# BMW GROUP TECHNOLOGY WORKSHOPS AUTOMATED DRIVING-DIGITALIZATION MOBILITY SERVICES









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This document contains forward-looking statements that reflect BMW Group's current views about future events. The words "anticipate," "assume," "believe," "estimate," "expect," "intend," "may," "can," "could," "plan," "project," "should" and similar expressions are used to identify forward-looking statements.

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#### **AUTOMATED DRIVING**

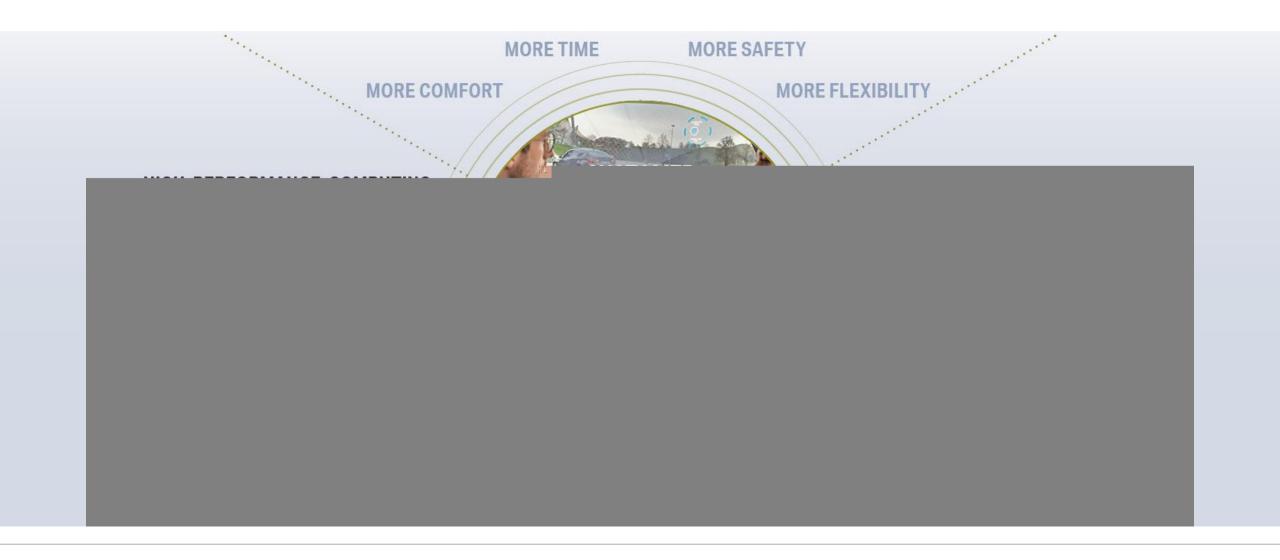




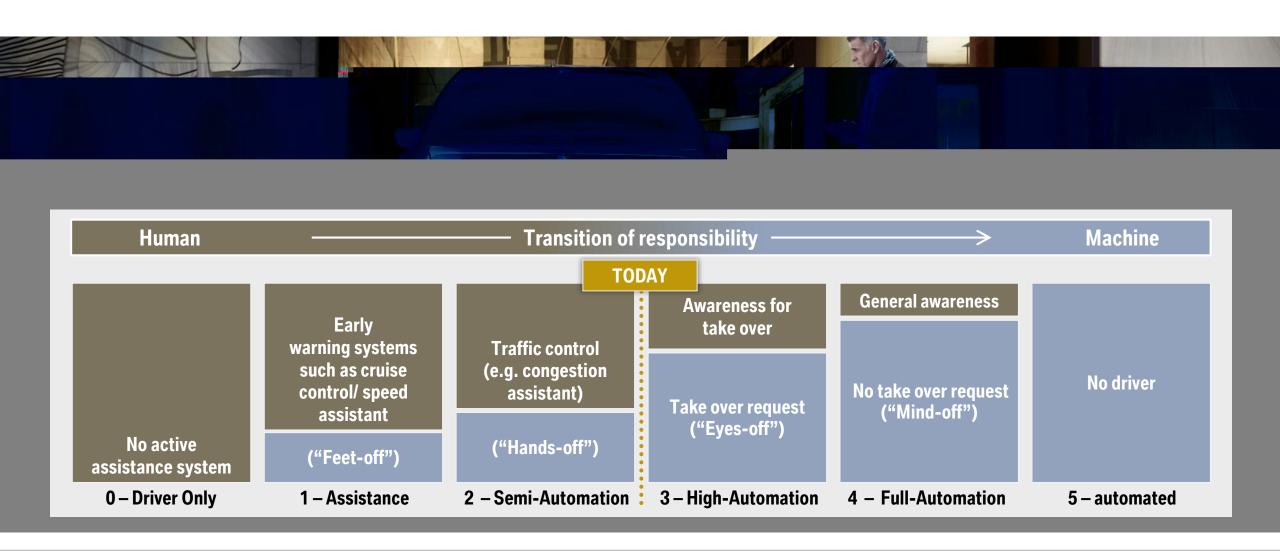




#### AUTOMATED DRIVING. CHANGING FRAMEWORK LEADS TO NEW DEFINITOIN OF FUTURE MOBILITY.



#### DEVELOPMENT STAGES OF AUTOMATED DRIVING.



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#### FIRST IDEAS BEING IMPLEMENTED TEN YEARS AGO.









Highly automated driving at the limits of vehicle dynamics (2014).





#### THE NEW BMW 5 SERIES DRIVER ASSISTANCE PROVIDES COMFORT AND SAFETY AT THE HIGHEST LEVEL.





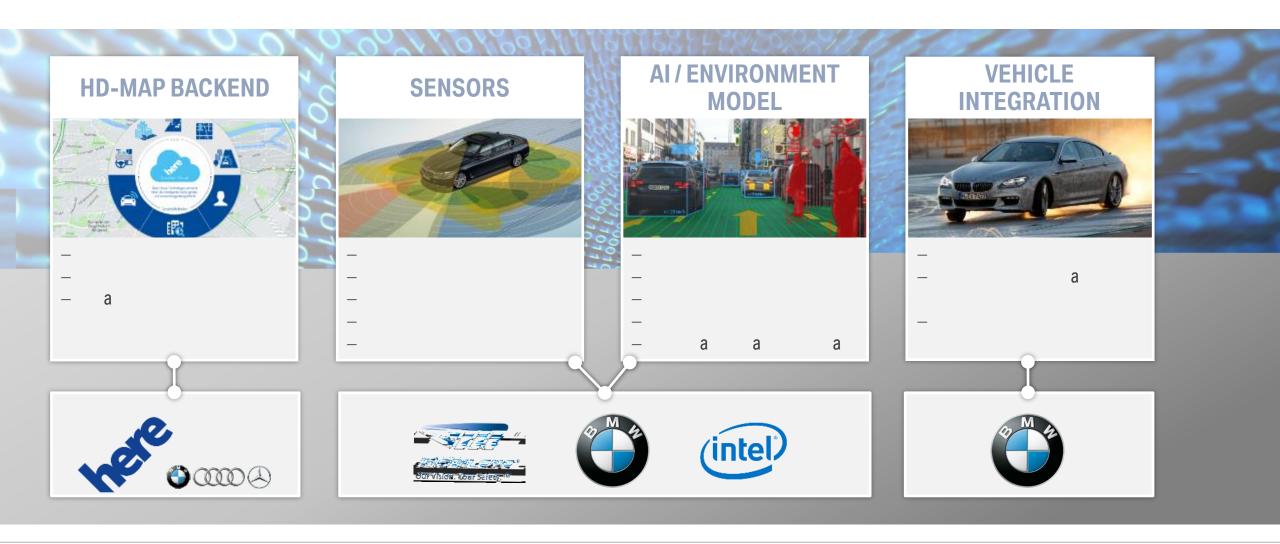




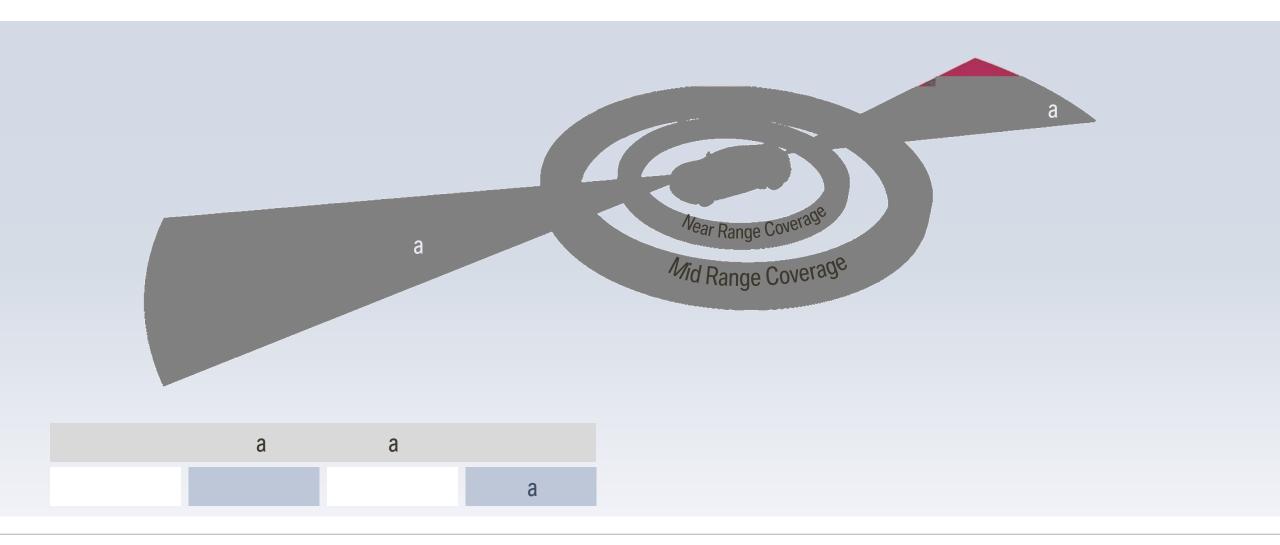
#### ARCHITECTURE FOR AUTOMATED DRIVING. END-TO-END WITH ALL KEY-TECHNOLOGIES.



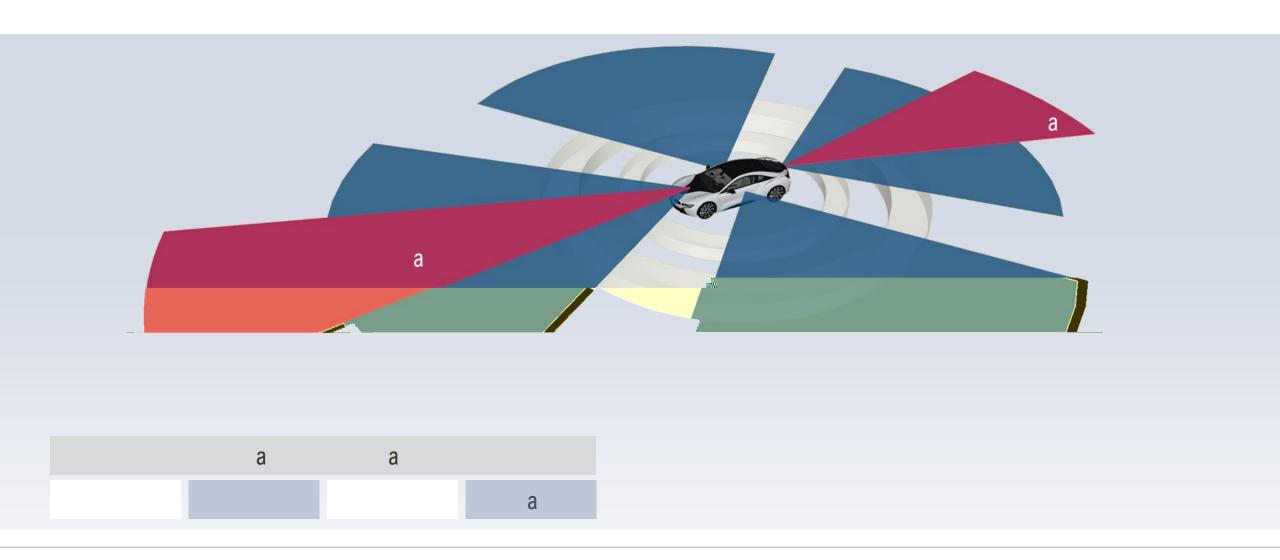
### HD-MAP, SENSORS, AI/ENVIRONMENT MODEL AND MOTION CONTROL PLAY A KEY ROLE IN THE ARCHITECTURE OF AUTOMATED DRIVING.



### HAD SENSOR SETUP – FOCUS ON LARGE-DISTANCE AREA COVERAGE.

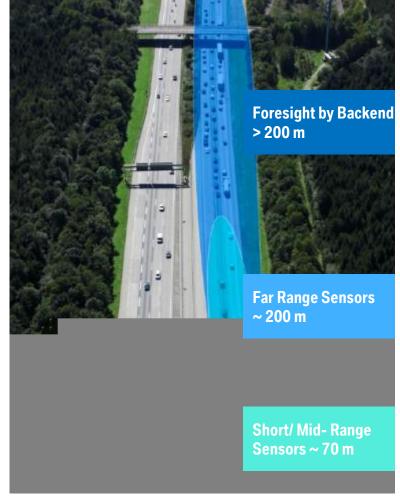


### FAD SENSOR SETUP – FOCUS ON 360° COVERAGE.



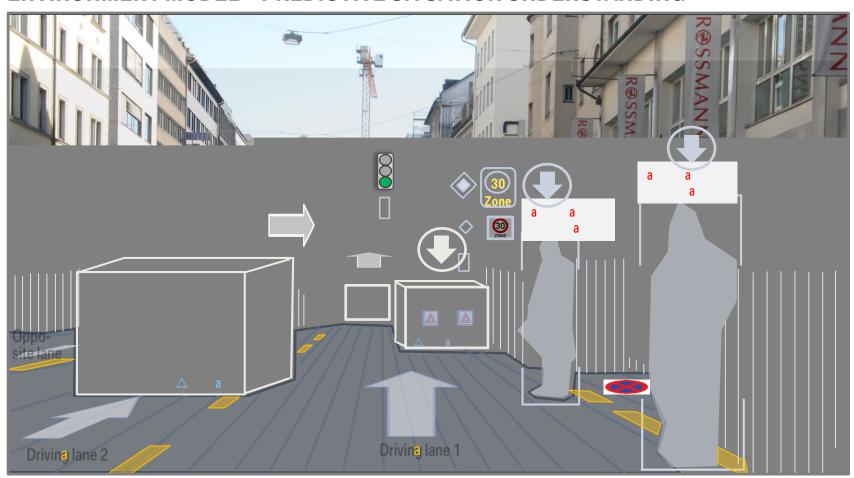
#### HIGHLY ACCURATE MAPS AND BACKEND CONNECTIVITY – TWO CORNERSTONES FOR HIGHLY AUTOMATED DRIVING.



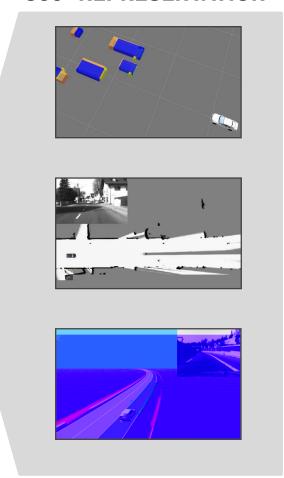


## BESIDES THE MERE TECHNICAL SENSING OF THE ENVIRONMENT, THE CONTEXTUAL UNDERSTANDING IS CRITICAL FOR AUTOMATED DRIVING APPLICATIONS.

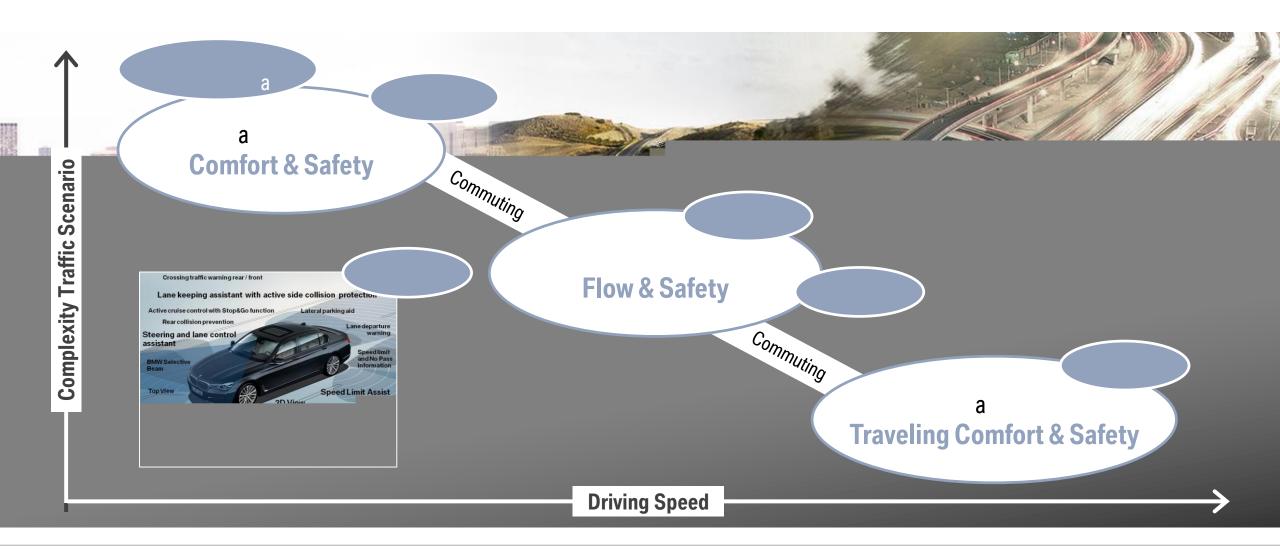
#### **ENVIRONMENT MODEL + PREDICTIVE SITUATION UNDERSTANDING**



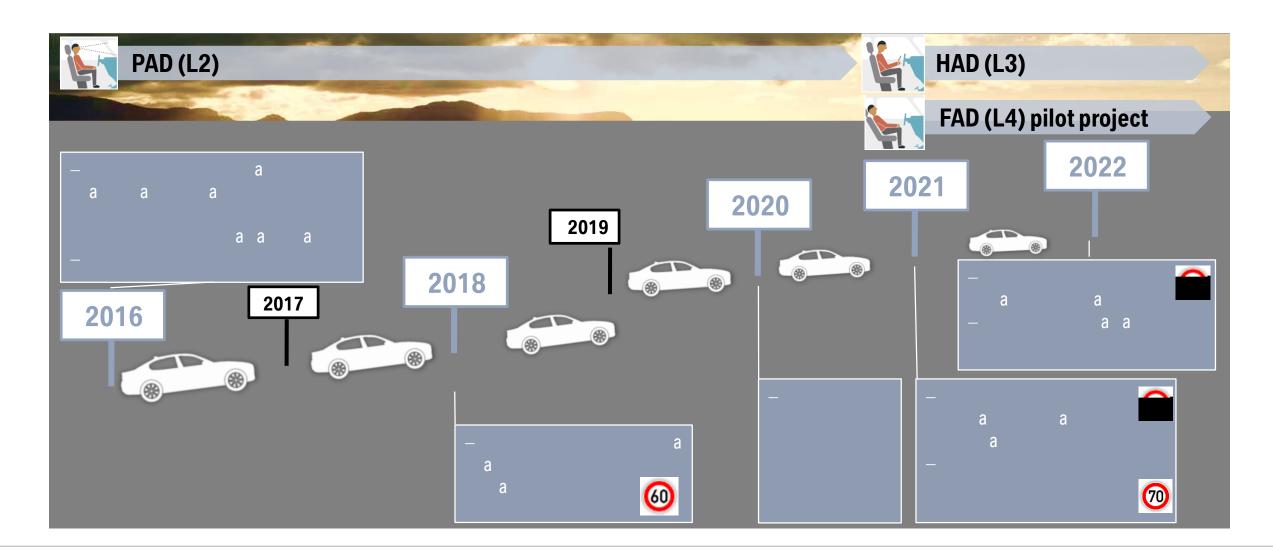
#### 360° REPRESENTATION



### "PLAYGROUND" AUTOMATION. ROLL-OUT LIMITED BY SCENARIO COMPLEXITY AND DRIVING SPEED.



#### ON THE WAY TO AUTOMATED DRIVING.



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## DIGITALIZATION AT BMW GROUP.











### STRATEGY NUMBER ONE > NEXT CONTAINS DIGITALIZATION AS A STRATEGIC DIRECTION.

We leverage innovative technologies, digitalization and sustainability to deliver unique customer experiences.

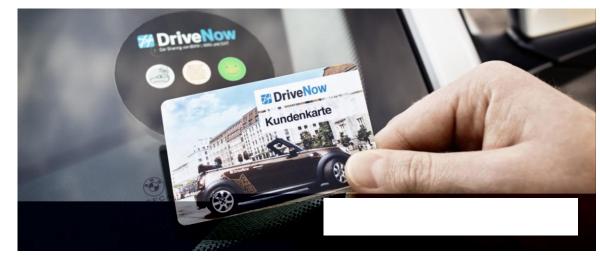
We embrace the opportunities that the transformation of our industry offers. We are committed to expanding our technological competence in the years to come, to enhancing the interaction of individuals, vehicles and services and to driving progress in sustainable mobility. This will secure our success and set new standards amongst our competitors.

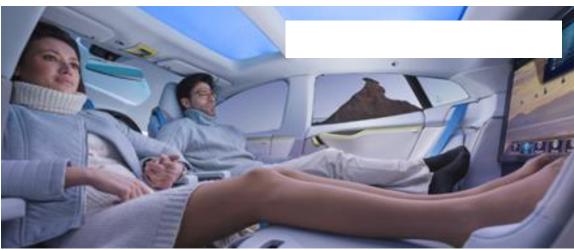
**Strategy NUMBER ONE > NEXT** 



#### AUTOMATED DRIVING ENABLES NEW (DIGITAL) BUSINESS OPPORTUNITIES.









#### MOBILITY SERVICES – THE URBAN REVOLUTION.













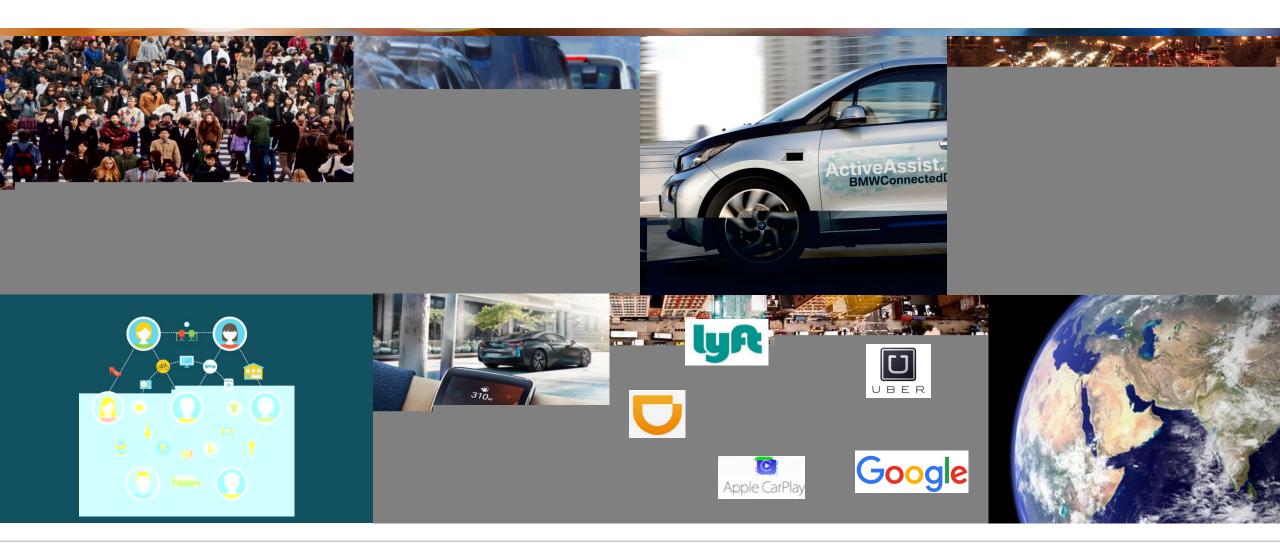








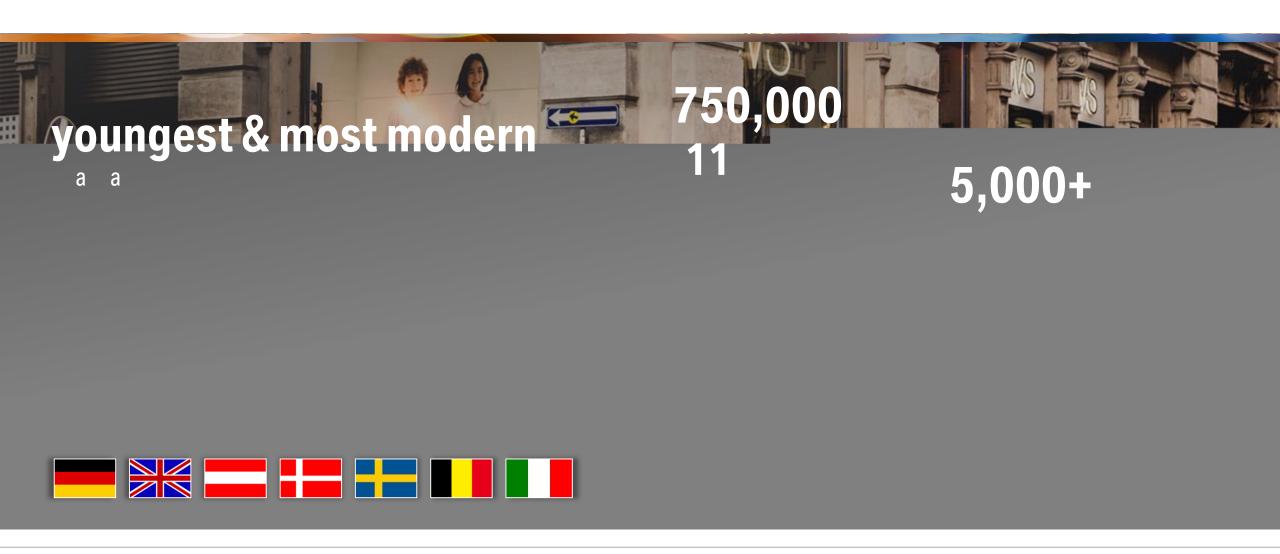
#### MAJOR TRENDS AND NEW TECHNOLOGICAL POSSIBILITIES ARE CHANGING THE RULES OF THE GAME.



## BMW GROUP'S CORPORATE STRATEGY NUMBER ONE NEXT IS THE ANSWER TO THE CHALLENGES OF SUSTAINABLE MOBILITY AND CHANGING MARKET CONDITIONS.



### DRIVE NOW. PREMIUM, FREE FLOATING CAR SHARING SERVICE FROM BMW GROUP & SIXT.



#### DRIVE NOW OPENS THE WAY FOR E-MOBILITY AND THE BMW i3.

200,000+ 6 Mio.+ 20%

**M** DriveNow Kennzeichen M-EV5127 Pilgersheimer Straße 34 ct/min 15 ct/min 0000 Elektro Problem melden

electric

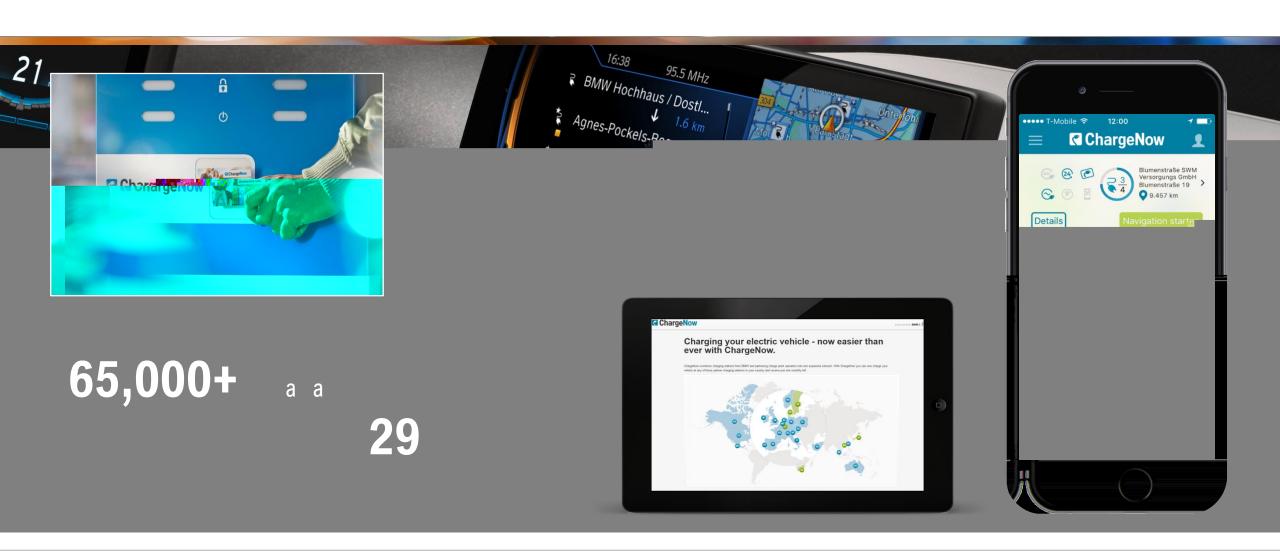
### REACH NOW. ON DEMAND MOBILITY SERVICES IN THE US.



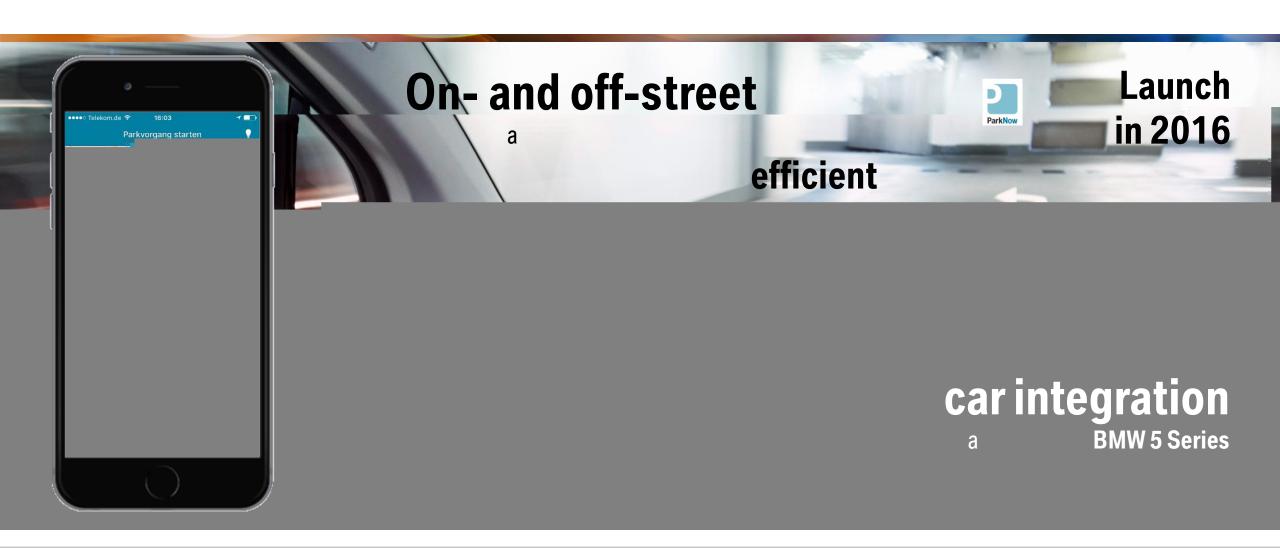
### ON DEMAND MOBILITY ON A NEW LEVEL. REACH NOW TO INTRODUCE UNIQUE FEATURES FOR THE CUSTOMERS.



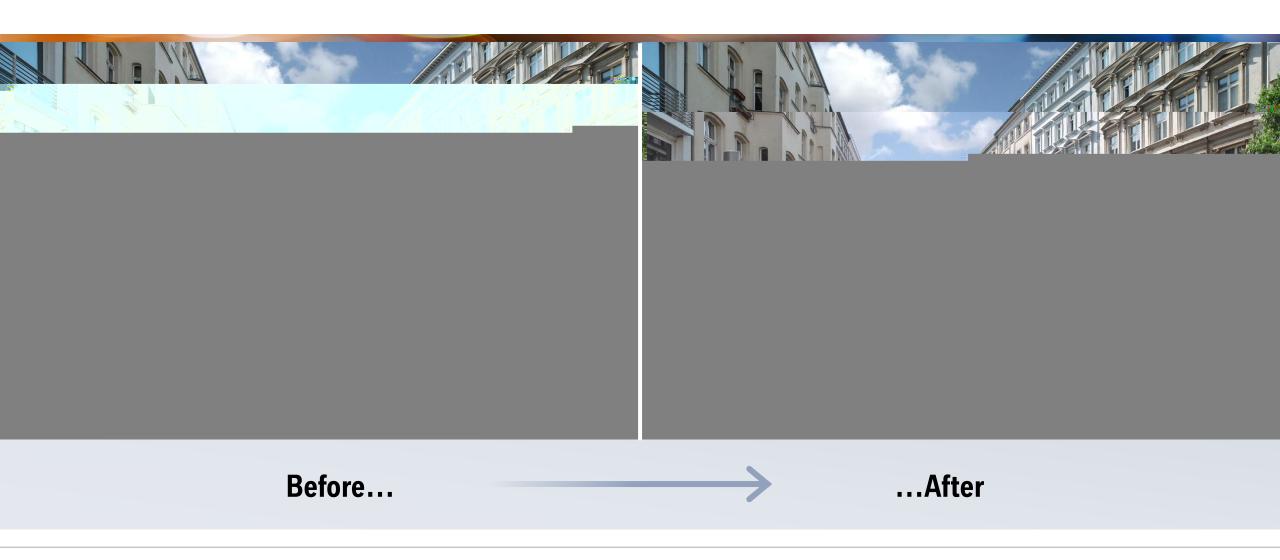
### CHARGE NOW. THE SERVICE THAT MAKES CHARGING CONVENIENT AND EASY.



#### PARK NOW. OFFERING PREMIUM ON- AND OFF-STREET PARKING SERVICES.



### CENTER OF COMPETENCE URBAN MOBILITY: IMPLEMENTING SUSTAINABLE URBAN MOBILITY – TOGETHER WITH ALL STAKEHOLDERS.



## DIGITALIZATION AT BMW GROUP.



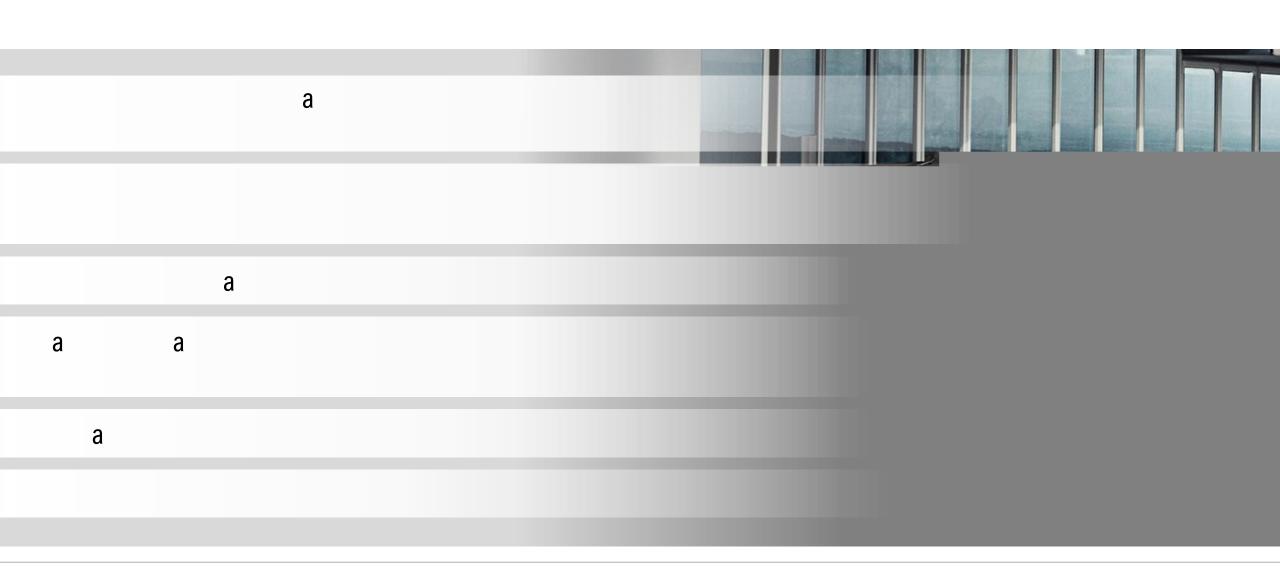








#### MAXIMS FOR THE BMW GROUP IN THE CONTEXT OF DIGITALIZATION.



#### BMW WILL DRIVE DIGITALIZATION FORWARD ACROSS THE COMPANY.

