

psw – engineers of the  
automotive future



# PSW Company Presentation

\_ PSW IDENTITY

**Who we are**

# **ENGINEERS** **OF THE AUTOMOTIVE FUTURE**

*\_ In more than 30 years, PSW has developed into one of the leading automotive engineering partners. Today the company is actively and imaginatively helping to shape the mobility of the future with 1000 specialists based in Ingolstadt and Neckarsulm. We see ourselves as an innovative development partner that develops entire vehicles and systems as well as integrating technologies for its customers.*

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\_ PSW IDENTITY

**What we stand for**  
Our vision.

**\_ WE ARE A LEADING**  
**DEVELOPMENT PARTNER**  
**FOR FUTURE MOBILITY.**

*\_ The foundation of our success is our wide range of services, something which is rarely found in the automotive industry. These services are exactly the expertise necessary to help shape the mobility of the future, ranging from pre-development and simulation to testing and support of vehicle series production. We combine our extensive range of services with efficient project management in a matrix organisation. Thus we are able to offer our customers the complete realisation of projects from a single source.*

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\_ PSW IDENTITY

**What drives us**  
Our creed.

\_ WE BRING

# **MOBILITY VISIONS TO LIFE.**

**#1**

***enabling***

*the entire development process*

**#2**

***envisioning***

*in emerging technologies*

**#3**

***efficient***

*in execution*

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# What sets us apart

A promise, four key fields of excellence, six areas of customer added-value.

*\_ We deliver*  
***integrated mobility technologies by pushing limits.***



**\_ Complete vehicle development**



**\_ Cutting-edge technologies**



**\_ Connected mobility & innovations**



**\_ Digital engineering & virtual prototyping**

**#1**

*Decades of engineering-expertise*

**#2**

*Innovative project management*

**#3**

*Continuous transfer of know-how and synergies*

**#4**

*Wide range of services and a strong network*

**#5**

*Know-how in future technologies*

**#6**

*Virtual development methods*





\_ PSW EXPERTISE

# #1 \_ Decades of engineering excellence (1/3)

From classical engineering to shaping the future of mobility.

>30 years'  
engineering-  
expertise

1988

\_ **FOUNDED**

AS A THREE-MAN COMPANY  
FOCUSING ON CLASSICAL ENGINEERING  
SERVICES

2016

\_ **100%  
OWNERSHIP**

BY AUDI AG

\_ **STRATEGIC REORGANISATION**  
WITH A MATRIX ORGANISATION

2019

\_ **CERTIFICATION AS GENERAL  
VEHICLE DEVELOPER**

\_ **RECORD ANNUAL SALES**  
€130 MILLION

2009

\_ **AUDI A5  
SPORTBACK**

DERIVATIVE  
DEVELOPMENT

2018

\_ **AUDI Q8 SUV**

OVERALL  
DERIVATIVE  
DEVELOPMENT

2020

\_ **AUDI A3**

DEVELOPMENT OF  
SPORTBACK AND  
LIMOUSINE



**MATTHIAS PFISTER**  
CHAIRMAN OF THE BOARD  
ENGINEERING



**SABINE MOCH**  
BOARD MEMBER FOR  
FINANCE, COMPLIANCE AND INTEGRITY



**PETER MOSCH**  
BOARD MEMBER FOR  
PERSONNEL, LEGAL AND ORGANIZATION

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KSU-ID: 01145

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\_ PSW EXPERTISE

# #1 \_ Decades of engineering excellence (2/3)

## References\*

30 years'  
engineering-  
expertise



Audi A5 SB



Lamborghini  
Urus



Audi Q8



Audi A3



Audi AI:ME

\*Scope of development varies depending on each project

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# #1 \_ Decades of engineering excellence (3/3)

Full power ahead towards achieving the electric future of mobility.

30 years'  
engineering-  
expertise

Audi e-Tron Concept

### Testfahrt mit dem Audi e-Tron GT Concept: Am Steuer der Zukunft

News 18. DEZEMBER 2018, 11:10 UHR Jens Meiners, cen/ampnet 31



**AUTOPRESSE**



**ERSTE FAHRT IM AUDI E-TRON GT**

## Da wird selbst Batman neidisch

**e-hub**



Der erste vegane Audi hat tierisch  
Power!



**DER SPIEGEL**

Fotostrecke  
Autogramm Audi E-Tron GT Concept: Elektrisch auf große Fahrt 10 Bilder

**Autogramm Audi e-tron GT Concept**

## Der Flachblitz

\*Source: [auto-presse.de](http://auto-presse.de); [e-hub.swiss](http://e-hub.swiss); [bild.de](http://bild.de), [spiegel.de](http://spiegel.de)

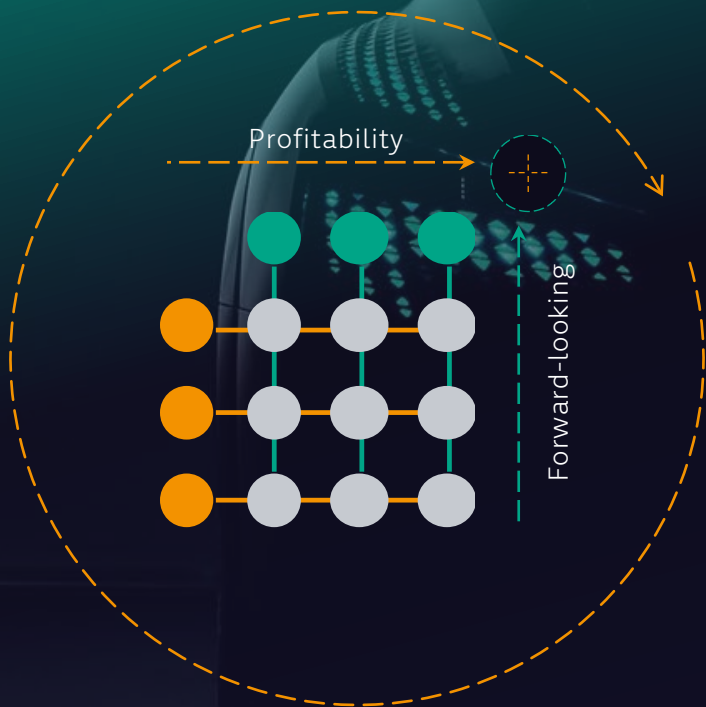


\_ PSW EXPERTISE

## #2 \_ Innovative project management

We develop mobility solutions in an agile matrix.

*Innovative  
project  
management*



**FOCUSING ON  
OEM, CUSTOMER ORGANISATION AND  
PROCESSES**

**SHORT RESPONSE TIMES  
THROUGH STRONG STEERING  
COMMITTEES**

**CLEAR RESPONSIBILITIES  
THROUGH RAPID DECISION-MAKING  
CHANNELS**

**MAXIMUM CUSTOMER FOCUS  
INCREASES DEVELOPMENT  
EFFICIENCY**

*\_ Our agile project management mirrors the vehicle series structure creating efficiencies and freedom for our customers.*

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# #3 \_ Continuous transfer of know-how and synergies

We maximise synergies.

Continuous transfer of know-how and synergies

**Audi A3 SB**



Highly synergetic development of the sportback and limousine variants



**Audi A3 Limousine**

**Audi Q8**



Maximum COP approach for parts (front end, door concept, rear view mirrors)



**Lamborghini Urus**

**1<sup>st</sup> generation Audi A5 SB**



Optimisation of technology



**2<sup>nd</sup> generation Audi A5 SB**



# #4 \_ Our wide range of services

Forward-looking expertise combined with a wide-ranging portfolio.

Wide  
range of  
services



\_ General Development



\_ Alternative Powertrains



\_ Integral Safety



\_ Smart City



\_ Virtual Engineering



\_ Innovation Hub



\_ Engineering



\_ Interior User Experience



\_ Thermal Management & Aerodynamics



\_ Quality, Testing & Validation





# #5 \_ Know-how in future technologies

Our contribution for sustainable, autonomous and connected mobility.

Know-how in  
future  
technologies



## SUSTAINABILITY

We have the expertise to help develop electric drivetrains, integrate them into vehicles and optimize their range.

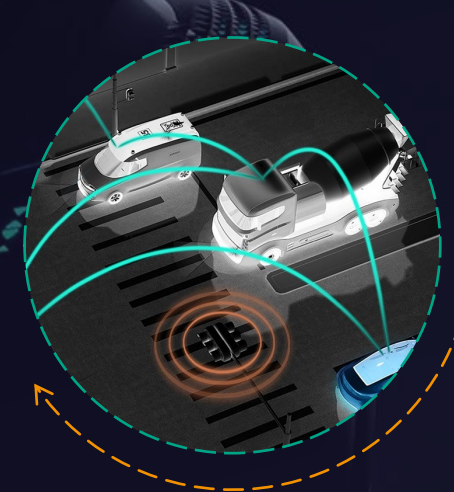
(E.g. fuel cells, dimensioning high voltage batteries, MLS, aerodynamics, thermal management)



## AUTONOMOUS MOBILITY

We have expertise in comprehensive safety systems and design of the interior by considering, integrating and testing all functions.

(E.g. driver assistance systems, automated testing, interior user experience)



## CONNECTIVITY

We program what is conceivable. This enables us to connect vehicles with their environment and ensure a more sustainable flow of traffic.

(E.g. Smart City, Audi traffic light info system, HMI/infotainment, Car-2-X)



## #6 \_ Virtual development methods

How our customers benefit from digital vehicle development.

Virtual  
development  
methods

### VIRTUAL TECHNOLOGY VALIDATION

*PSW tests load cases  
virtually within a few hours.  
Using hardware, this takes  
much longer.*

### DIGITAL AERODYNAMICS DEVELOPMENT

*PSW digitally develops  
aerodynamics, thus reducing test  
times with hardware to a few  
hundred hours.*

### VIRTUAL REALITY TECHNOLOGY

*PSW develops solutions with VR  
methods, bringing technologies to  
life and thus facilitating design  
decisions.*



# We are all this and much more – PSW.



38

YEARS OLD  
AVERAGE AGE OF STAFF MEMBERS

400



OEM CUSTOMER PROJECTS IN  
CONVENTIONAL AND FUTURE  
TECHNOLOGY FIELDS

6



YEARS AVERAGE  
PERIOD OF STAFF RETENTION



130

MILLION EUROS TURNOVER  
GENERATED BY PSW IN 2019

1000



PEOPLE WORK FOR  
PSW AT TWO LOCATIONS



22

NATIONALITIES DEVELOP GLOBAL  
IDEAS AND SOLUTIONS

3-4



MAJOR PROJECTS IN PARALLEL IN AN  
AGILE MATRIX ORGANISATION



30

YEARS OF ENGINEERING  
EXCELLENCE.







# — Making tomorrow possible.

We look forward to shaping the mobility of the future with you!