## DRIVING DYNAMICS AND AUTOMATED DRIVING.

**Dr. Mihiar Ayoubi** Senior Vice President Driving Experience



### HEART OF JOY –



#### SUPERBRAIN OF PANORAMIC IDRIVE

THE

SUPERBRAIN OF AUTOMATED DRIVING

## SUPERBRAINS OF THE NEUE KLASSE.

## THE NEUE KLASSE. ENTIRELY NEW DRIVING PLEASURE.



# • Entirely new body. Entirely new drivetrain. Entirely new electric backbone.

Entirely new functional architecture.

## CONNECTED CHASSIS. A MASTERPIECE OF ENGINEERING.



## A NEW ERA OF DEVELOPING THE NEXT SHEER DRIVING PLEASURE. THE HEART OF JOY.

## DYNAMIC PERFORMANCE CONTROL. STRATEGIC BENEFITS.

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 $\Diamond$ 

UPDATABILITY. Over-the-air rollout of complex & distributed functions.

VARIANT CONTROL. Reduction Start-up- & application efforts.

SCALABILITY. Enabler e.g. M-HP derivatives with 4 EM concepts.

COST & WEIGHT. New approaches and opportunities.

#### BMW PROPRIETARY. Scalable with short time to market.

#### DEVELOPMENT SPEED. Quick changes & shorter development cycles.

#### HEART OF JOY \_\_

#### CORE SUPERBRAIN

#### SUPERBRAIN OF PANORAMIC iDRIVE

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#### L SUPERBRAIN OF GEN25 AUTOMATED DRIVING

## SUPERBRAINS OF THE NEUE KLASSE.



THE

## **ASSISTED DRIVING PLEASURE.** ADJUSTED ADAS PRODUCTS ACCORDING TO THE NEEDS OF OUR CUSTOMERS BASED ON GEN21.









In Germany, the **Highway** Assistant is used by our Customers in ~ 2/3 of their driving time when offered.

The Take Rate of the Highway Assistant is more than 50%.

The Take Rate of the enhanced Parking Packages is more than **66%**.

More than 70 Mio. km driven with Highway Assistant active since market launch.

In US, the Highway Assistant is used by our Customers in more than ~50% of their driving time when offered.

The Take Rate of the Highway Assistant is more than 40%.

The Take Rate of the enhanced Parking Packages is more than 80%.



## ADAS STATUS QUO. TAILORED ADAS PRODUCTS FOR LOCAL CUSTOMER NEEDS.

#### PARKING\*

 Parking Functions offer advanced automated parking solutions, allowing drivers to park their vehicles with minimal input and enhanced convenience.

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 Parking with Al-Powered slot detection & maneuver selection.

\* Worldwide offer

### LEVEL 2+ DRIVING

- To ~50% of our US customers technical innovations were extremely important when purchasing/leasing their vehicle.
- Feeling safe and secure in their car is a very important **need** for our customers.
- Next Gen Highway Assistant with Hands-Free and Entry2Exit navigation with automatic Lane Change.
- BMW the first to approve Hands-Free Highway Assistant according to **UN-ECE R171** on the market<sup>\*\*</sup>.



• Highway & City Assistant as a continuous driving experience Address-to-Address, fully symbiotic for complex urban driving tasks.

\*\* Market offer depending on regulatory premises.

## BMW GROUP X QUALCOMM. STRATEGIC COOPERATION FOR THE NEXT GENERATION ADAS.



### BMW AND QUALCOMM.

### AN EXCELLENT PARTNER.

- on joint solution.

Joint development of Gen25 ADAS platform for BMW Neue Klasse.

Focus on safety and maturity.

Leveraging competences and cost synergies using latest Al Technology.

 Validation with BMW test vehicles for US and global markets.

 Advanced, flexible SOC design and toplevel computer vision capabilities.

• Broad competences in hardware and software co-design, Al and Automotive.

High performance attitude and demand

## BMW IS COMMITTED TO RESPONSIBILITY BY COMBINING SAFETY, COMFORT AND INNOVATION.

## ASSISTANCE

## INNOVATION





## CONTROLLABILITY

## BMW NEUE KLASSE WILL OFFER A UNIQUE AUTOMATED DRIVING **EXPERIENCE. TRENDSETTER** WITHOUT FOLLOWING A TREND.



### SMART.

**Best of two worlds:** cutting-edge Al-algorithms for perception and planning.

Safety proven rule-based algorithms for final decisionmaking process.





## SYMBIOTIC.

Seamless assistance: keep driver intuitively engaged when needed.

## 1.0 km ·80 1 D



### SAFE.

**Pioneering ADAS** innovation for 20+ years: never compromising safety.



## **SYMBIOTIC –** DRIVER INTERACTION. COOPERATIVE ASSISTANCE.

Seamless symbiotic between assistance and guidance by the driver.

#### Cooperative steering and world first cooperative braking during active assistance.





Seamless transition and smoothest assisted deceleration to standstill.

## **SAFE – CORE LAUNCH PHILOSOPHY. NEXT LEVEL DRIVER** INVOLVEMENT AND STATE-OF-THE ART SAFETY FEATURES.

 Next generation active safety as a silent companion.

• High-performance interior camera for intelligent driver involvement.

• Safety first is our guideline and not chasing flashy features.



## ADAS STATUS QUO. TAILORED ADAS PRODUCTS FOR CHINA.

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- Over 1/3 of our chinese BMW customers are looking for **most** modern technology, while an equally large group wants to avoid stress when driving.
- In China our customers use **Level 2** ~50% of their driving time on highways.
- China specific L2+ product adapted to the **needs** of our customers living in urban areas or megacities and engineered with local partners.

## ADAS FOR CHINESE MARKET. CHINESE AI TECHNOLOGY EMBEDDED IN BMW PRODUCT EXPERIENCE.



### BMW AND MOMENTA.



Combining **20+ years** of pioneering safety with locally trained driving knowledge and enhancing **geopolitical resilience.** 

Navigation Guided Assist for **seamless** L2+ Assistance from **Urban to Highway.** 

Developed specifically for Chinese road networks, traffic conditions and user expectations, utilising advanced **Al algorithms** and **data driven development methods.** 

## MOMENTA AS A STRONG PARTNER FOR BMW.

# 宝马集团中国与Momenta智能驾驶辅助合作签约仪式 Signing Ceremony for ADAS Cooperation Between BMW Group China and Momenta 0 0



