Audi Business Innovation@ Automotive Software Factory:
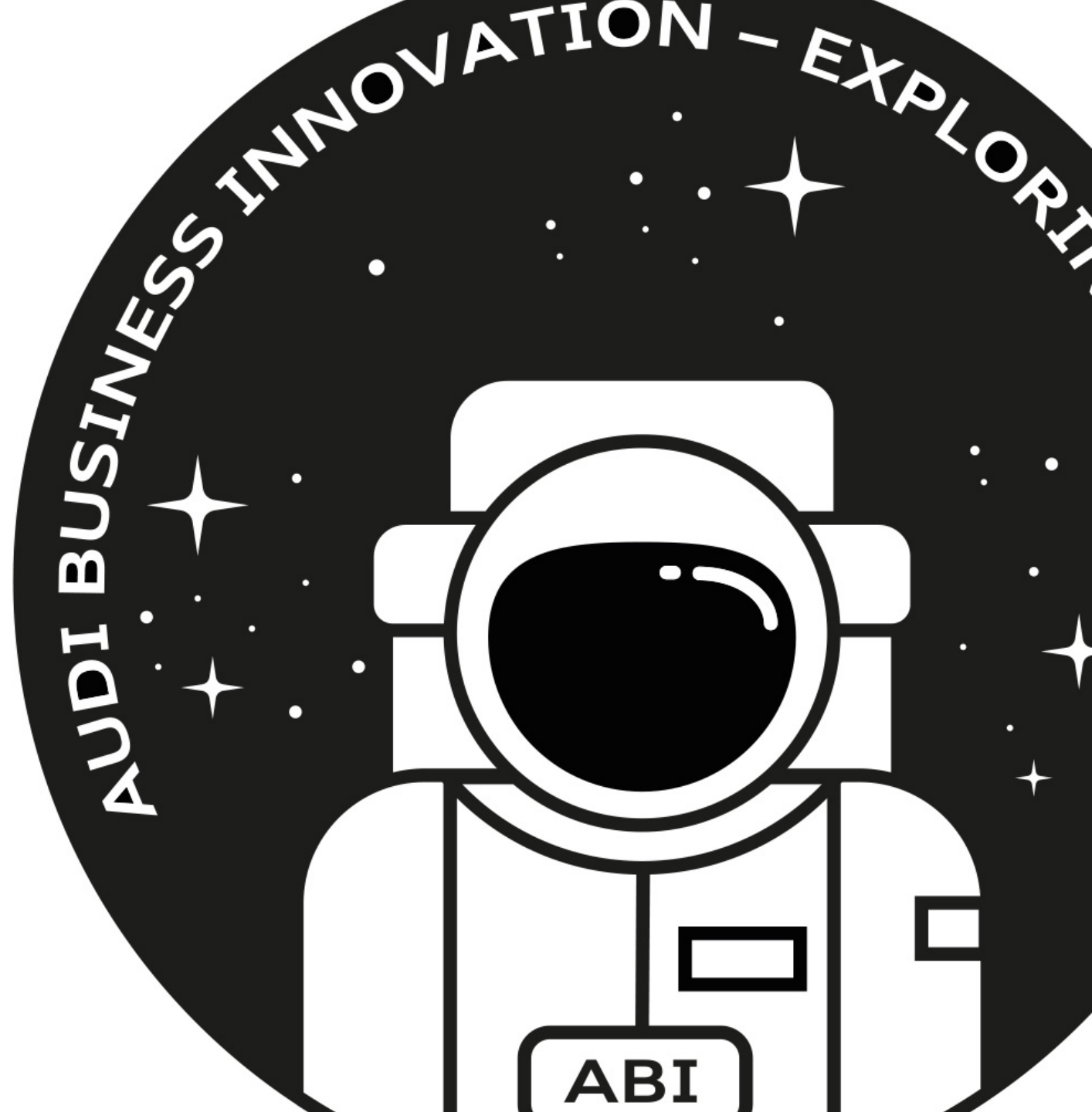## Learning Curves

Potsdam | 22.09.2022

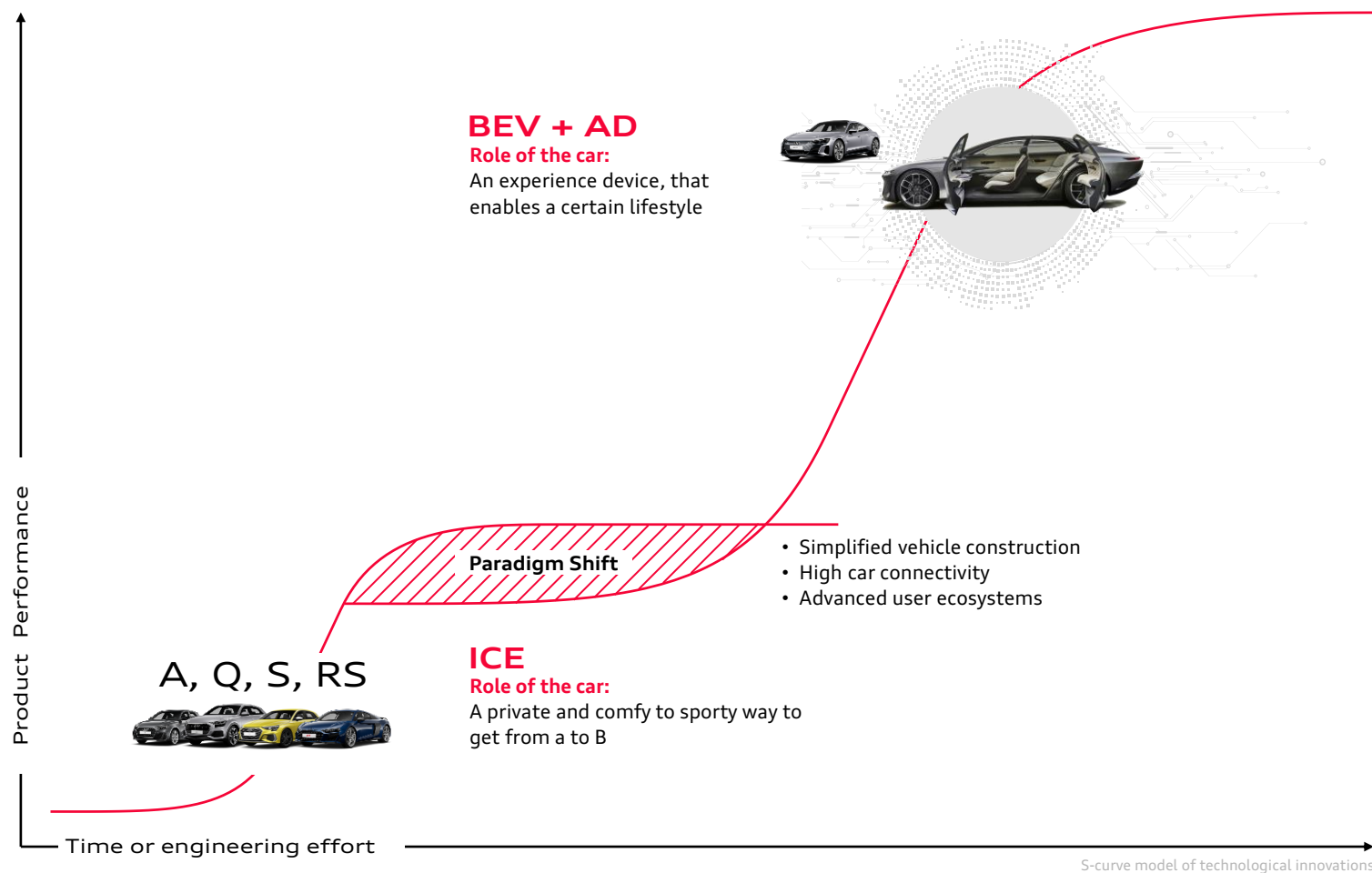**Digital transformation in the automotive industry:**

How corporate owned digital units boost car manufacturers to go beyond engineering and sales

About game changing parameters...

The shift from ICE to BEV+AD changes access to the vehicle:
Audi drivers bought hardware, Audi users nowadays buy access to a system.

BEV + AD
Role of the car:
An experience device, that
enables a certain lifestyle

Paradigm Shift

- Simplified vehicle construction
- High car connectivity
- Advanced user ecosystems

A, Q, S, RS

ICE
Role of the car:
A private and comfy to sporty way to
get from a to B

Product Performance

Time or engineering effort

S-curve model of technological innovations

BEV + AD Paradigm

Software-differentiated vehicles with access to infrastructure
and layers of value-added services that make ownership special.

Success Factors	User & Business Empathy
	Integrated Software & Systems
	Interoperational Development
	Inside-out Design & Battery Engineering
Complexity Driver	Software Stack
	Product Development
	User Relationship Management
Problem to solve	Tech infrastructure and continuous service updates

ICE-Age Paradigm

Engine specs define the car character, a local dealer network
provides local service offer.

Success Factors	Range of Engines
	Product Manufacturing
	Local Dealer Ships
Complexity Driver	ICE Engineering
	Manufacturing
	Global Sales / Dealer Network
Problem to solve	Engine complexity and sales distribution

>> This paradigm shift requires a new understanding, new methods and new competencies to master it successfully <<

Observation: 3 key dynamics drive BEV

Broader definition of jobs to be done	**A software stak that allows problem solving**	**Strategic use of technologies**
› Expansion of roles the brand can potentially play in a user's life. Integrate others or become integrated (commoditized) yourself	› Software is core competence and at the center of value creation	› Certain technologies need to be strategically owned, even if they don't initially map to a business case
› More points of contact with the user allow for more data points to make connections	› Companies today are competing for the ability to quickly test new value propositions and develop them into marketable services	› Huge upfront investment costs of innovations
› Solving more problems expands the TAM, reducing the dependency on a single business model	› Flexibility and adaptability of the technical infrastructure are basic prerequisites for success	› Example: LIDAR, but also voice control and maps (what would have happened if car manufacturer strategically used voice control?)

From one time vehicle purchase to multiple transactions - long lasting business models are changing.

Audi Drivers are becoming Audi Users


The vehicle becomes an experience device
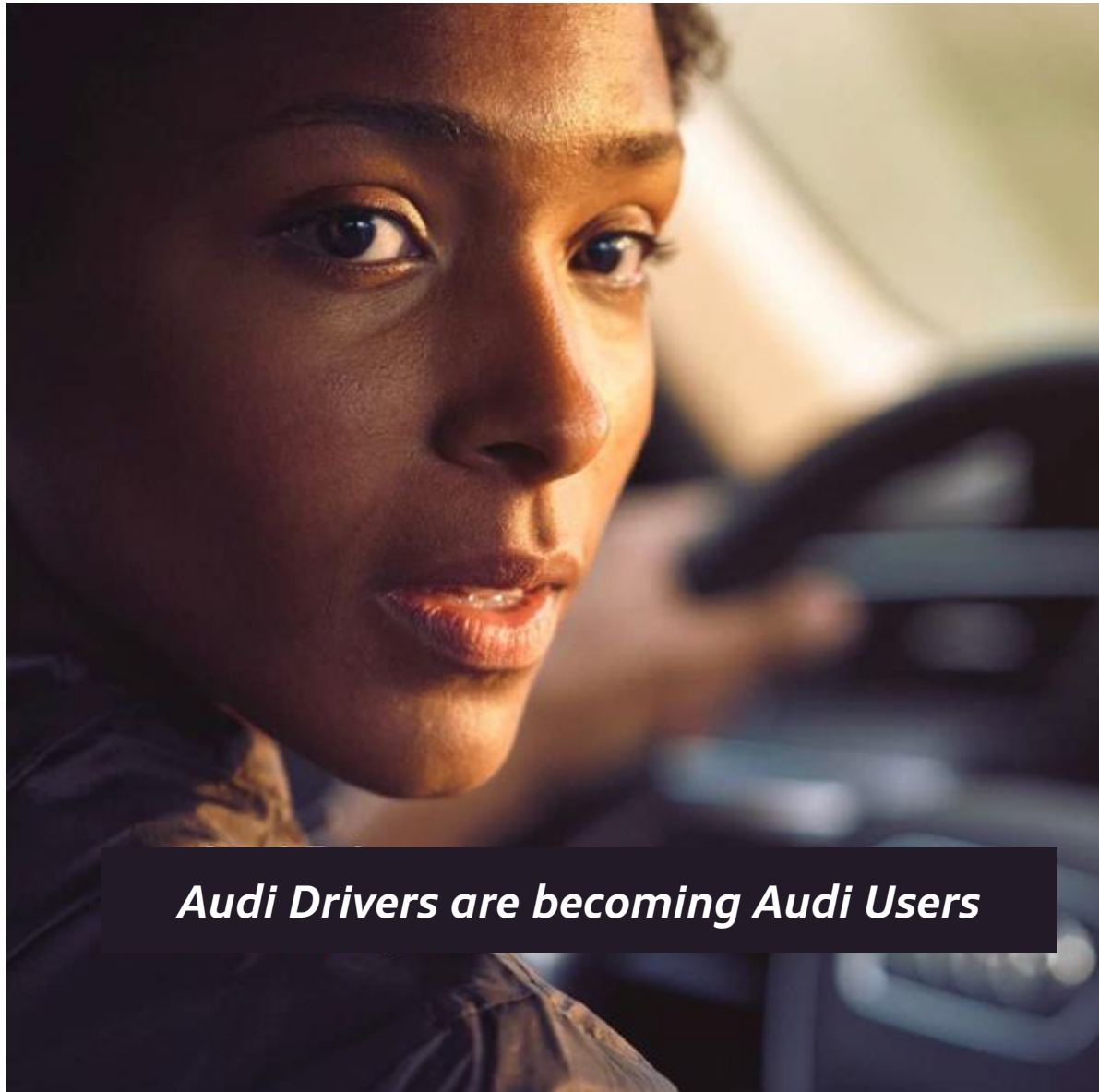
It's all about the customer: From life areas to use cases by explaining the Experience layer

The *Experience Layer (Exploration Layer)* contains three entities:

A **life area** is one of the areas into which clients' activities of their daily life can be divided (e.g., mobility, entertainment, work).

Experience clusters are derived from overlying life areas and aggregate different Use Cases as homogenously as possible (e.g., charging).

A **Use Case** is an action that takes place between a customer and a brand to enable a clearly defined scenario derived from a specific customer intention (e.g., "I have to charge my car in public" or "I want to order food while driving").
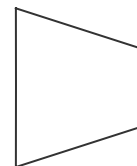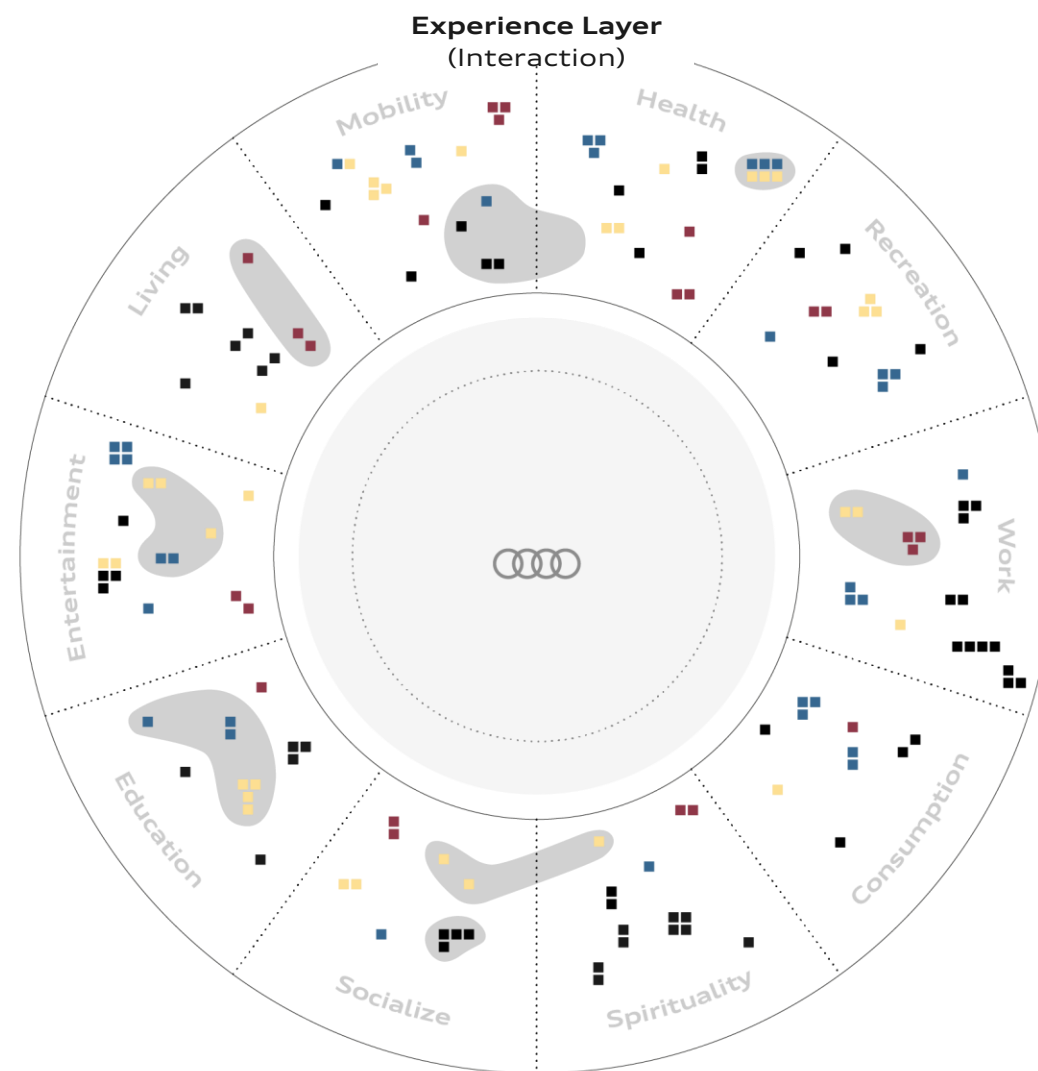
Life Area

Experience Cluster

Use Case

Experience Layer
(Interaction)

About Audi Business Innovation as Audi's digital product development company…

As a 100% daughter of AUDI AG, ABI focuses on the development and implementation of digital services and products along the customer journey of Audi.

Innovation driver and realizer of strategic competitive business and IT potential: conception and validation of innovative products (degree of innovation and know-how assurance)

Re-thinking business models in another way than it is done at a large corporation

The conscious investment by a group in a small company creates kind of a **protected space / environment**
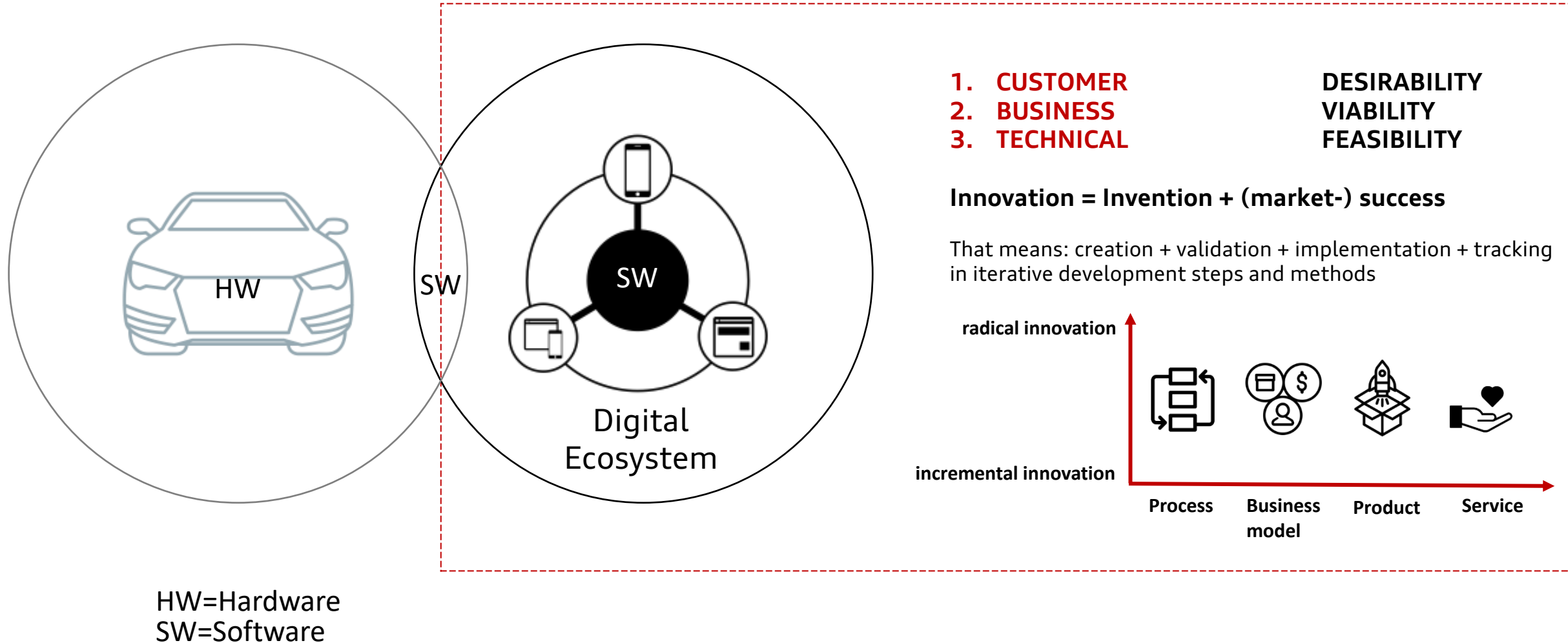
Speedboat through independency: legally independent company with clear roles, lean processes and little bureaucracy (Time2Market)
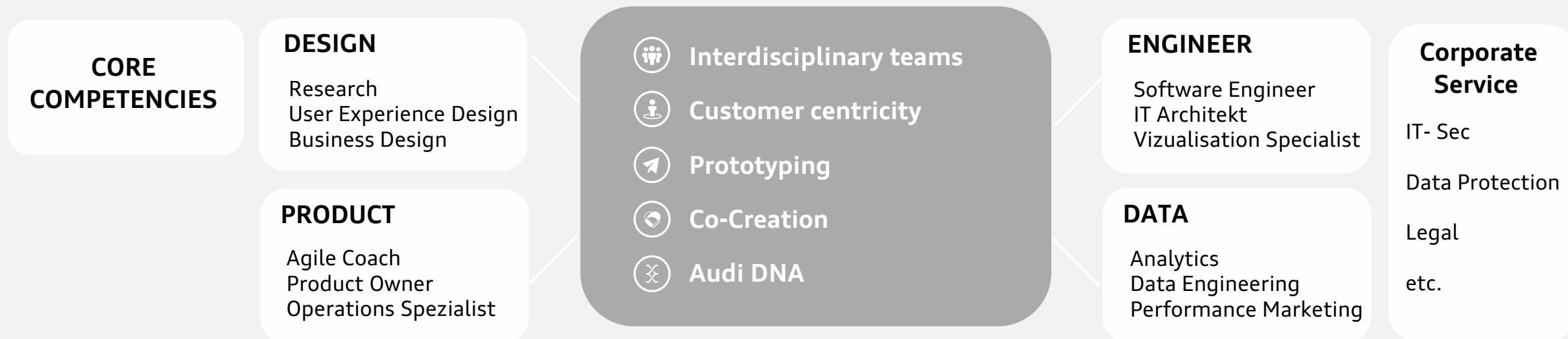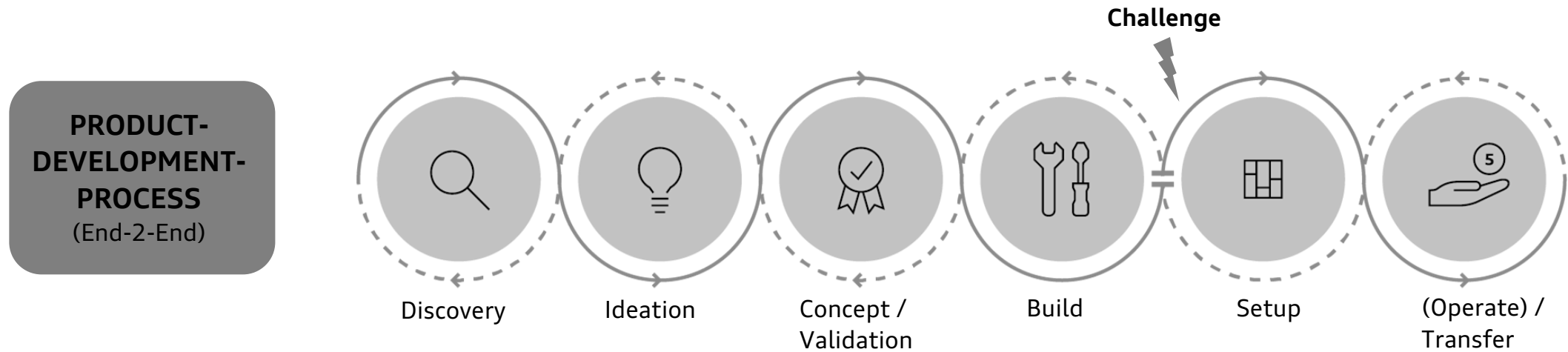
Interdisciplinarity and agile mindset: development and holding of differentiating competencies to the parent company in order to fulfill additional highly specialized activities ("Kerneigenleistung" and expertise)

With expertise and experience ABI contributes to the development of digital services and products for the Audi ecosystem and defines requirements for future car development cycles (HW + SW).

HW

SW

SW

Digital
Ecosystem

1. **CUSTOMER**   **DESIRABILITY**
2. **BUSINESS**   **VIABILITY**
3. **TECHNICAL**   **FEASIBILITY**

Innovation = Invention + (market-) success

That means: creation + validation + implementation + tracking in iterative development steps and methods

radical innovation

incremental innovation

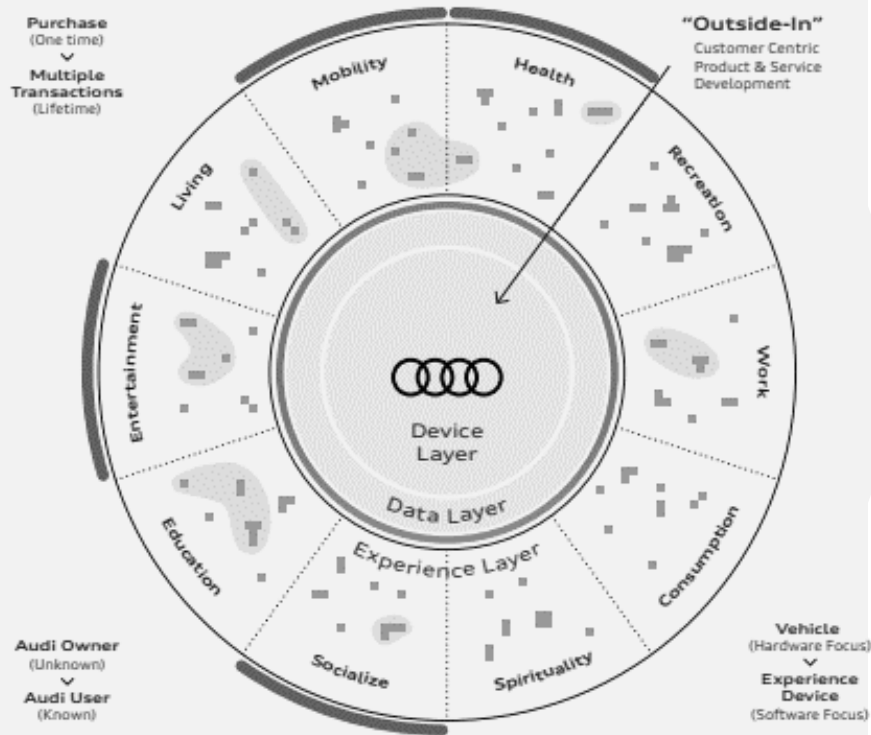**Process**   **Business model**   **Product**   **Service**

HW=Hardware
SW=Software

At Audi Business Innovation, we practice covering the entire product development process with interdisciplinary teams

PRODUCT-DEVELOPMENT-PROCESS
(End-2-End)

Challenge

Discovery   Ideation   Concept / Validation   Build   Setup   (Operate) / Transfer

CORE COMPETENCIES

DESIGN
Research
User Experience Design
Business Design

PRODUCT
Agile Coach
Product Owner
Operations Spezialist

- Interdisciplinary teams
- Customer centricity
- Prototyping
- Co-Creation
- Audi DNA

ENGINEER
Software Engineer
IT Architekt
Vizualisation Specialist

DATA
Analytics
Data Engineering
Performance Marketing

Corporate Service

IT- Sec

Data Protection

Legal

etc.

ABI's fields of research & action for customer centric innovations & product development

FORE SIGHT ACA DEMY

Trend & Research

Mobility	Health	Community	Entertainment
Mobility "I don´t worry about charging"	**Health** "I want my safety, well-being and future vitality to be positively affected"	**Community** "I am part of an exclusive community with access to meaningful content, connections and offers"	**Entertainment** "I want in-car time to be an unique premium experience"

User & Business

App & Web

eCommerce

Plattforms & Technology

Customer & Data

Digital Product Development Processes

Processes

How to succeed?

CLEAR MISSION/ OBJECTIVE

› Relevance to the core business
› Managing with metrics (clear KPIs / OKR driven)

TEAM of EXPERTS

› Resource allocation along the whole innovation process
› Will and competencies to work interdisciplinary

(AGILE) WAY OF WORKING

› Consistent prioritization, fast learning, and targeted adjustments
› Iterative integration of qualitative and quantitative customer feedback to optimize customer experience quickly → CUSTOMER is KEY

SPONSORSHIP and BUY IN from TOP MANAGEMENT is essential!

› Stable and wide network in the (VW) group
› Visibility

MINDSET and ATTITUDE

› "Culture eats strategy for breakfast"

Strong FOCUS on BUSINESS MODEL and SCALING

› Clear view of the differentiating digital value proposition
› Partner selection/integration/ outsourcing is a strategic issue
› Data are drivers of the digital transformation

Acceptance of the inevitable: Change is constant!

THANX

AUDI BUSINESS INNOVATION GMBH