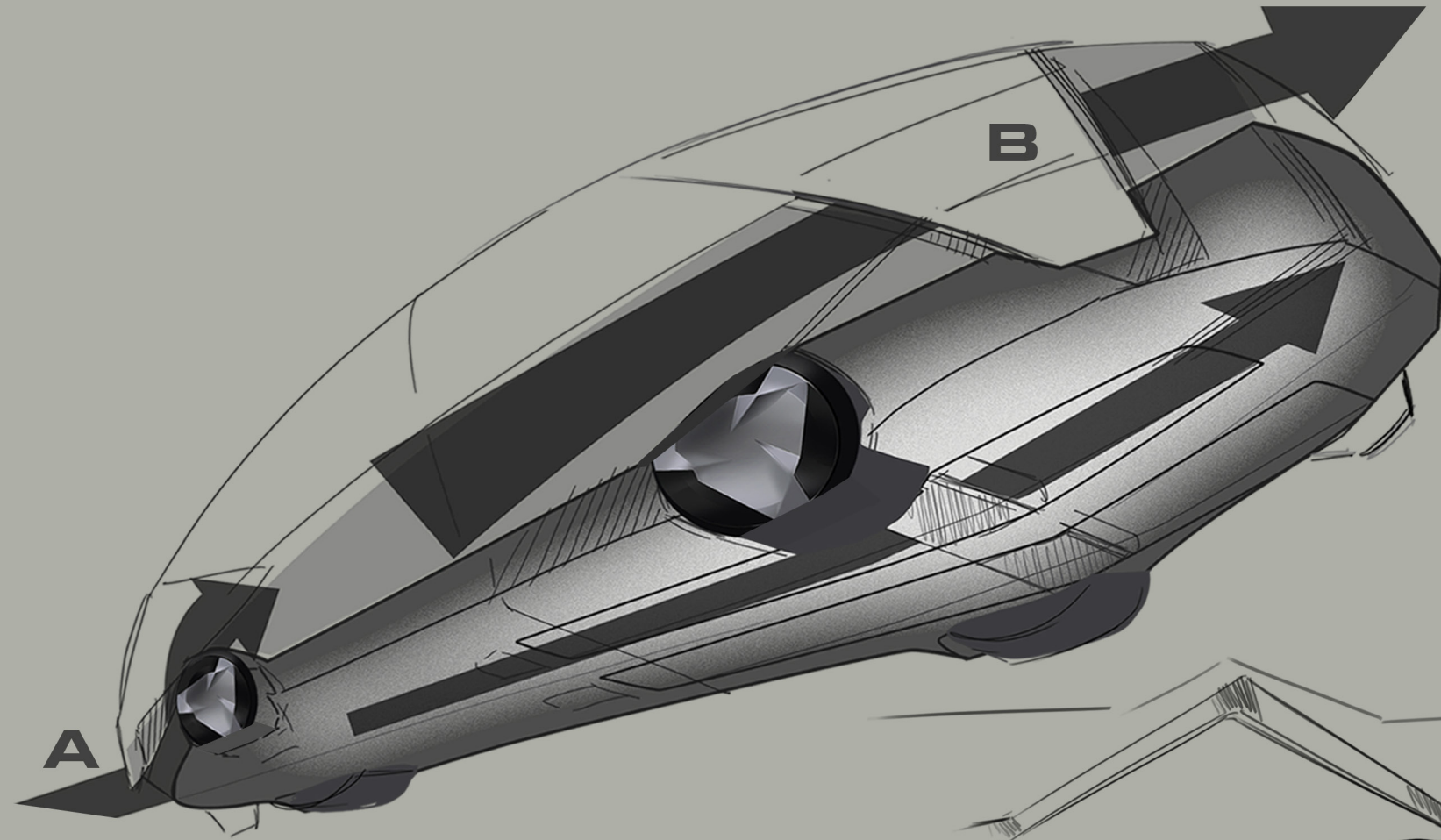
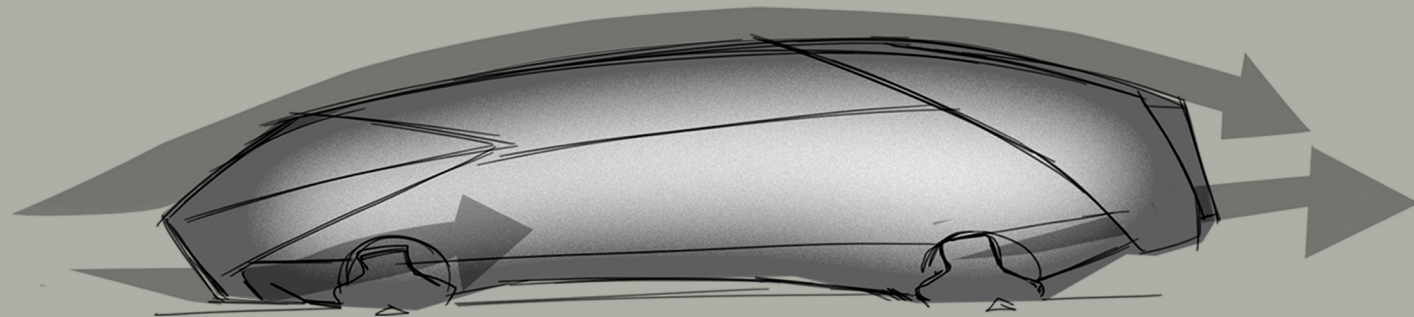
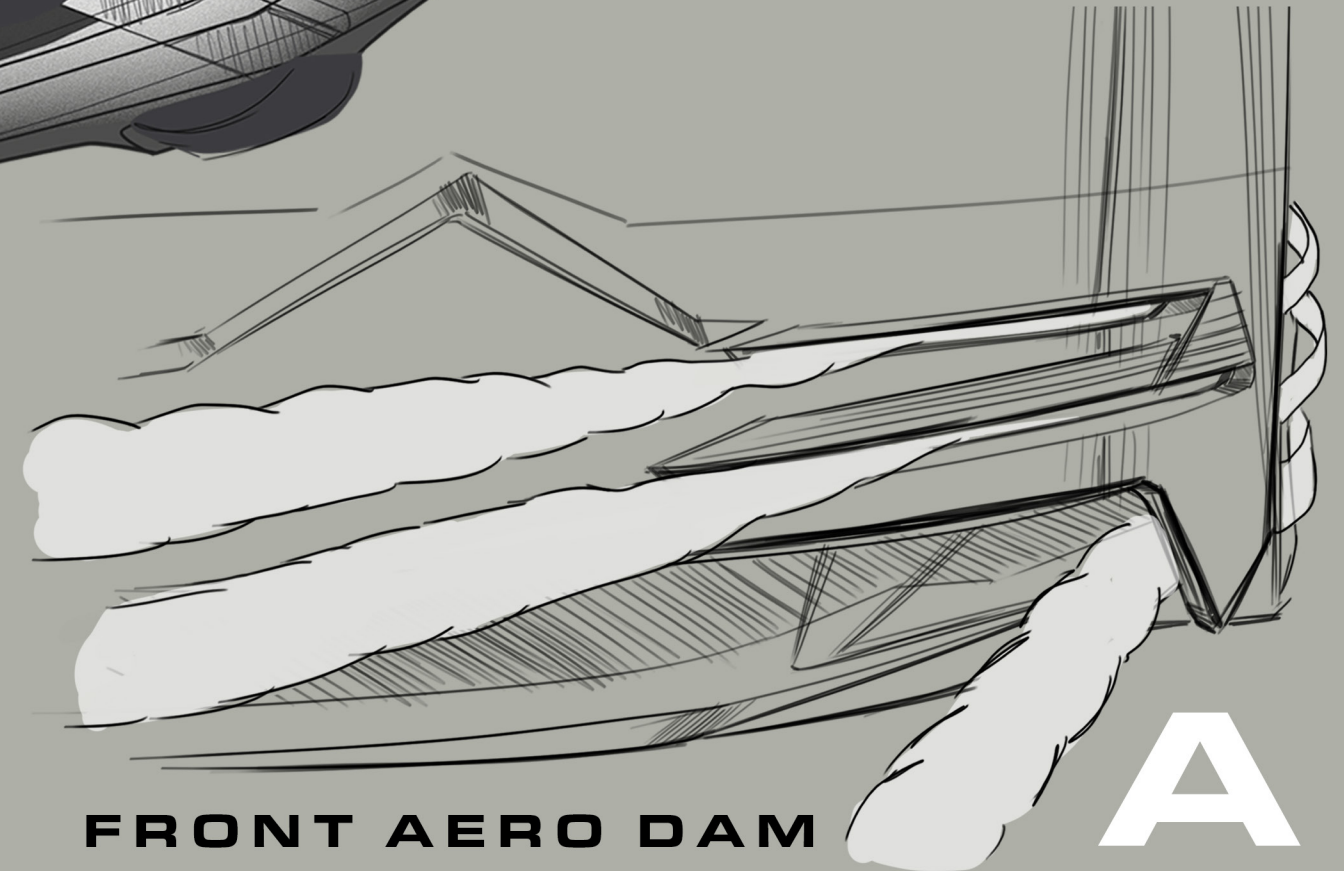


Figure "A" represents the first stage of aerodynamic management, where air is channelled through the front aero dam curtain, enabling smooth airflow towards the front fender and along the vehicle's sides. Figure "B" demonstrates the boat-tail concept, directing air through the side and bottom aero dam, optimising airflow towards the rear. This carefully engineered approach not only improves aerodynamics but also results in a striking and well-proportioned bus design.

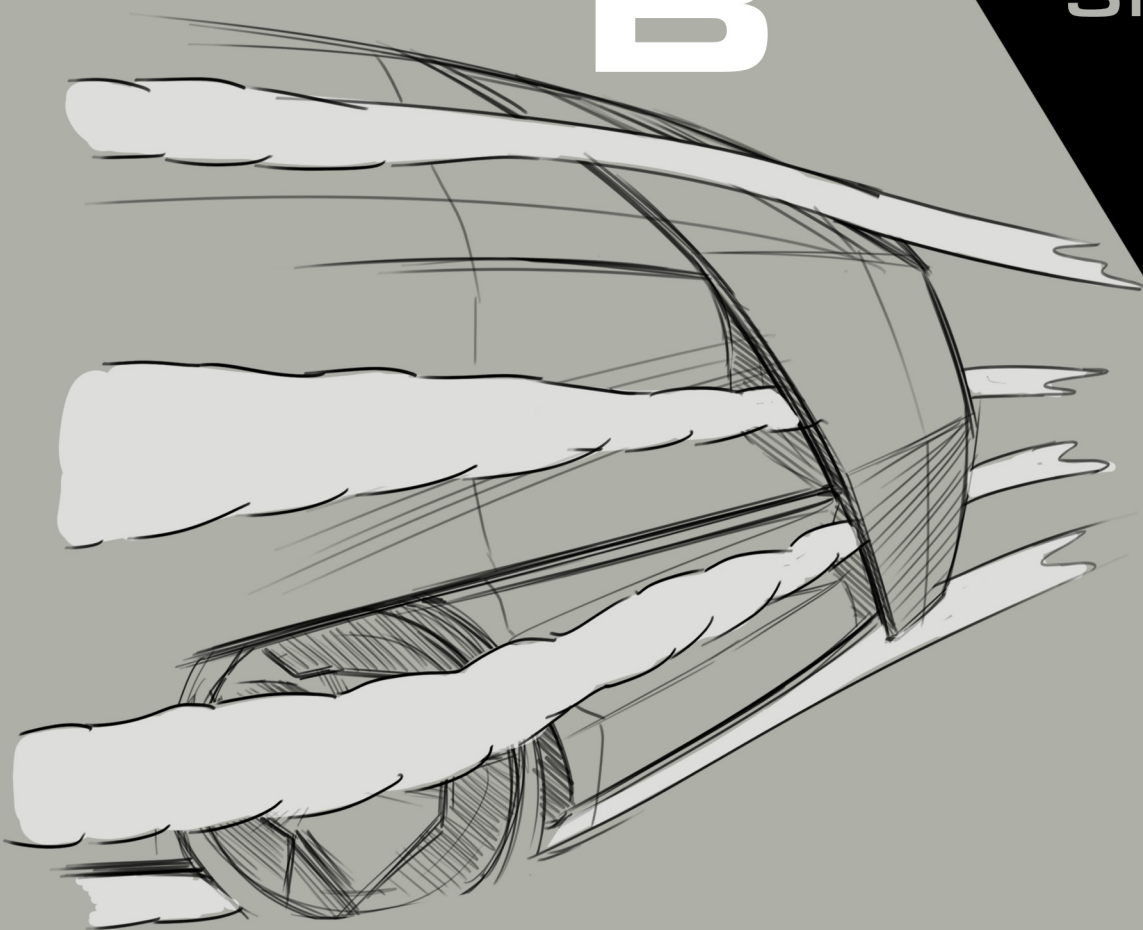


AERO SILHOUETTE



FRONT AERO DAM

REAR AERO DAM
B

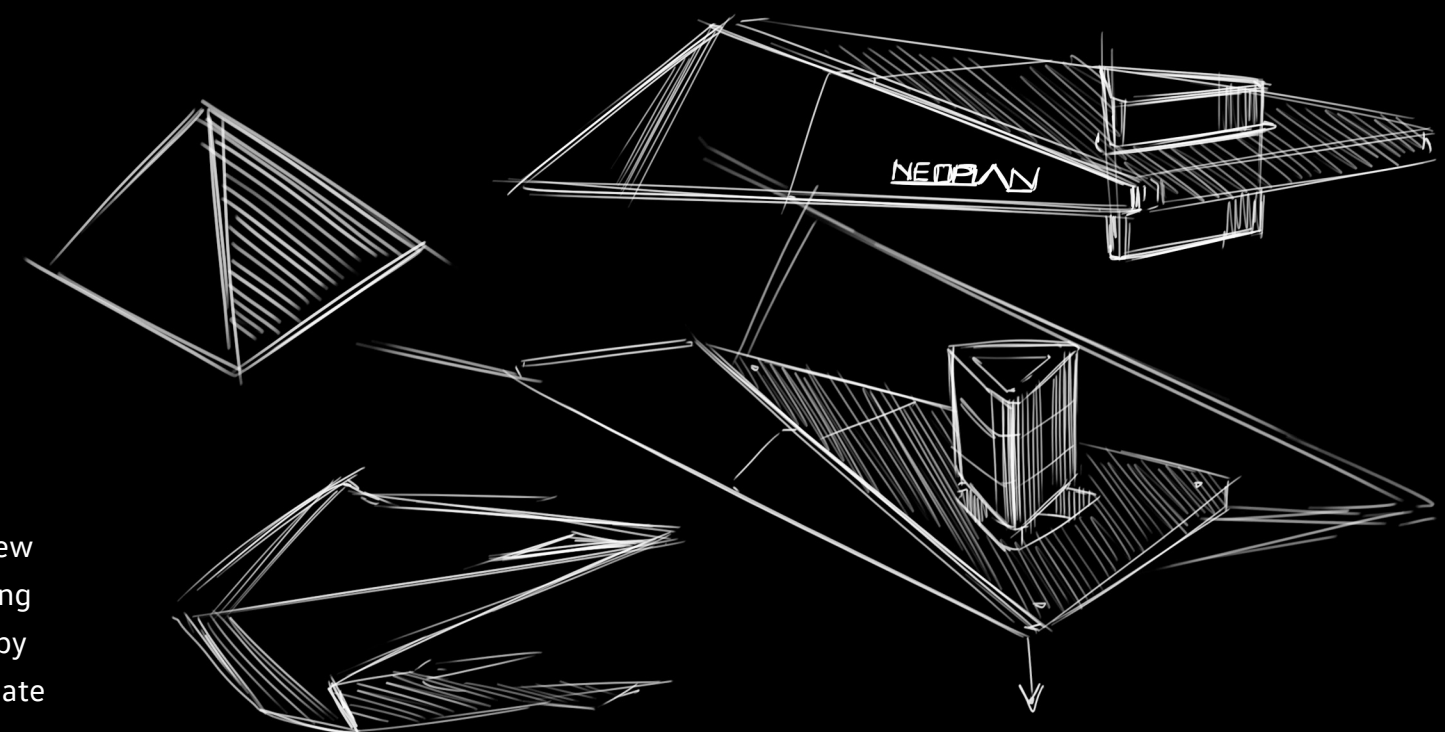


28



>Mystic
Rune Portal
Side CAM

The side cam introduces a new camera position, incorporating a pyramidal design inspired by mythical runes, adding intricate detail that enhances Wonder.
wonder.



MYSTIC + TECH



29

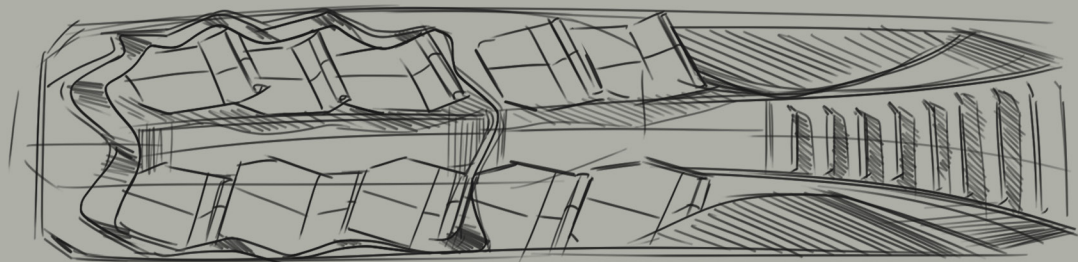
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NEOEVAN MYSTIC PORTAL



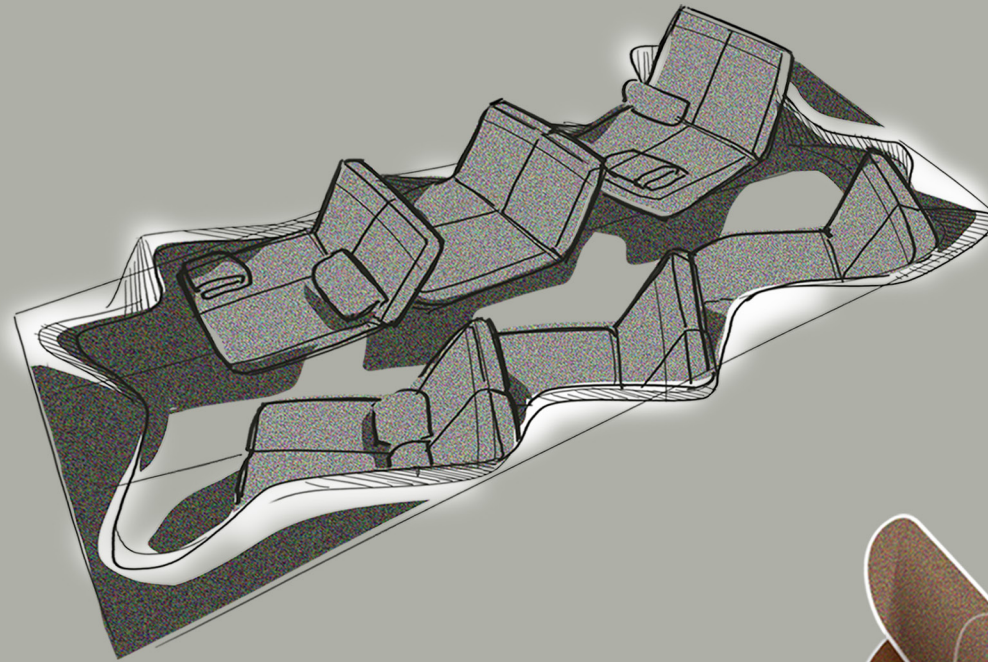
>Mystic Rune Portal Interior Development

The interior design embodies the concept of passengers travelling through a warp tunnel, experiencing ripples of light and time. The seats resemble sunbeds, offering a relaxed and comfortable atmosphere. The two-seater bench layout allows one person to utilise both seats if unoccupied, while still maintaining a strong horizontal design when shared. Passengers sit closer to the ground, creating additional ceiling space that enhances the overall sense of openness. Additionally, the design introduces a compression and expansion effect, where the rear entrance staircase leads into the vast interior volume. This compression builds excitement, making the space feel larger and fuller, enhancing the immersive experience.

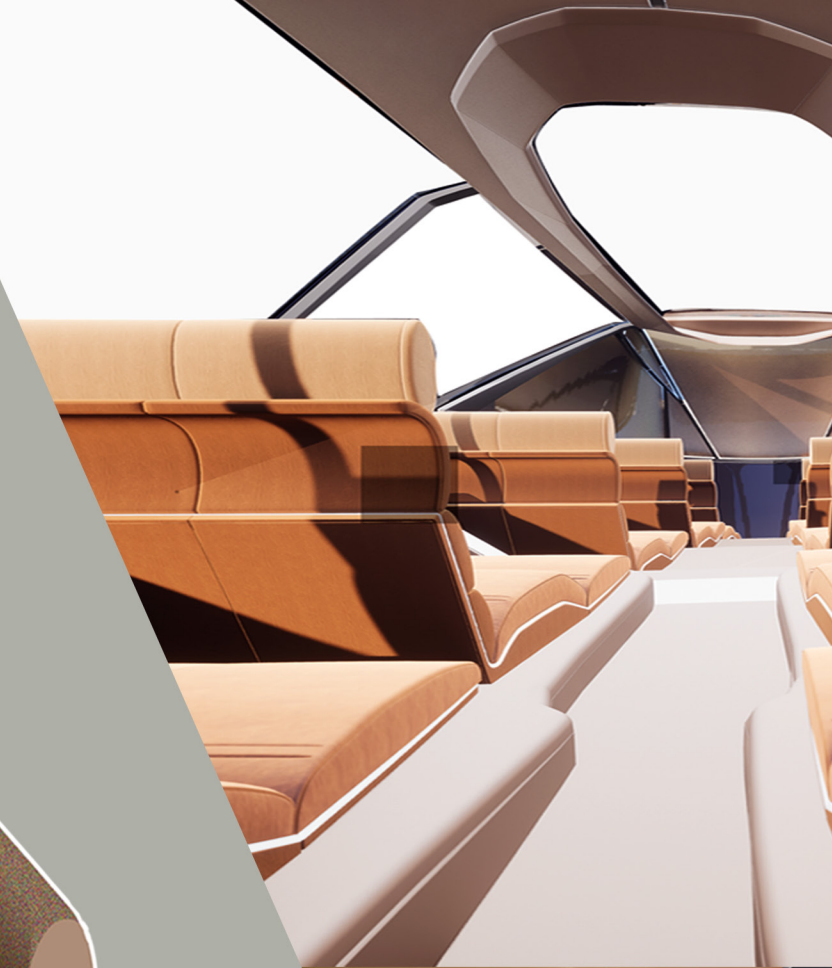
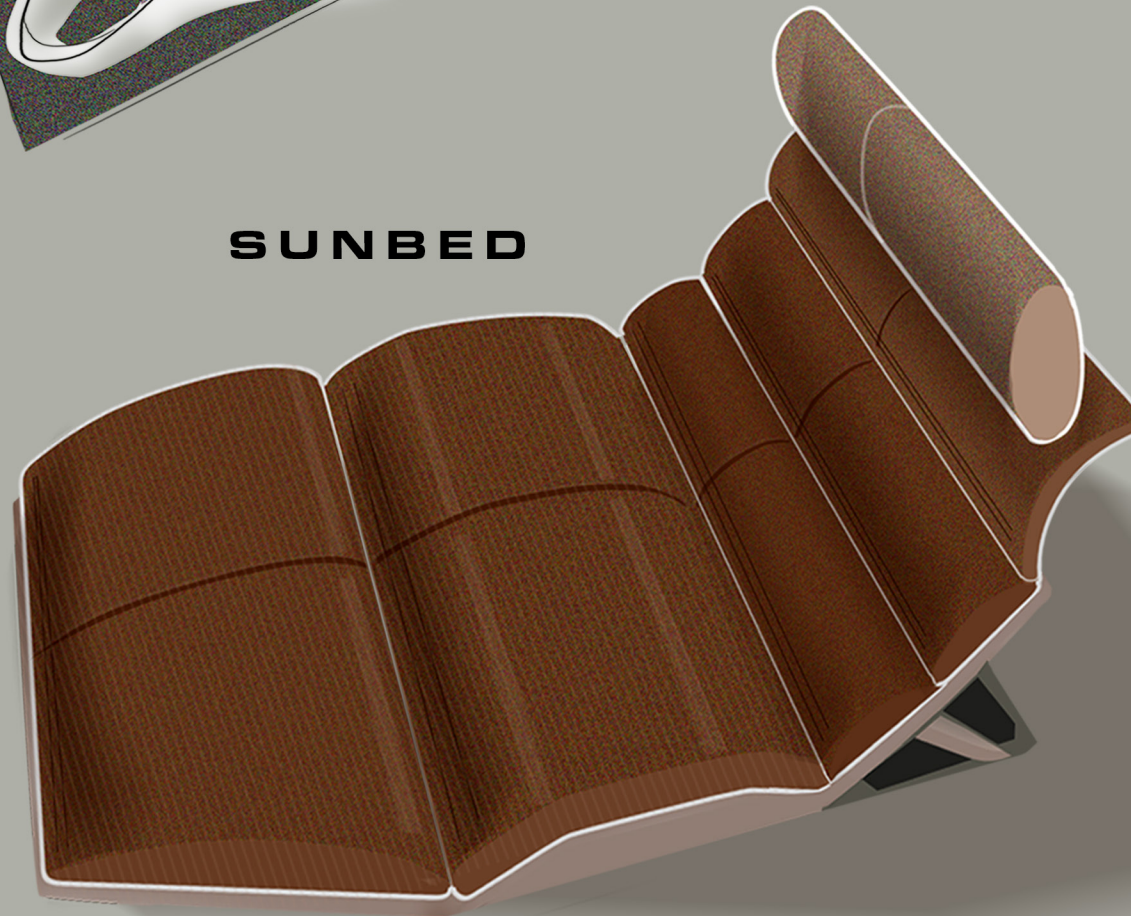
EXPANSION<<<<<COMPRESSION



**PORTAL
WAVE**



SUNBED





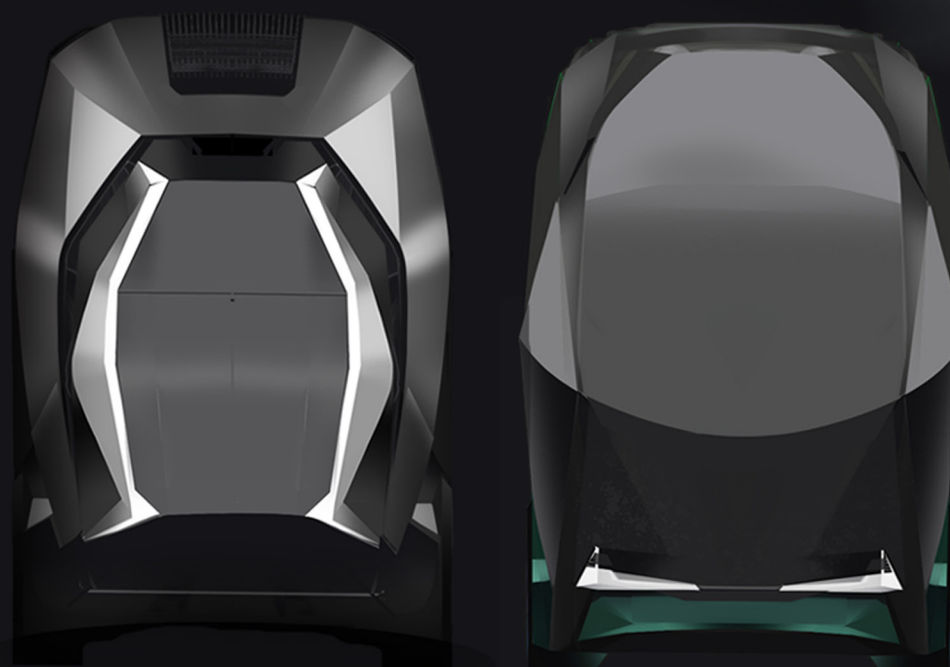
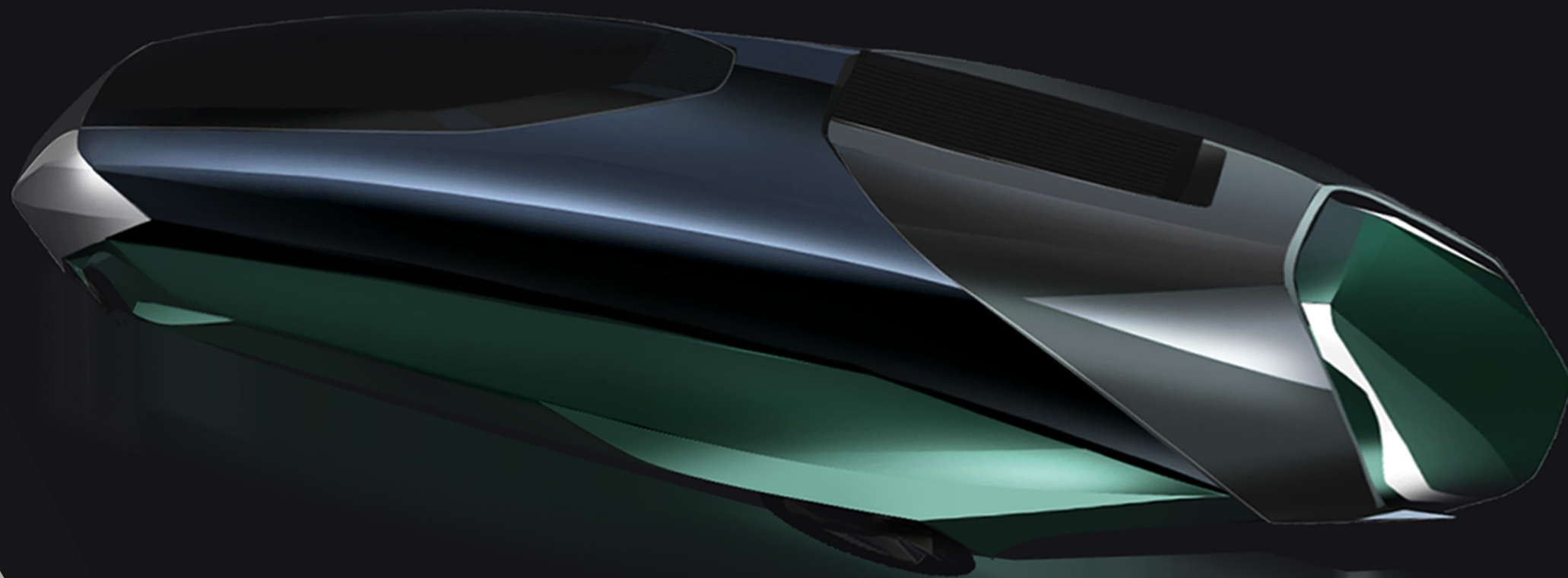
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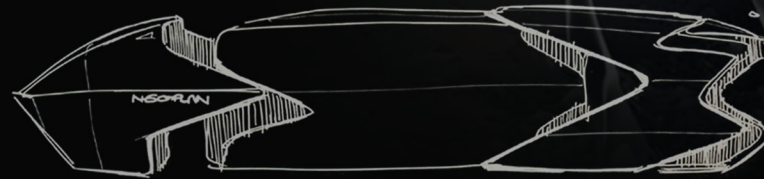
ChronoLiner
NEOLIN MYSTIC PORTAL



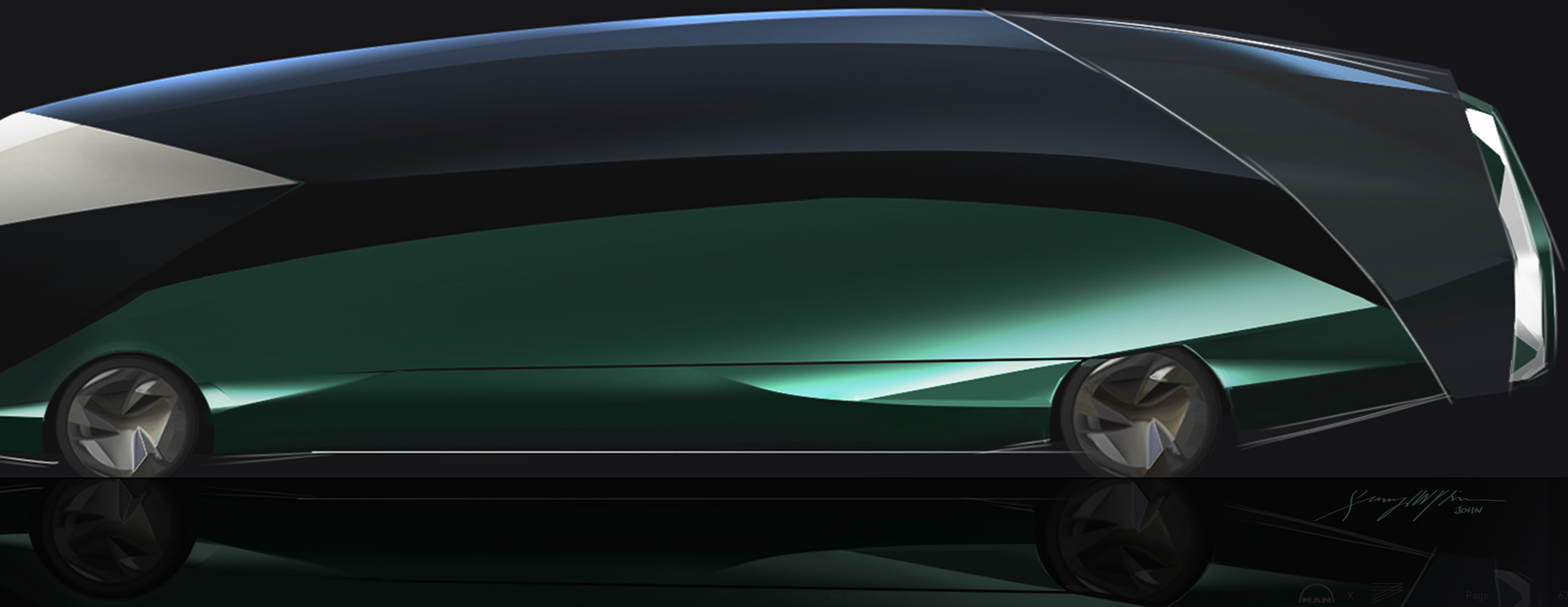
> Mystic Rune Portal Key Sketch Direction

The Mystic Rune concept key sketch marks a departure from traditional bus design, introducing a bold, angular form with diamond-cut surfacing. This radical approach integrates three modular components, seamlessly combining them with the essence of the Mystic Rune concept. The result is a futuristic, sculpted volume that enhances both aesthetics and functionality, redefining bus design with a striking balance of innovation, geometry, and mysticism.





MODULAR+ FORWARD PORTAL



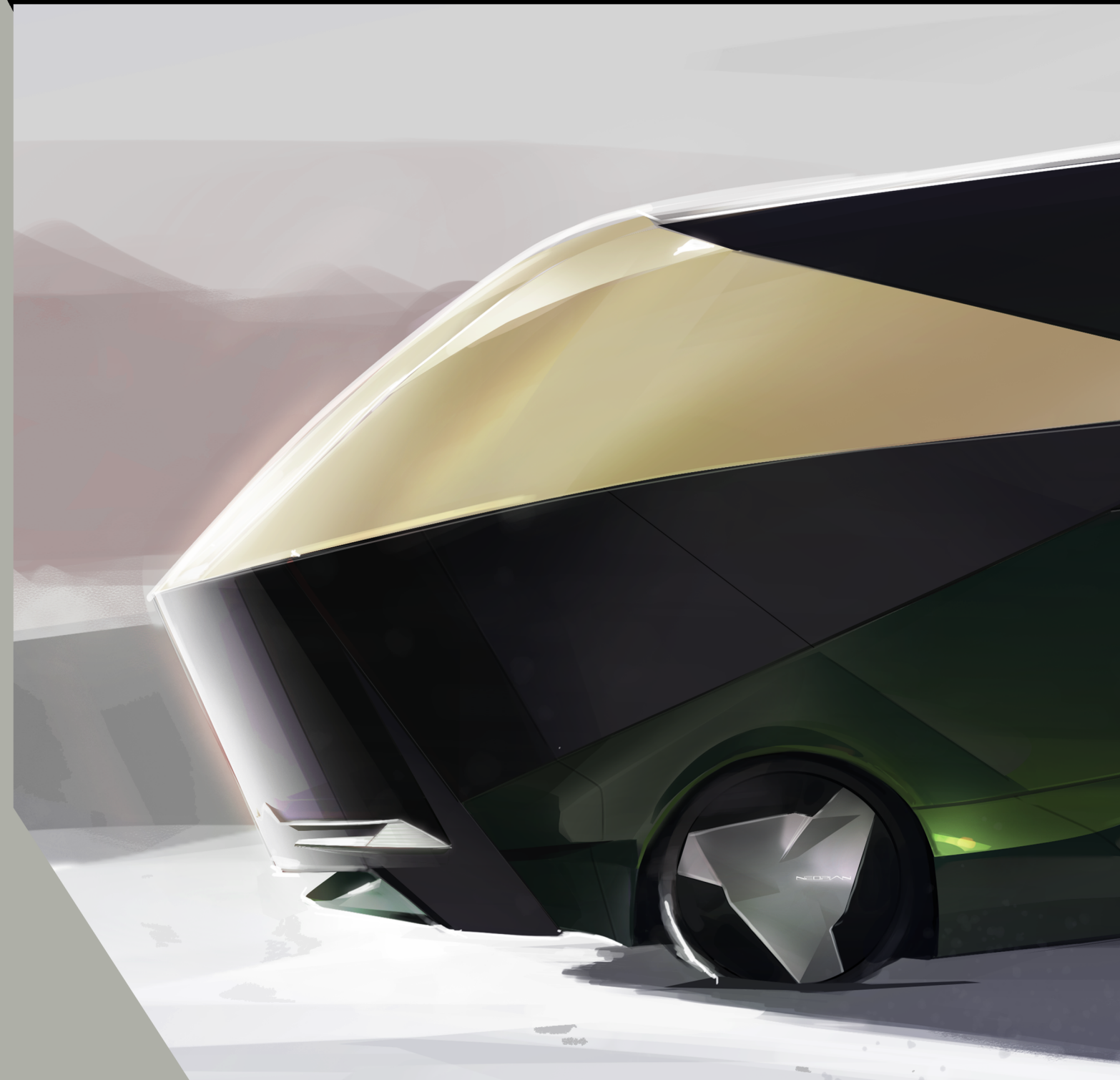
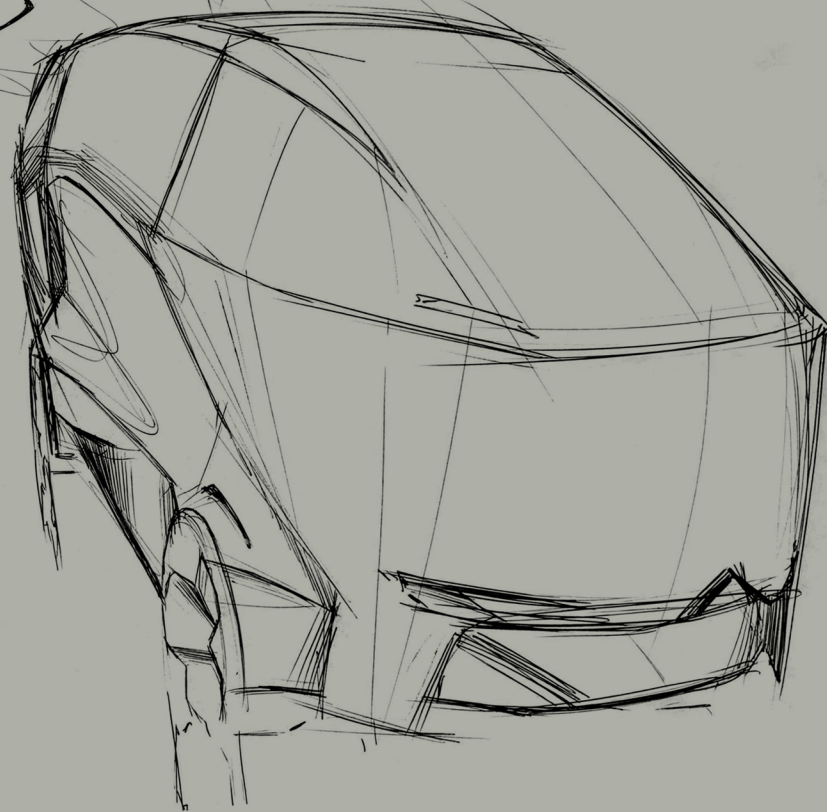
John
JOHN

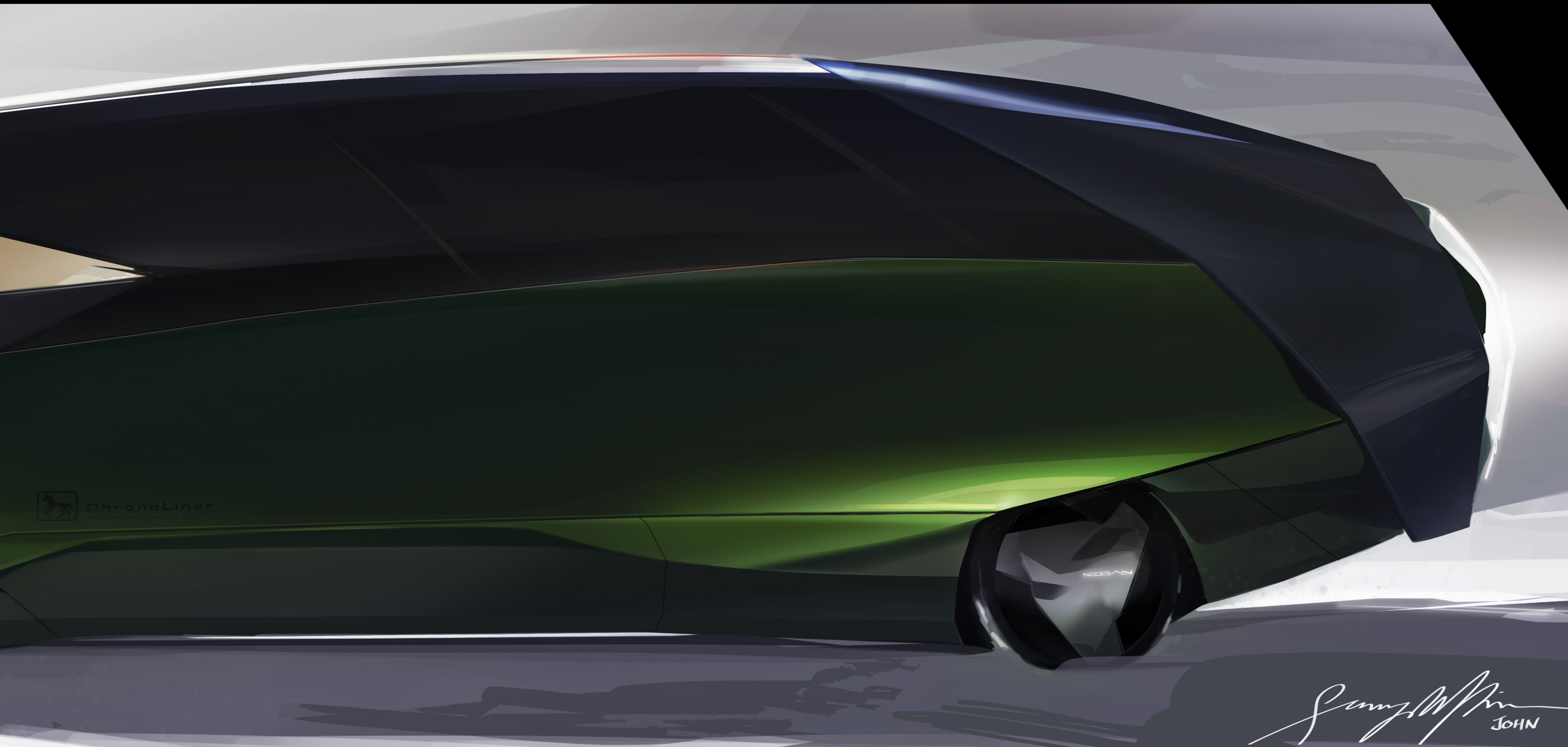
3 1

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NEOPLAN MYSTIC PORTAL



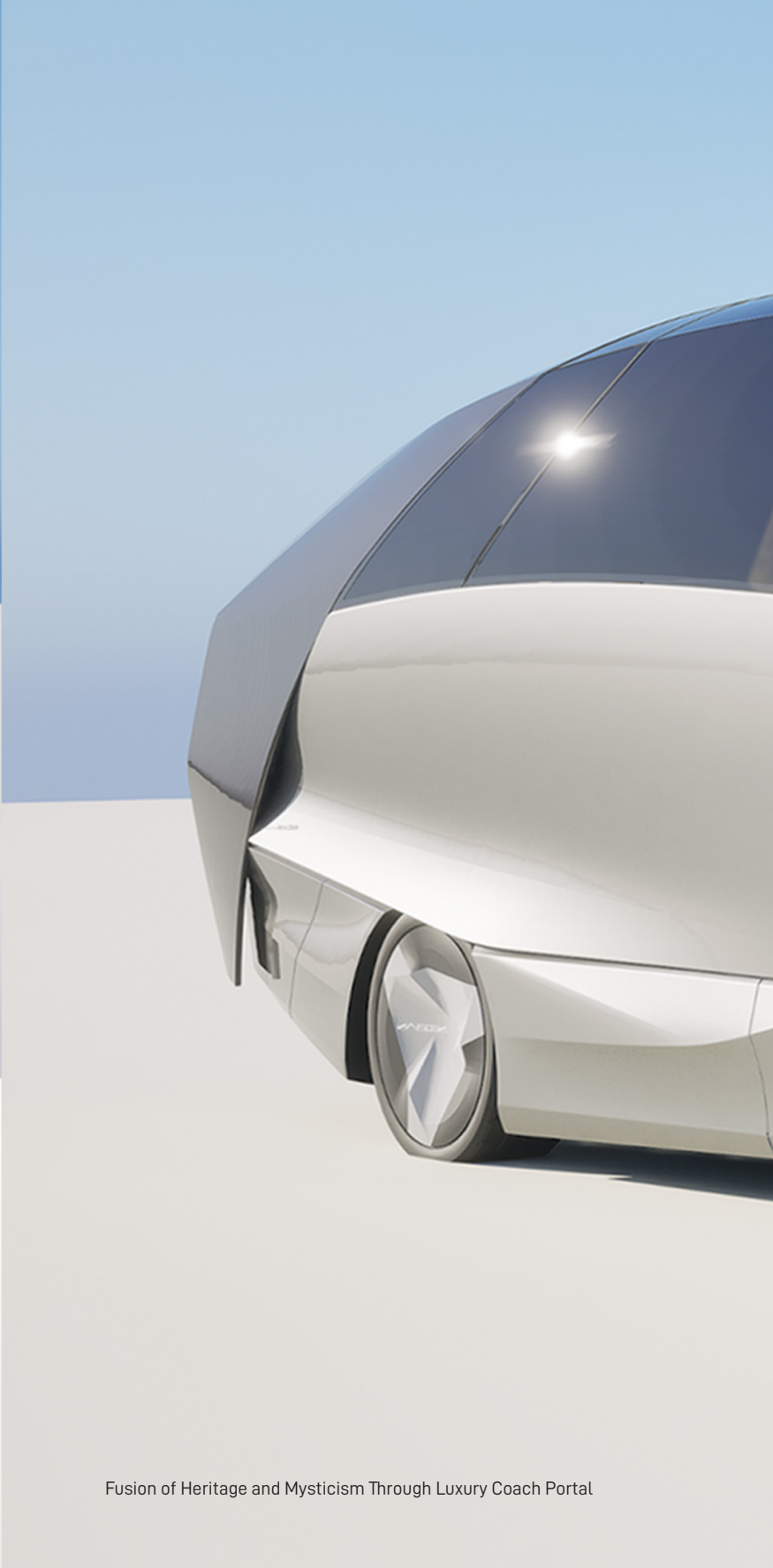
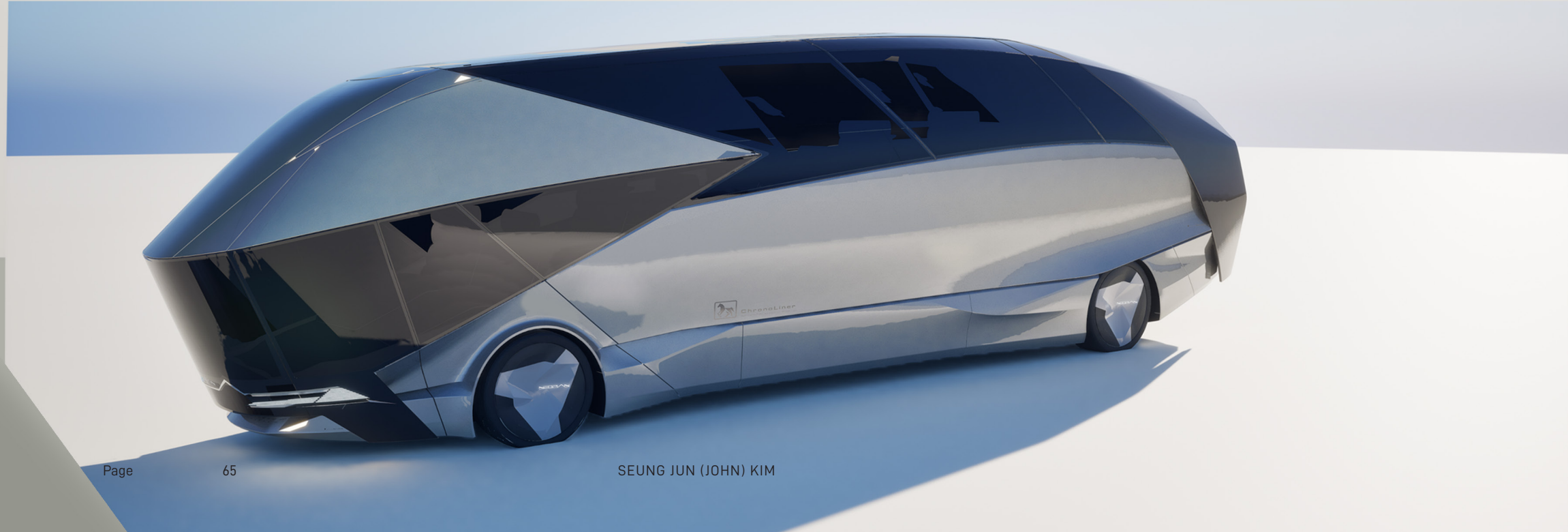
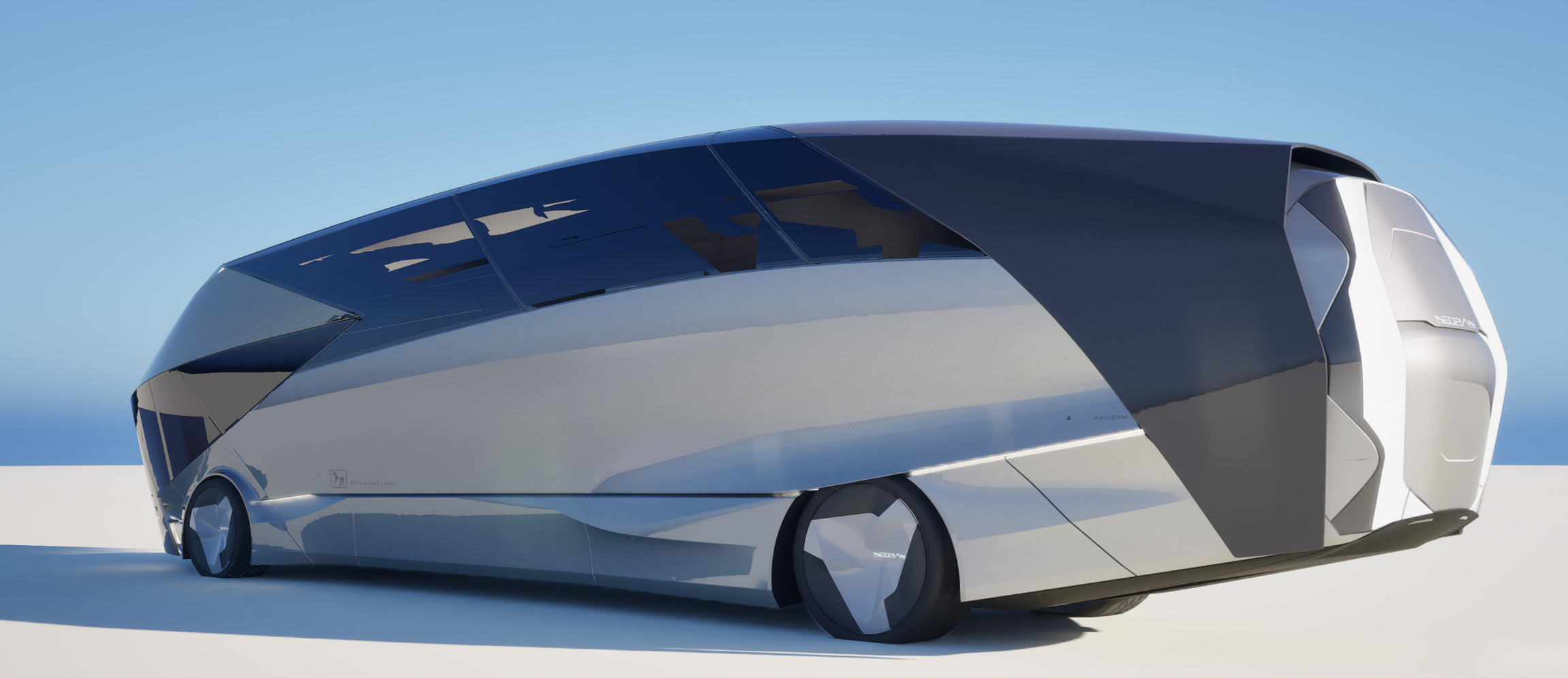
> Mystic
Rune Portal
Final Design
Direction

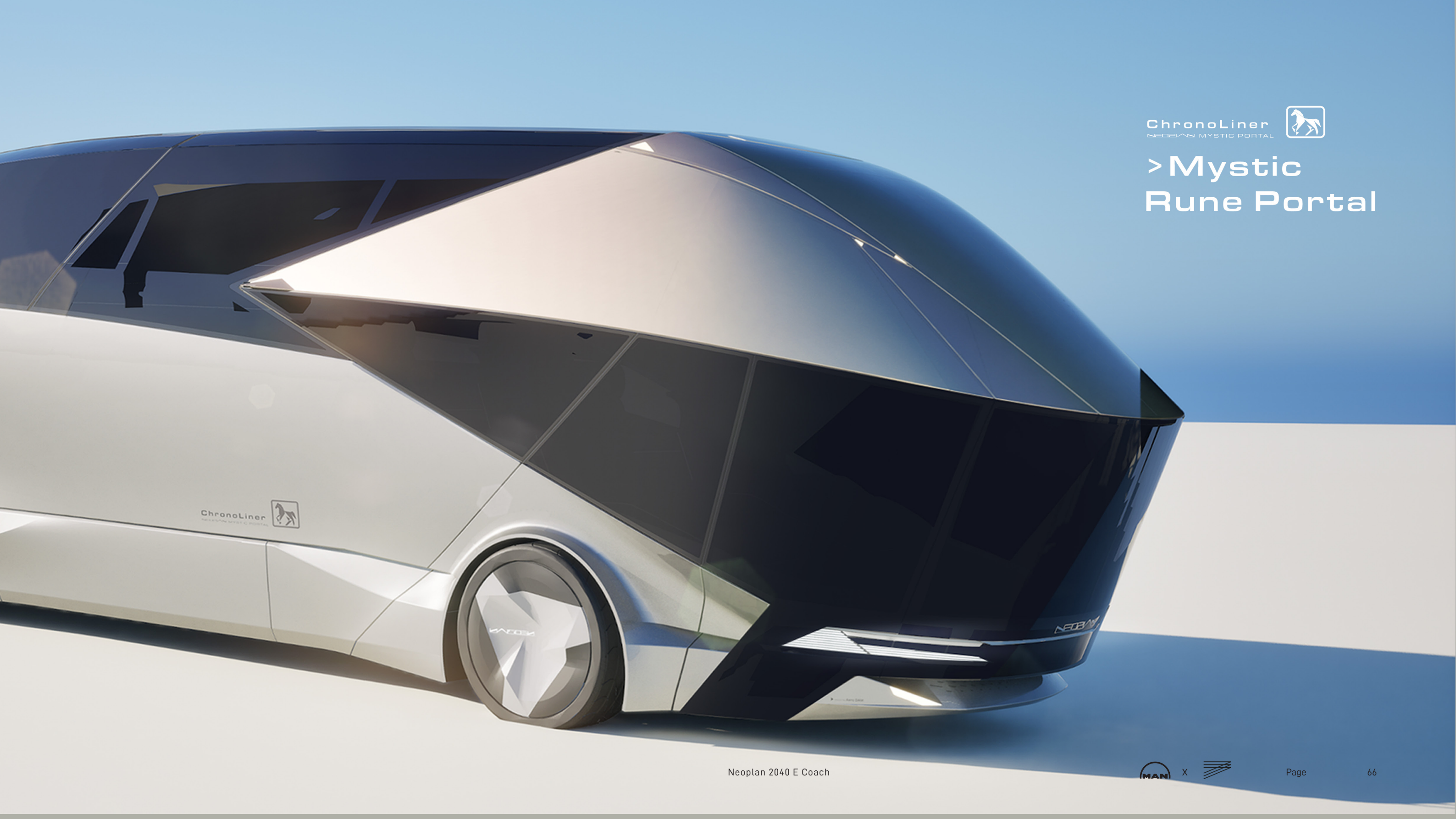




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Samuel Pin
JOHN





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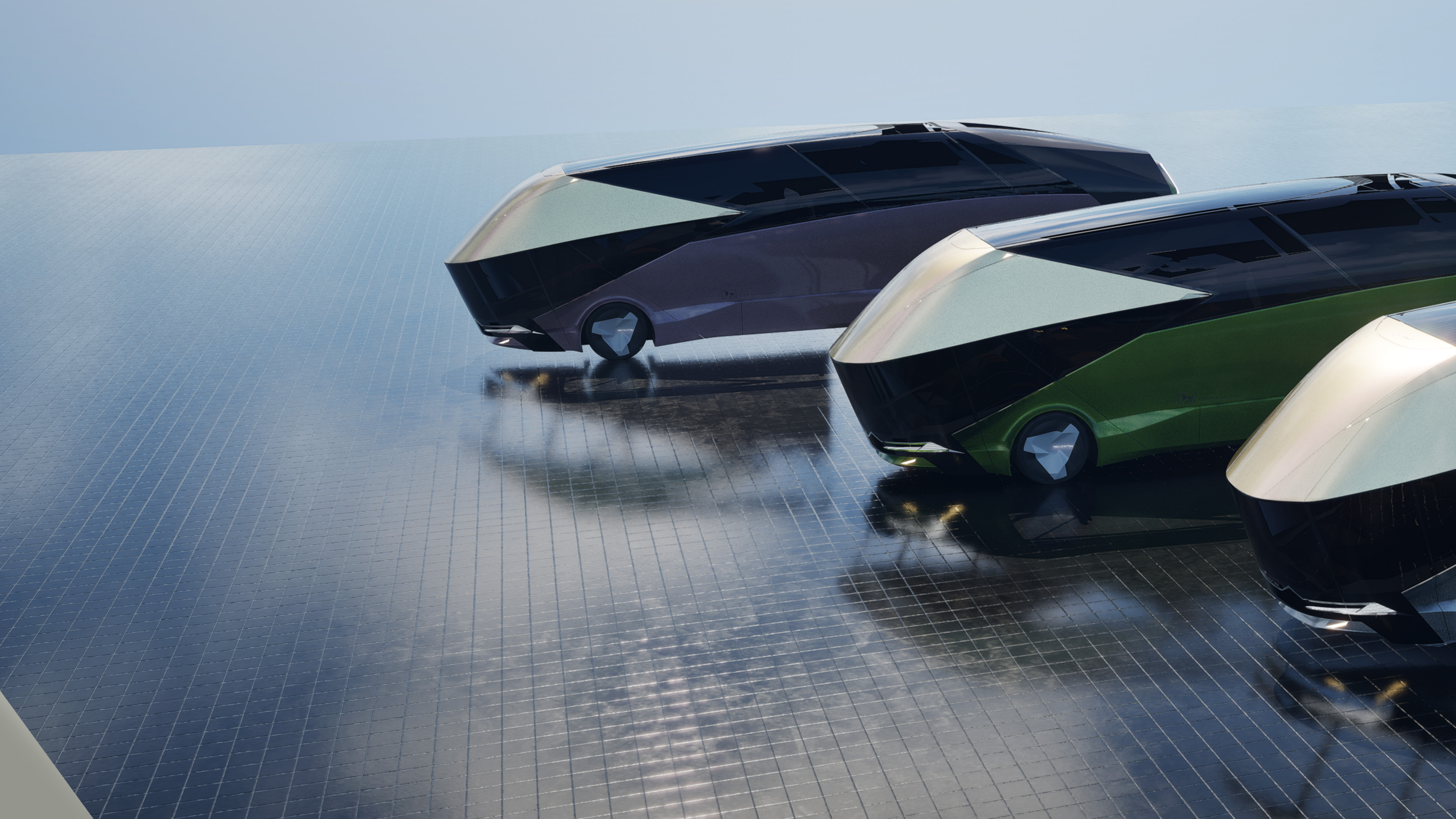


> Mystic Rune Portal

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NEOPLAN





3 2

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MYSTIC PORTAL

> Mystic
Rune Portal
CMF Development/ Ideation



RECOMMENDATION

Vault Luxe embodies the fusion of high-end sophistication and cutting-edge energy storage design. This colour concept draws inspiration from the secure, high-capacity nature of a vault, representing strength, innovation, and reliability, while the Champagne gold, grey, and black

1. VAULT LUXE

tones convey elegance and refinement. It is a vision of premium energy solutions that combine luxury aesthetics with sustainable functionality, reimagining storage as both a technical marvel and a design statement.



Mystic Aurora is a mesmerizing blend of Champagne gold and blue-tinted glass, designed to evoke a sense of ethereal beauty and wonder.

2. MYSTIC AURORA

The colour and trim capture the shimmering, mystical quality of a northern light display, offering a sophisticated yet emotional experience. This palette combines luxury with an enchanting, otherworldly allure, creating a premium aesthetic that feels both timeless and transcendent.



Celestial Opaline is a luxurious, multi-dimensional colour that blends a pristine white base with delicate undertones of purple and blue. Inspired by the iridescent quality

3. CELESTIAL OPALINE

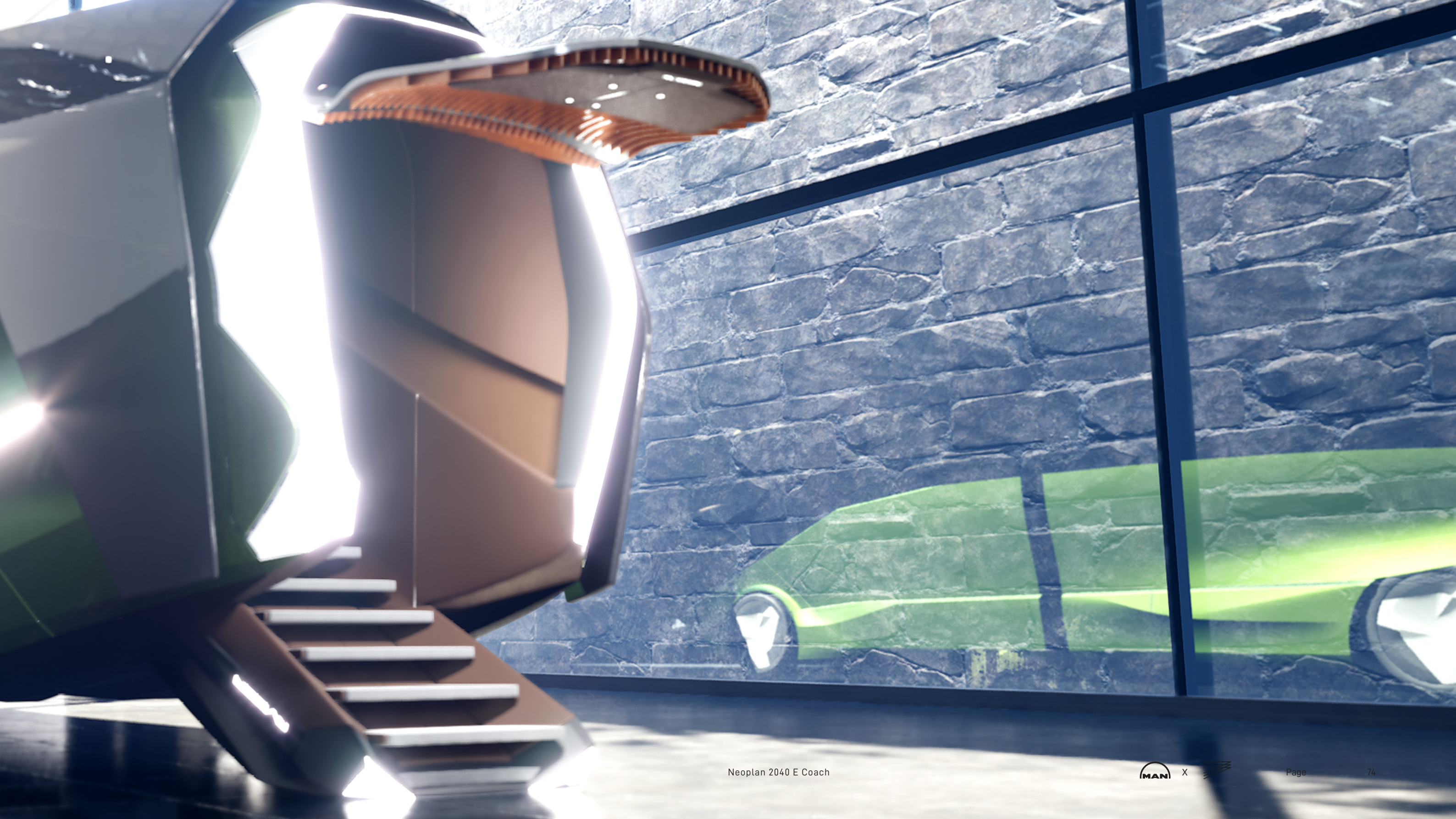
of opal, it radiates a soft, celestial glow that feels both modern and timeless. This colour exudes a sense of refined elegance, making it ideal for premium products that aim to capture sophistication with a touch of ethereal beauty.



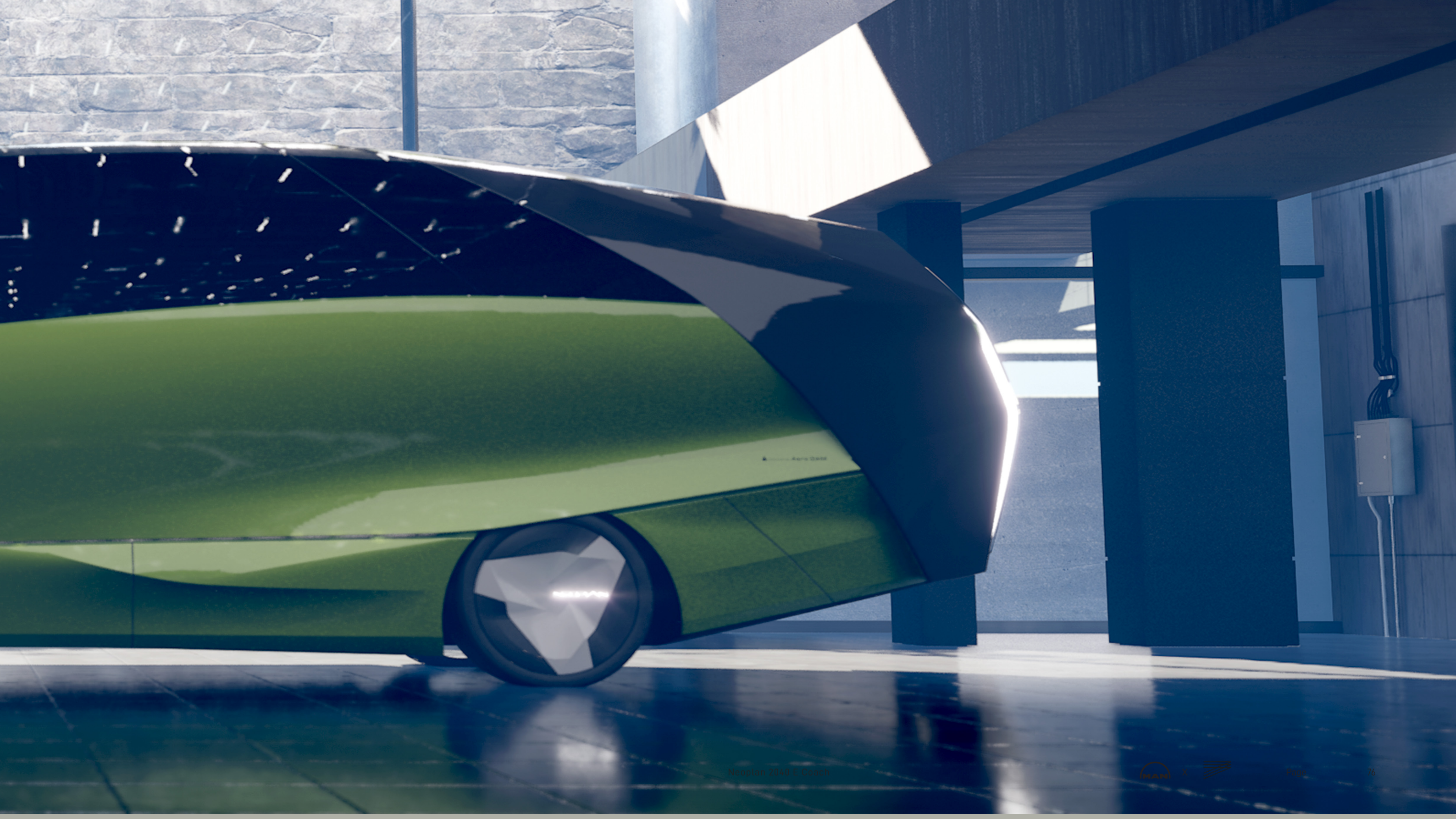


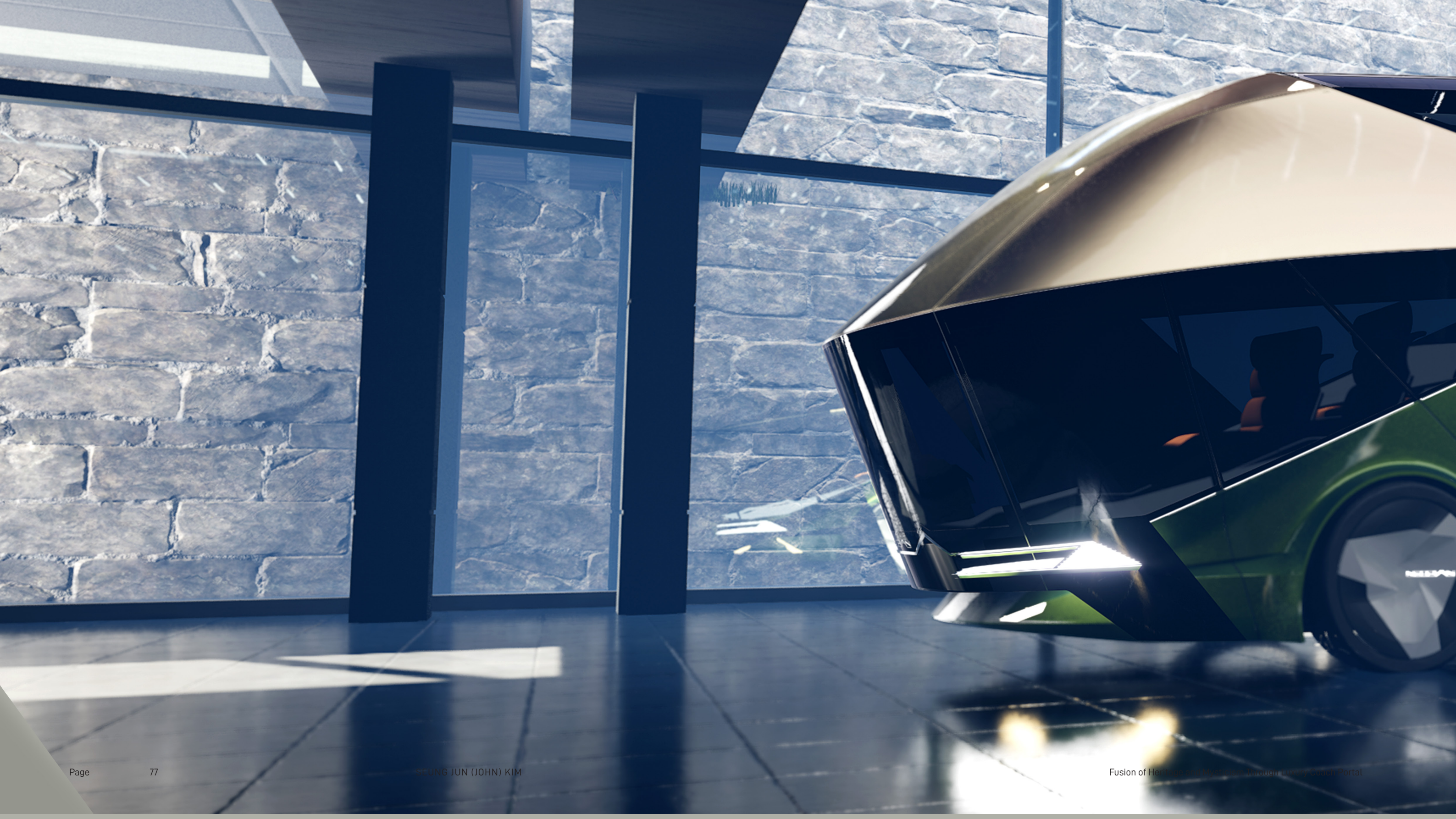


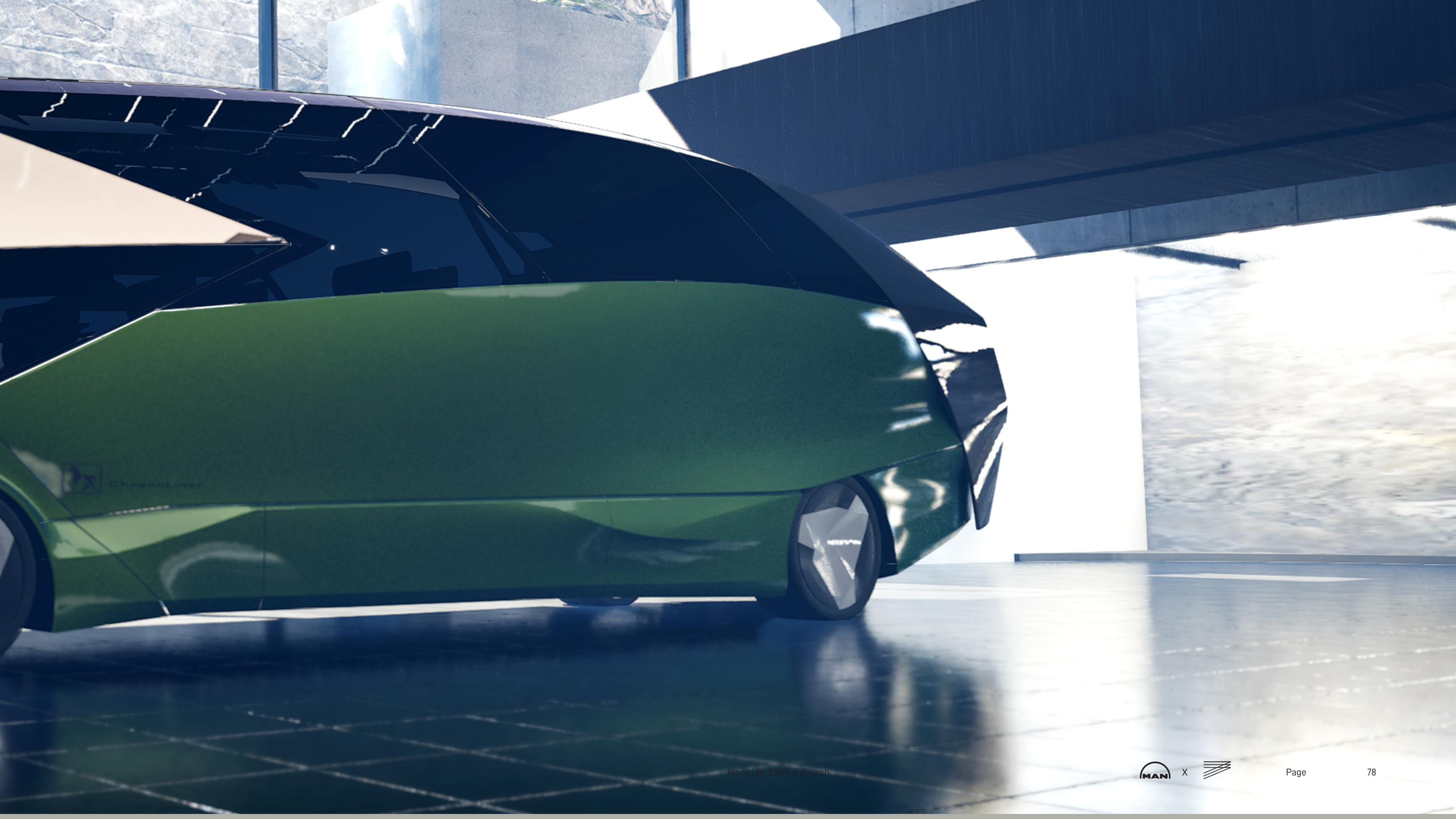












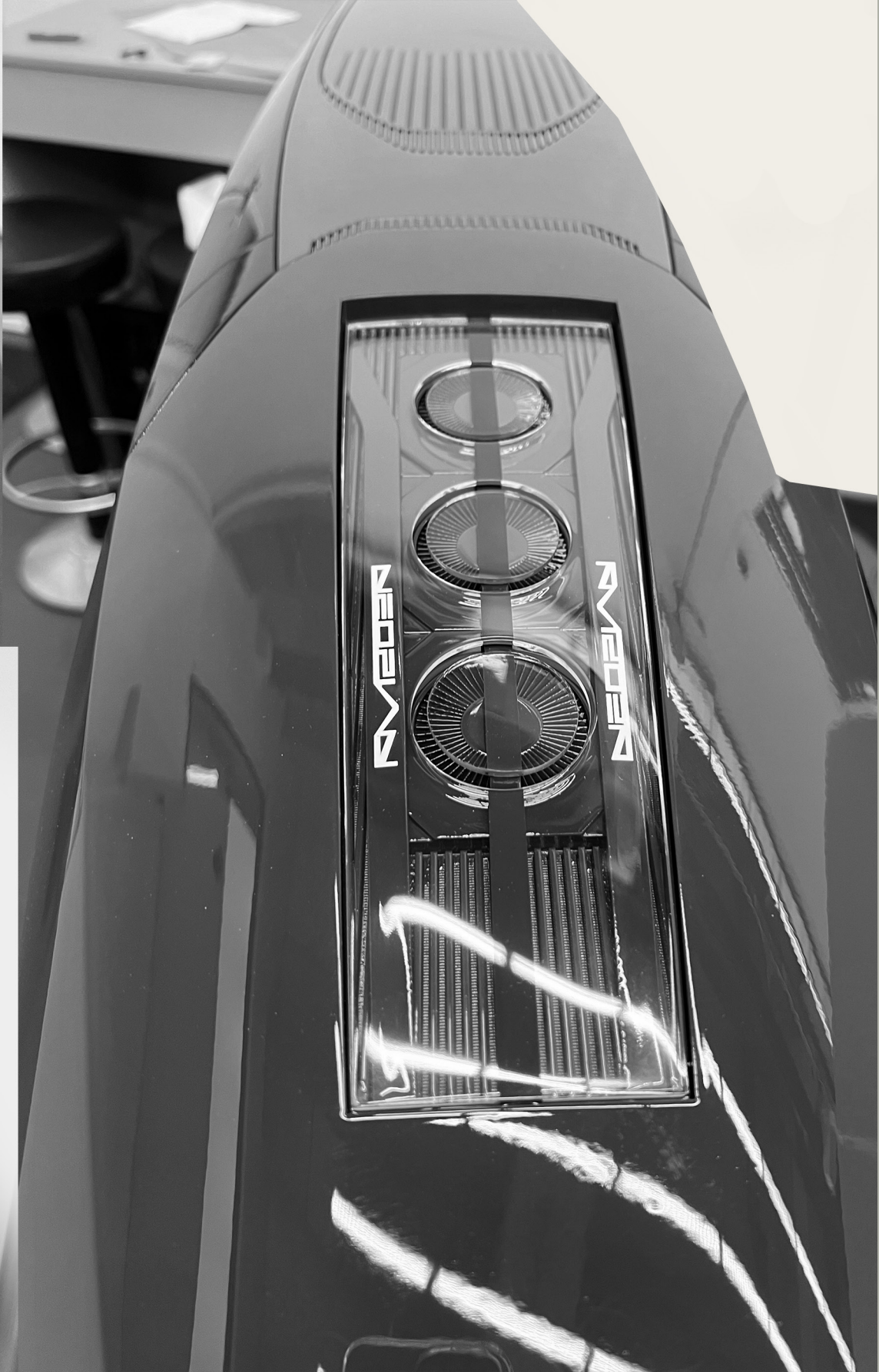
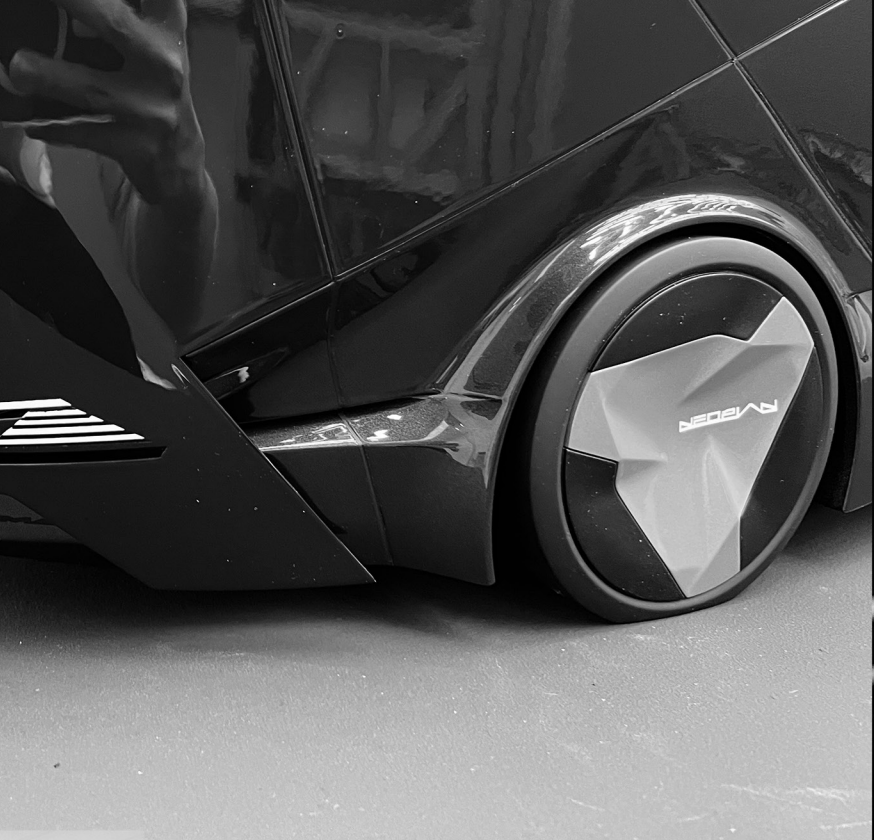
















3 4

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NEOPLAN MYSTIC PORTAL



> Conclusion

The Neoplan E-coach 2040 concept harnesses the mystic portal concept to exquisitely integrate the following three elements: aesthetics rooted in legacy, future technology and rediscovering and redefining luxury based on the theory of time relativity.

The design has paid homage to Neoplan's legacy by maintaining the general form of a Neoplan coach whilst pushing boundaries to develop a narrative of a portal that enables passengers to enter a momentary luxurious realm before arriving at a destination.

The mystical portal concept has been implemented to rediscover and redefine luxury travel in the form of transportation rather than just a means of transportation to a specific destination. The design brings forth an immersive mythical experience where time is fluid compared to everyday life.

Integrating advanced electric technology positions the E-coach as an environmentally conscious solution, reducing emissions by 66 to 75% compared to equivalent individual electric vehicles.

To conclude, this Neoplan E-coach 2040 concept uses experienced-based design philosophy to intentionally shape passengers' overall experience to recognise and perceive this design as a luxury in the form of a coach. This design denotes a new interpretation of timeless luxury and sets a precedent for future design for luxurious Neoplan coaches. Therefore, I believe this design will catalyse the rebranding of Neoplan as the new height of the coach industry in terms of opulence and grandeur.

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3 6



MAN DESIGN



AKKODIS

> Acknowledgement

Firstly, I am grateful to the entire MAN Design team for sponsoring my thesis. This thesis has been a magical journey to work on a well-known coach brand. In particular, the following team members have given me inspiration and motivation to push myself further.

Stephan Schoenherr (Head of Design and HMI)

Sven Gaedtke (Head of Design)

Michael Streicher (Team Lead)

Thorsten Bergmaier-Trede (Supervisor)

Moritz Menacher

Melike Cavdar

Mattias Böttcher.

Alessandro Naridello

Helena Sophie Ebel

Marc Schippling

Marius Maier

Gurbuz Urgun

I would like to thank Akkodis for sponsoring my model. The perspectives and knowledge I gained from doing the model were invaluable.

I would like to express my gratitude to Professor Kurt Beyer for giving me the opportunity to work on the thesis.

I would like to give my sincere thanks to Andreas Hoffmann. Your guidance, support and knowledge have been instrumental in completing the courses and this thesis.

Lastly, I would like to thank my family, who greatly supported me to the very end of this thesis.

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MYSTIC PORTAL

