

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.

psw – engineers of the
automotive future



_ 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.

psw – engineers of the
automotive future



_ 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



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

psw – engineers of the
automotive future



_ 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



#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



Der erste vegane Audi hat tierisch
Power!

e-hub



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; e-hub.swiss; bild.de, spiegel.de

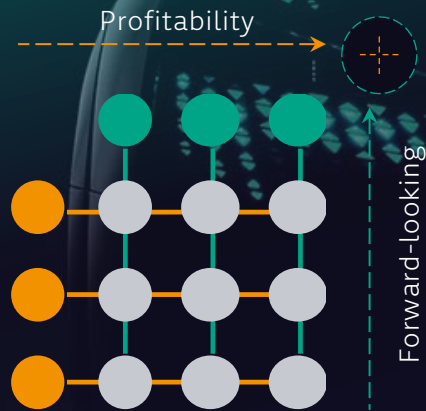


_ PSW EXPERTISE

#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.



#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

1st generation Audi A5 SB



Optimisation of technology



2nd 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.

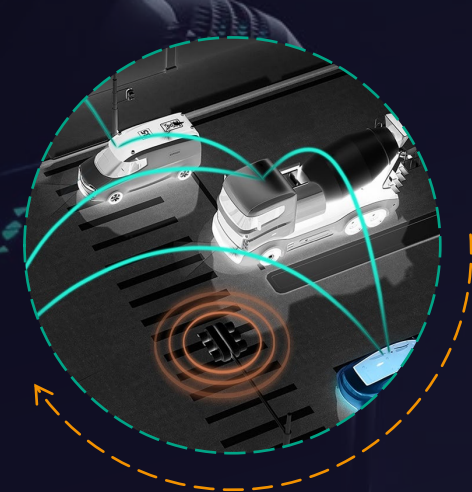
(E.g. fuel cells, dimensioning high voltage batteries, MLS, aerodynamics, thermal management)



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



153

MILLION EUROS TURNOVER
GENERATED LAST YEAR

980



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



>35

YEARS OF ENGINEERING
EXCELLENCE.





— Making tomorrow possible.

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