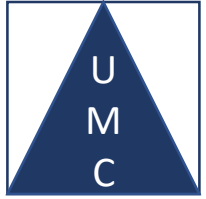University of Muenster Consulting
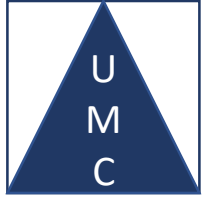
Anna Theile, Max Noever, Erich Daniel, Simon Jeurissen

Autonomous Driving
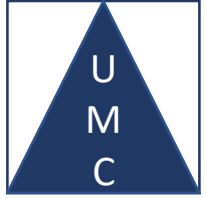
The German Automotive Industry – Is it already too late?

What is Disruption for us?

"*Disruption is the change of an industry, often due to highly innovative technology advancements, that leads to the need for adapting established business models and levels the market playing field.*"

Our Rationale – Why Automotive?

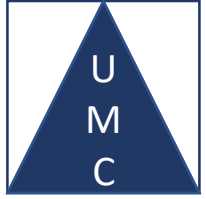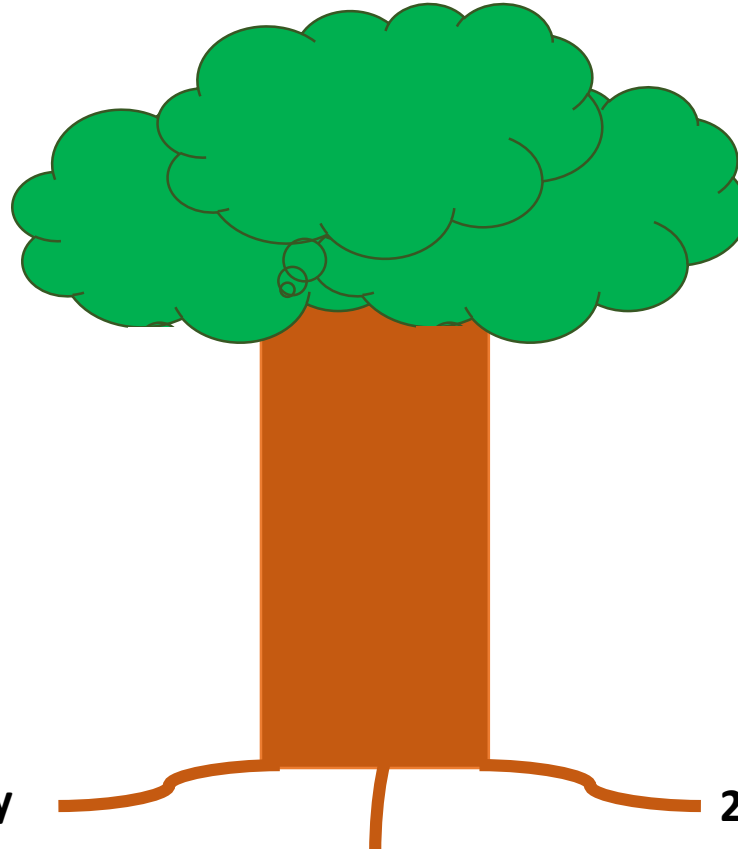| 1	In today's world, mobility trends impact almost everyone's life!
2	The Automotive industry is one of most important industries in the world!
3	We're German!

Root Causes – Why did the industry become disrupted?

1. Evolving technology

- Evolving of artificial intelligence
- Rise of the "Internet of Things" (IoT) and 5G

2. Changing customer needs

- Desire to use time more efficiently
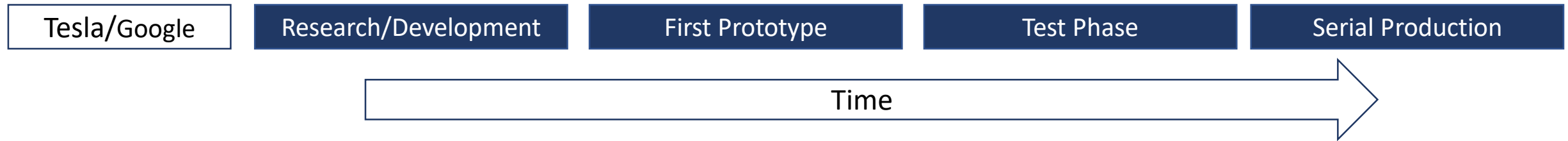- Increasing trust in technology
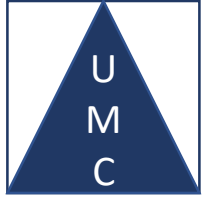- Acceptance of "shared economy"
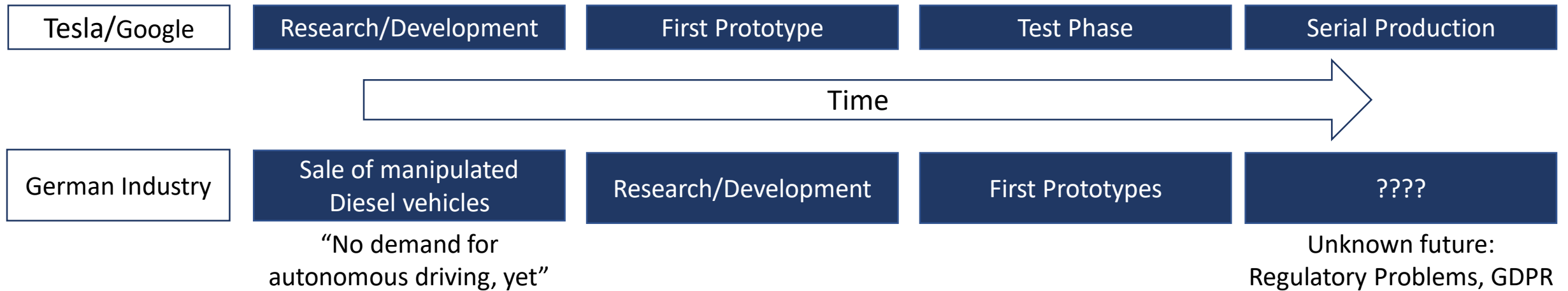
1. Evolving technology

2. Changing customer needs

3. Changing competitive landscape

- Inertia of dominant market players
- New market entrants

Analysis– Has the German Automotive Industry slept in ?

| Tesla/Google | Research/Development | First Prototype | Test Phase | Serial Production |

Time →

Analysis– Has the German Automotive Industry slept in ?

Tesla/Google	Research/Development	First Prototype	Test Phase	Serial Production

Time →

German Industry	Sale of manipulated Diesel vehicles	Research/Development	First Prototypes	????

"No demand for autonomous driving, yet"

Unknown future: Regulatory Problems, GDPR

Analysis– Has the German Automotive Industry slept in ?

Tesla/Google	Research/Development	First Prototype	Test Phase	Serial Production

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Unknown future: Regulatory Problems, GDPR

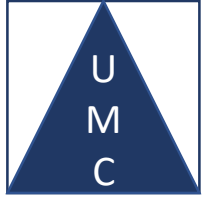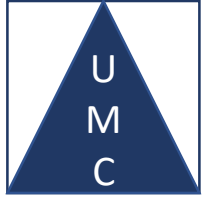| Regulatory Problems	• Test phase under real conditions is politically prohibited • Data protection issues, legal responsibilities

GDPR	• Affects every EU-inhabitant • Non-compliance can results in fees of up to 4% of annual global revenue

Alternatives – What Could Come Next?

	Collaborate	Compete
What should have been done in the past?	• Understand that software industry is too strong to compete with • Convince software industry that German cars are technically still state of the art • Software can only evolve if hardware gets better	• Identify and understand your competitors • Acknowledge your competitor's abilities • Design and develop autonomously driving car for serial production
What should be done now?	• Collaborate with software industry • Concentrate on development of *hardware* • Use own infrastructure for serial production in cooperation with software industry • Get rid of GDPR and/or ethnical problems	• Test prototype within real world conditions • Develop massive IT-Department • Negotiate about political support (tax reductions for customers)

Alternatives – What Could Come Next?

UMC

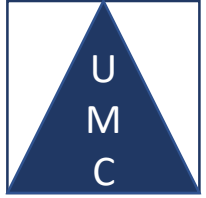|	Collaborate	Compete
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Thank you