Advancing in automotive with AI

Mastering the intersection of technology, compliance, and customer trust

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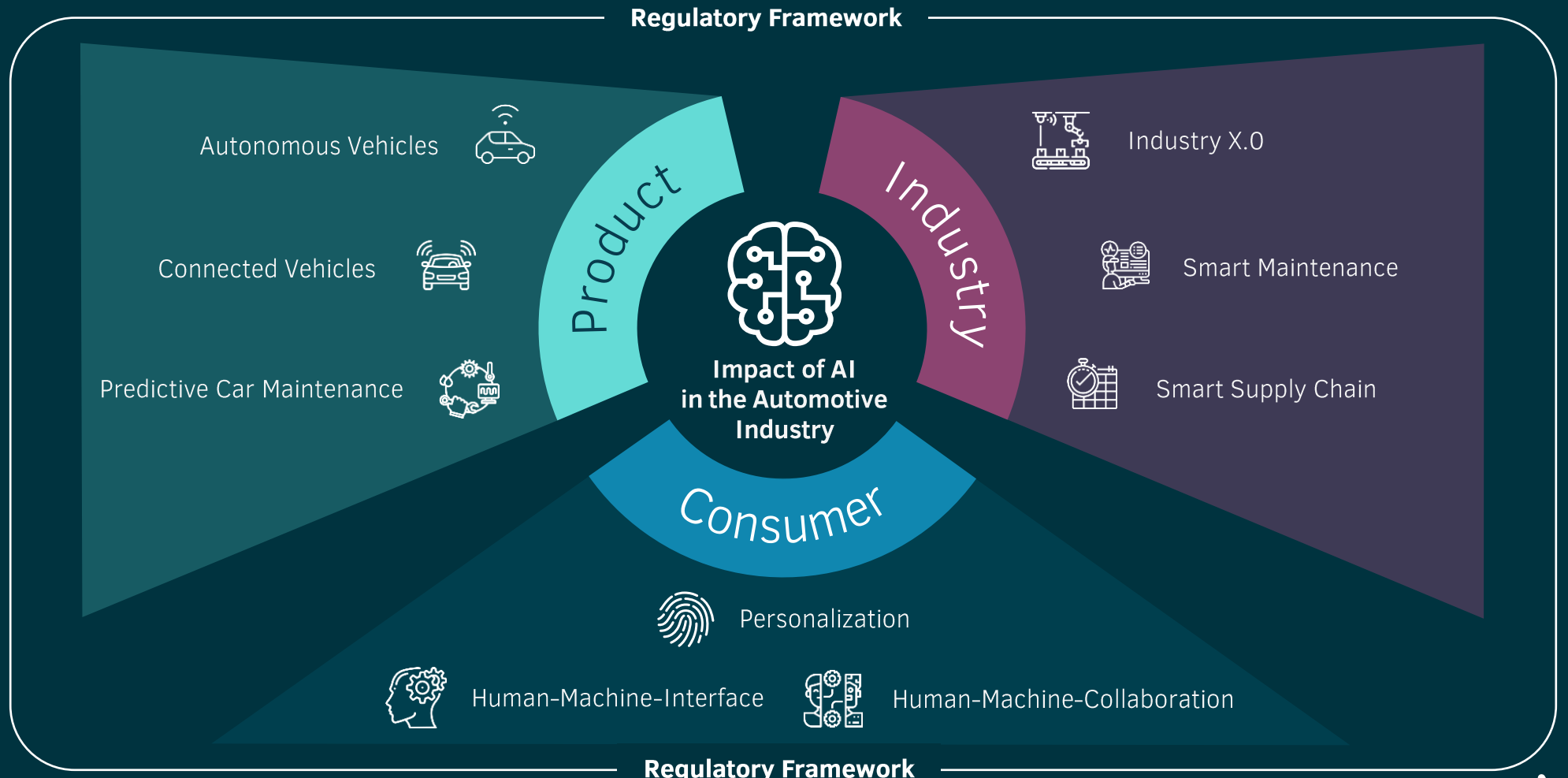
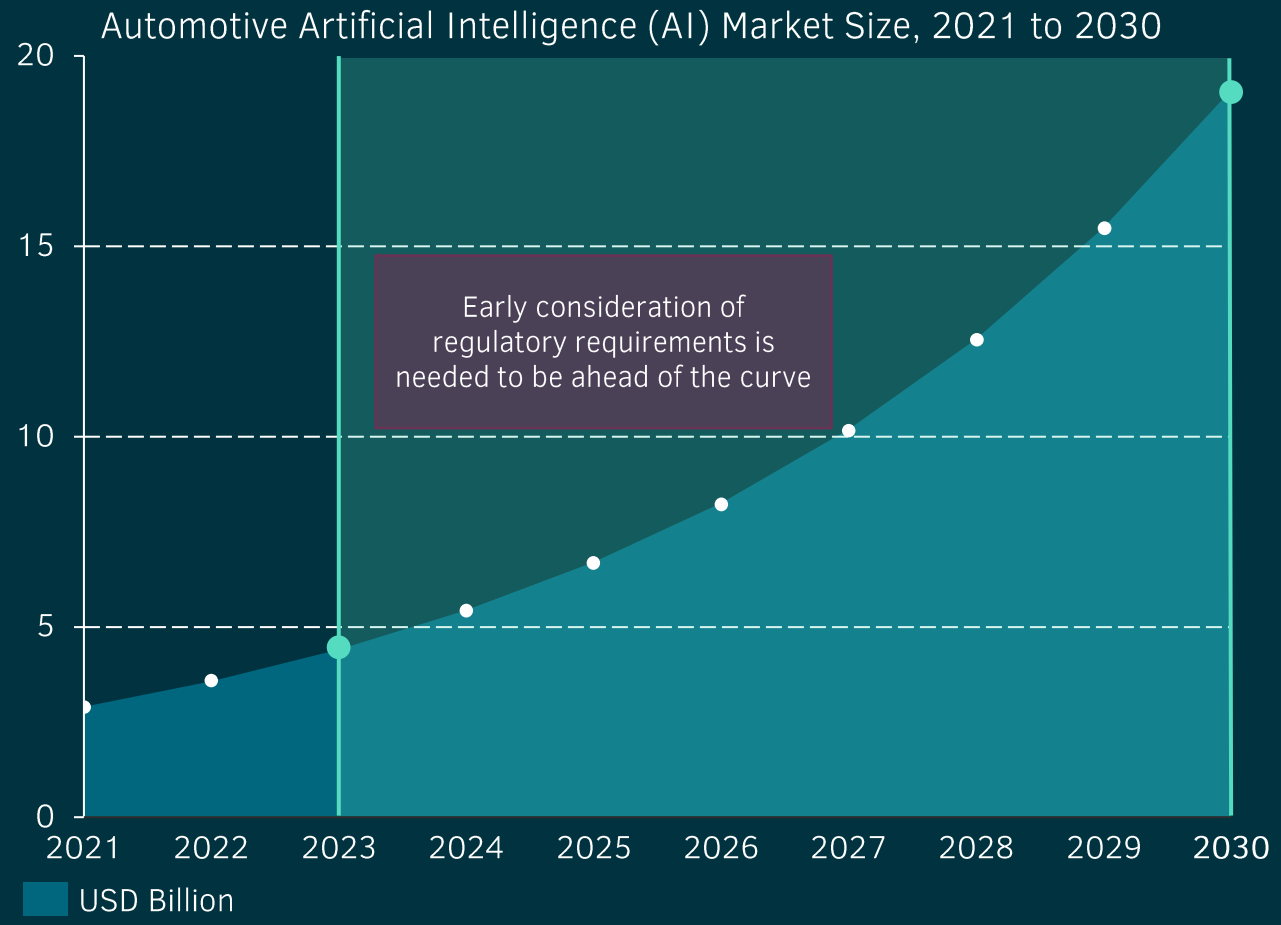
The rapid digitization and the introduction of Artificial Intelligence (AI) in the automotive industry have far-reaching implications for safety and bring along new regulatory requirements



The successful incorporation of AI in the automotive industry depends on the early consideration of regulatory requirements



What to expect in the near future:

The Impact of AI on Products, Industry and Consumer will be progressively regulated. A non-exhaustive list of upcoming regulations:

Action field	UNECE	USA	European Union
Cybersecurity and Privacy	UNECE R155/156 (and more to in discussion)	US DOT AV 4.0 Guidelines	EU GDPR EU Cybersecurity Act
Interoperability: Vehicle to Vehicle (V2V) Connection of any vehicles	UNECE (WP.29): Regulation proposals in discussion		EU Data Act EU Data Governance Act (DGA)
Data Sharing: Access and sharing of non-personal data with other stakeholders			
Development and deployment of AI systems and autonomous vehicles	UNECE R157 (and more in discussion)		EU Artificial Intelligence Act (AIA) EU VGSR

Source: https://www.precedenceresearch.com/automotive-artificial-intelligence-market

The current focus in the automotive industry is the EU Artificial Intelligence Act and the Vehicle General Safety Regulation (VGSR) which present 5 main fields of action to the industry players

Excerpt of current industry focus

	EU Artificial Intelligence Act	VGSR: Vehicle General Safety Regulation
Who	**European Commission**	**European Commission**
What	Regulates AI Systems in various sectors. Imposes safety, monitoring, privacy and liability requirements on AI systems, incl, systems for autonomous vehicles.	Aims to improve road safety and regulates safety features and technologies for autonomous driving such as Advanced Driver Assistance Systems (ADAS).
Where	Affects partially or fully autonomous vehicle sold in European Union.	Affects new vehicle sold in European Union.
When	21st Apr. 2021 – Officially proposed Q2 2023 – Planned implementation Q3-Q4 2024 – Earliest applicability	6th Jul. 2022 – Applies to new vehicles <2.5t 7th July 2024 – Applies to new vehicles <3.5t

5 action fields

1. Data privacy and security
2. Technical and product complexity
3. Regulatory compliance
4. Validation and testing
5. Cost and resource constraints

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The 5 fields of action have a massive impact on various processes of the automotive players and the homologation of the OEMs and result in 4 challenges

1. Regulatory compliance
2. Technical and product complexity
3. Data privacy and security
4. Validation and testing
5. Cost and resource constraints

Manufacturers / OEMs

Impact

1. Reconfiguration of audit and homologation process to ensure legal conformity
2. Extensive assessment of existing processes and IT landscape with strong interdependence between various departments
3. Cross boundary knowledge transfer for stronger interaction between stakeholders (OEM & suppliers) while increasing overall safety
4. Knowledge elaboration within the company and fight for knowledge leadership within the market
5. New regulations affects the technology choices of manufacturers, potentially resulting in a reduction of available product options

Suppliers

Impact

1. Meeting the new requirements from OEMs to map the regulations by reevaluating the existing supply-chain
2. Adaption of existing product strategy to meet legal requirements
3. Respond to increasing security and safety requirements
4. Reevaluation of the existing validation process and extension of testing
5. Cost effective positioning of company and product / service portfolio with consideration to new innovative market players

Challenges

Changed cost & pricing structures

Increased process and system adaption

Cross organizational stakeholder management

Newly formed market conditions

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In order to future-proof existing processes and systems and to safely integrate AI technology into vehicles, action must be taken at an early stage

Why you should act now

- The use of AI in the automotive industry is **growing rapidly** and more and **more vehicles are being equipped with AI systems**.
- Therefore, regulators are increasingly looking at the **use of AI technology** and have **already issued standards** for their use.
- By addressing AI regulations, automotive players ensure that they **comply with the necessary regulations** and standards and **minimize potential risks**, which ultimately **increases consumer adaption of AI-based vehicle systems**.

What's in it for you

1. **Improved safety:** By complying with AI regulations such as UNECE No. 157 and VGSR the overall safety of vehicles increases.
2. **Enhanced trust:** Complying with AI regulations helps building trust with customers and stakeholders, as it demonstrates a commitment to ethical and responsible use of AI technology.
3. **Secured market position:** Acting at an early stage ensures the company's competitive position against new players and future-proofs the product portfolio.

accilium serves as a sparring partner and supports clients through the entire process with strong focus on strategy and IT transformation within projects affected by AI regulations.

Contact our team for more insights

Michael Weingärtner

Senior Manager
+43 676 770 074 0
michael.weingaertner@accilium.com

Dr. Christina F. Edye

Associate
+49 173 4384 549
Christina.edye@accilium.com

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CONTACT

office@accilium.com
+43 1 934 68 05

accilium.com

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